UHCL

2023/24

GRADUATE CATALOG

Courses, Degrees Requirements, Faculty and General Information.

uhcl.edu/catalog

[DATE]

UNIVERSITY OF HOUSTON CLEAR LAKE

[Company address]

Table of Contents

General Information

General information contains an overview of University of Houston-Clear Lake, and its services and policies that pertain to both undergraduate and graduate students. This information becomes effective with the beginning of the fall 2023 semester.

Any printed or PDF version of this document is for archival and/or convenience purposes only. It may not reflect the most accurate or up-to-date information. The online version of this catalog (https://www.uhcl.edu/academics/resources/catalog/) is the only official source for UHCL catalog content regarding the University and its respective policies, procedures, services, programs and courses.

Contact Us

Office of the Registrar:

Phone	281-283-2525
Fax	281-226-7230
Email	registrar@uhcl.edu
Web	https://uhcl.edu/registrar/
Location	NOA II 1200

Office hours:

Monday - Friday, 8 a.m. - 5 p.m.

University Overview

University of Houston-Clear Lake is a student-centered, community-minded, partnership-oriented university that offers bachelor's, master's and select doctoral degree programs to enhance the educational, economic and cultural environment of the region. 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 business, education, human sciences and humanities and science and engineering. Academic programs are designed to develop the critical thinking, creative, quantitative, leadership and communication skills of students.

The university is committed to community engagement through partnerships with educational institutions, businesses, government agencies and nonprofit organizations.

A Metropolitan University

Adjacent to NASA's Johnson Space Center, UHCL is situated in the heart of Clear Lake's high-tech 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 higher education institutions serving the Texas Upper Gulf Coast, UHCL is a vital component of the surrounding region. The university conducts applied and basic research. It engages in community and professional services that support both the economic development and the quality of life of the area. Because a strong university is essential to the success of the area's industries, UHCL is dedicated to developing and strengthening programs that support the region's various commercial, engineering, human services and trade sectors, especially in the computing, medical, petrochemical and space industries.

Students and faculty apply academic theories and conduct research through UHCL's centers, institutes, clinics and laboratories. These entities include:

- Art School for Children and Young Adults
- Center for Autism and Developmental Disabilities
- Center for Educational Programs
- Center for Executive Education
- Center for Professional Development of Teachers
- Center for Robotics Software
- Center for Workplace Consulting
- Diplomacy Institute
- Environmental Institute of Houston
- Health and Human Performance Institute
- Institute for Human and Planetary Sustainability
- Professional Development Lab School

- Psychological Services Clinic

Establishment of UHCL

The establishment of UHCL 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), which called for a second University of Houston campus to provide upper-level and graduate programs. In 1973, the Texas Senate authorized the construction of a permanent campus at Clear Lake.

Construction began early in 1974 with the first phase of the Bayou Building. September 1974 marked the beginning of regularly scheduled classes on the UHCL campus under the leadership of founding chancellor, Alfred R. Neumann. Opening-day enrollment totaled 1,069 students. Charter faculty included 60 professors. Today, the university has approximately 8,900 students, and more than 600 full-time and adjunct faculty.

In fall 2014, UHCL welcomed its first-ever freshman class. The university received approval from the state in 2011 for downward expansion, which allowed the university to add freshman- and sophomore-level courses to its roster.

Creation of UHCL Pearland

In 2007, the Texas Higher Education Coordinating Board approved the creation of UH-Clear Lake at Pearland. Located at 1200 Pearland Parkway, the new campus was developed as a partnership between UHCL and the city of Pearland to improve access to higher education for Pearland-area residents.

In 2009, construction began on a facility that featured eight media-equipped classrooms, two teaching labs, library and other student resources. Classes began in fall 2010, with more than 600 students enrolling in degree programs such as accounting, business, criminology, education, nursing and psychology.

In fall 2014, UHCL Pearland began offering courses toward a Bachelor of Science in Nursing degree for registered nurses with associate degrees. The RN to BSN program is customized for students who wish to improve managerial skills and advance as nurse managers, educators or administrators.

Since 2017, UHCL Pearland has hosted Alvin Community College core classes, which are transferrable to UHCL.

In fall 2018, classes became available for students in UHCL's Doctor of Education in Educational Leadership program. In spring 2019, classes began in a new, three-story Health Sciences and Classroom Building, featuring a simulated hospital environment, 100-seat lecture hall, laboratories, faculty offices and study zones.

For more information about degree programs offered at UHCL Pearland, call the Office of Enrollment Services at 281-212-1690.

Accreditations

The University of Houston-Clear Lake is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award baccalaureate, masters, and doctorate degrees. Questions about the accreditation of the University of Houston-Clear Lake may be directed in writing to the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, GA 30033-4097, by calling (404) 679-4500, or by using information available on SACSCOC's website (www.sacscoc.org).

The College of Business maintains accreditation for graduate and undergraduate business programs by the Association to Advance Collegiate Schools of Business (AACSB International). College of Business graduate and undergraduate accounting programs also maintain separate AACSB accounting accreditation.

The College of Education is accredited by the Texas State Board for Educator Certification (SBEC). The Council for Accreditation of Counseling and Related Educational Programs (CACREP), a specialized accrediting body recognized by the Council for Higher Education Accreditation (CHEA), has granted accreditation to the Clinical Mental Health Counseling (M.S.) program in the Department of Counseling, Special Education, and Diversity, College of Education at University of Houston-Clear Lake.

The College of Human Sciences and Humanities is home to a number of accredited programs. The Behavior Analysis program is accredited by the Association for Behavioral Analysis International. The Human Factors/Ergonomics Certificate and the Human Factors concentration in the master's degree Psychology program are both accredited by the Human Factors and Ergonomics Society. The Registered Nurse-to-Bachelor of Science in Nursing program is accredited by the Accreditation Commission for Education in Nursing. The Bachelor of Social Work is accredited by the Council on Social Work Education. The Doctor of Psychology in Health Service Psychology has been awarded accreditation on contingency by the American Psychological Association. The School Psychology program is approved by and has received National Recognition from the National Association of School Psychologists. In addition, the National Strength and Conditioning Association has recognized the Fitness and Human Performance curriculum as preparing students for successful entrance into the career field.

The College of Science and Engineering's undergraduate degree programs in Computer Engineering and Mechanical Engineering are accredited by the Engineering Accreditation Commission of ABET. The undergraduate degree programs in Computer Science and Computer Information Systems are accredited by the Computing Accreditation Commission of ABET. The undergraduate program in Chemistry is accredited by the American Chemical Society (ACS). The undergraduate programs in Occupational Safety and Health-Safety and Industrial Hygiene are accredited by the Applied and Natural Science Commission (ANSAC) of ABET.

The Counseling and Mental Health Center is accredited by the International Accreditation of Counseling Services (IACS). The Doctoral Internship in Health Service Psychology in the Counseling and Mental Health Center is additionally accredited by the American Psychological Association (APA).

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 UH System Board of Regents and Chancellor Renu Khator. Administrative responsibility for UHCL is vested in its president. UHCL's shared governance process includes the Faculty Senate, University Staff Association and Student Government Association, working with the university's administration through various committees and councils including University Council, which is chaired by the university's president. Other councils/committees include Academic Council, University Life Committee, Planning and Budgeting Committee, and Facilities and Support Services Committee.

The Campus

UHCL's buildings are situated in a 524-acre natural environment. The campus features picturesque, park-like settings with Horsepen Bayou winding through wooded areas abundant with wildlife.

The Arbor Building houses painting, ceramics, weaving and photography studios, as well as educational centers, teaching methods labs and psychology facilities, notably UHCL's Center for Autism & Development Disabilities.

The Bayou Building houses the majority of classrooms, administrative and faculty offices, the library, alumni relations, bookstore, cafeteria, computing services and laboratories, copy services, mailroom and Bayou Theater. It is also home to the Center for Executive Education, Center for Professional Development of Teachers and other research activities.

The Delta Building houses student computer laboratories, classrooms and computing faculty offices. It is home to UHCL's Cyber Security Institute and Center for Robotics Software.

The Student Services and Classroom Building accommodates functions that include enrollment, health, counseling, academic support and veteran services. The one-stop Welcome Center provides enrollment, registration, fee payment, financial aid and scholarship services.

The STEM and Classroom Building houses classroom and lab space for science, technology and mechanical engineering. A three-story section accommodates classrooms, teaching labs and research labs; a two-story section is home to offices, computer lab and a 100-seat tiered lecture hall.

The Recreation and Wellness Center includes academic and recreational wings, open study spaces, casual seating, food service and private study rooms. An indoor,

elevated three-lane running track provides runners a campus view while overlooking two regulation-sized basketball courts and a multi-activity court for indoor soccer, hockey and other sports. It also features weight and cardio rooms, two multipurpose rooms for yoga and other exercises as well as three teaching labs and two classrooms. It is also home to UHCL's Exercise and Nutritional Health Institute.

UHCL'S Environmental Institute of Houston is located in North Office Annex 1, just off Entrance 3 adjacent Parking Lot D.

The Central Services Building is headquarters for building maintenance, grounds and custodial services, scheduling and space planning and vehicle maintenance. The UHCL Police Department is located next to Central Services.

Hunter Residence Hall is home to a community of Hawks who live, learn and engage together. The 297-bed residence hall is located steps away from the Recreation and Wellness Center, STEM and Classroom Building and computer labs. As residents, students have access to free laundry, a full community kitchen, study rooms, high-impact programs along with support from live-in staff.

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 and instruction on navigating search interfaces, retrieving information, and evaluating information for use in scholarly research. From our webpage (www.uhcl.edu/library), chat with librarians online, in person, or contact them by phone at 281-283-3910, by text at 281-816-4341 or by email at library@uhcl.edu.

Students can receive help formulating effective search queries and identifying the best online resources from a collection of over 300 subscription-only databases containing thousands of publications and millions of full-text articles. Research strategy classes are tailored to discipline specific courses. The newly renovated Active Learning Classroom is equipped with laptops and interactive learning devices so that students may participate in an engaging hands-on environment. Appointments are available pairing students with expert librarians for more in-depth personal research fostering a comfortable and inspiring one-on-one environment.

UHCL students, faculty and staff may also quickly and easily request and borrow books from UH and UH-Downtown through the shared discovery tool, OneSearch. The TexShare card, available upon request in Neumann Library, allows a UHCL student to borrow books from most academic or public libraries in Texas. Additionally, the library's interlibrary loan service can acquire requested materials from libraries across the nation.

The library occupies approximately 87,600 square feet in the Bayou Building and contains collaborative study areas, quiet study areas and many technology-enhanced study rooms. Neumann Library offers 43 PCs and four iMacs for student use. The library also contains more than 300,000 print volumes and 700,000 e-books, and provides access to more than 120,000 e-journals. The library also has a collection of international films on DVD, and subscribes to several educational video databases, which offer up to 100,000 streaming videos. A curriculum library for education students contains selected K-12 textbooks, classic and contemporary children's literature in print and audio formats.

In addition to the university collections, UHCL Archives & Special Collections include the NASA Johnson Space Center History Collection, Human Space Flight Collection and the Clear Lake Area Collection. These materials are open for research to UHCL students, alumni, faculty, staff and the general public.

Office of Information Technology (OIT)

The OIT Support Center serves as the primary point of support for campus information technology. Individuals may visit the office at Bayou Building, Suites

B2300. Hours of operation and other important support information can be found on the Support Center's web page.

OIT provides a wide range of information technology tools and services to the campus. These include:

- Wireless internet capability throughout all UHCL buildings.
- Academic Computing labs and specialized teaching labs that include both Windows and MacOS workstations, printers, scanners, and software.
- Support for instructional technology in classrooms and computer teaching labs across all UHCL campuses
- Access to a wide range of software applications from off campus, via either Remote Lab Access (VPN) or the Virtual Lab (Apporto).
- Access to Microsoft 365, a web-based service that provides O365 applications like Word, Excel, and PowerPoint, as well as Outlook Email, premium spam and malware protection, and One Drive with 1 TB of storage.
- Technical and software support, including user orientations and training for UHCL hardware and software.

UHCL Alumni Association

The Office of Alumni Relations focuses on creating meaningful engagement and experiences for UHCL alumni by uniting fellow alumni, students, and the larger university community through support services, tailored communications, volunteer opportunities, events, philanthropic opportunities and more.

All UHCL graduates and recipients of teacher's certificates are automatically members of the UHCL Alumni Association. The organization seeks to continue fostering the connection between alumni and their alma mater. Alumni are encouraged to share UHCL pride with family, friends, co-workers and community members by reconnecting, getting involved, and supporting UHCL.

To learn more about the UHCL Alumni Association or to get involved, visit www.uhcl.edu/alumni or contact the Office of Alumni Relations at 281-283-2021 or alumni@uhcl.edu.

University Police

The University of Houston-Clear Lake Police Department is responsible for law enforcement, security and emergency response at UHCL and UHCL Pearland. 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. Their core values are Leadership, Integrity, Professionalism and Service.

Emergency Management & Fire Safety and Environmental Health & Safety are also part of the UHCL Police Department. Emergency Management & Fire Safety coordinates university and community resources to protect lives, property and the

environment through mitigation, preparedness, response and recovery from all natural and man-made hazards that may impact the campus. Environmental Health & Safety focuses on environmental protection, general safety, lab safety and safety training.

The police department is located at 700 E. Bayou Rd., across from Parking Lot D. Security services are available 24 hours a day, seven days a week by calling 281-283-2222. Trained, professional police and communications officers staff the department. The university police also provide the following: lock-shop services including card access and keys, vehicle unlocks, vehicle jump-starts, airing deflated tires, safety escorts to your vehicle and safety classes.

To report an on-campus crime or any emergency, call the University Police Department at 281-283-2222 from off-campus (cellular) telephones or 2222 from on-campus telephones or use the SafeZone app on your phone - download at: www.uhcl.edu/police/safezone. For special announcements, emergency closings and other information, call the UHCL Hotline at 281-283-2221 or visit www.uhcl.edu/emergency. For a complete overview of the University Police Department and its services, visit www.uhcl.edu/police.

Parking

Parking is handled by the UHCL Parking Department. To purchase a student, faculty or staff permit, visit http://uhclparking.t2hosted.com. Guest passes may be purchased at kiosks located throughout campus. For more information, contact the Parking Department at 281-283-2277, email parking@uhcl.edu or visit www.uhcl.edu/parking.

Division of Student Affairs

Office of the Vice President for Student Affairs

The Office of the Vice President for Student Affairs provides support and leadership for the offices of Campus Recreation and Wellness, Career Services,Center for Student Advocacy & Community (CSAC), Counseling and Mental Health Center, Dean of Students, Health Services, Orientation and New Student Programs, Student Affairs at the Pearland campus, Student Advocacy, Student Housing and Residential Life, Student Involvement and Leadership, Student Publications and Veteran Services.

Office	Location	Phone
Vice President for Student Affairs	Bayou 2523	281-283-3025
Campus Recreation and Wellness	RWC 203	281-283-2330
Career Services	SSCB 3109	281-283-2590
Center for Student Advocacy & Community (CSAC)	SSCB 1203	281-283-2575
Counseling and Mental Health Center	SSCB 3103	281-283-2580
Dean of Students	SSCB 1201	281-283-2567
Health Services	SSCB 1301	281-283-2626
Office of Student Advocacy	SSCB 1202	281-283-2720
Orientation and New Student Programs	SSCB 1202	281-283-2420
Student Housing and Residential Life	Hunter Residence Hall	281-283-2615
Student Involvement and Leadership	SSCB 1204	281-283-2560
Student Publications	Bayou 1239	281-283-2570
Veteran Services	SSCB 3201	281-283-3071

Campus Recreation and Wellness

The Department of Campus Recreation and Wellness serves the UHCL and surrounding communities through physical activity, educational programming, student engagement and overall well-being. Our core mission is to create educationally purposeful experiences by providing outstanding facilities, programs and services that inspire and promote lifelong healthy habits. We want all Hawks to have a stronger sense of holistic wellbeing and happiness, which will improve overall quality of life during and after UHCL. We pride ourselves on providing an inclusive and safe space for all Hawks.

The Campus Recreation and Wellness department is located in the Recreation and Wellness Center (RWC). The RWC houses 82,000 square feet of fitness, recreation and social spaces including basketball and volleyball courts, a Multi-Activity Court (MAC) for indoor soccer and volleyball, badminton and table tennis, multi-purpose rooms and state-of-the-art fitness equipment. Study rooms and social spaces including the Hawk Energy Bar are located in the RWC lobby and on the academic wing of the facilities. The Hawk Energy Bar has small food items, as well as coffee and smoothie options during the fall and spring semesters. The RWC is open seven days a week.

All enrolled UHCL students are active members of the RWC, and have access to the facility at no additional costs. Memberships are available for non-students including faculty, staff, spouses, dependents and the greater UHCL community for a low monthly fee. All members have access to the RWC, as well as all outdoor field spaces (Delta field, Delta tennis and basketball courts and the recreation field). Fitness and recreational equipment and workout towels are available for checkout at no cost. For an additional fee, members can sign up for fitness programming (personal training packages, group fitness class semester pass, nutrition and dietetic services), as well as semester locker rentals, shower towel service and more.

Campus Recreation and Wellness is the largest student employer on campus. We offer developmental opportunities for students interested in learning and growing their skills in fitness, customer service, management, marketing, and more. Any interested students can contact us at campusrecreation@uhcl.edu for more information.

For more information:

Phone	281-283-2330
Email	CampusRecreation@uhcl.edu
Web	www.uhcl.edu/student-affairs/health-wellness/campus-recreation
Location	RWC 203

Career Services

Career Services assists students and alumni in exploring, establishing and/or advancing their careers in their degree fields; and, provides support in securing jobs while enrolled at UHCL.

Career Services offers UHCL students and alumni:

- Vocational testing and assessment
- Career exploration resources
- Job search assistance
- Mock interviews and resumé critiques
- Resumé referrals with career services registration
- Online job listings
- On-campus interviewing
- Multiple job fairs and networking events

Individual assistance is available by appointment and during walk in hours. All other services are available during regular office hours Monday - Friday 8 a.m. - 5 p.m.

For more information:

Phone	281-283
Email	careerservices@uhcl.edu OR employerservices@uhcl.edu
Web	www.uhcl.edu/career-services
Location	SSCB 3109

Counseling and Mental Health Center

Connect ● Empower ● Thrive

The mission of UHCL Counseling and Mental Health Center is to help students fulfill their goals by fostering connections with members of the university community, facilitating the discovery and realization of power in their strengths, and developing the ability to address emotional and psychological challenges.

The licensed professionals in counseling and mental health provide a variety of free and confidential services including individual, couples and group therapy, and assisting students with a variety of personal concerns. From anxiety, depression, relationship problems, stress, family issues, substance abuse, grief/loss, trauma, body image, eating disorders, cultural and identity concerns to adjusting to life at UHCL, the counseling team is available to address virtually any concern.

Additional services include psychiatry, 24/7 crisis line, the Mind Spa and biofeedback, outreach, consultation, support groups and presentations/workshops. Visit our website to take a mental health screening or use relaxation exercises. Our website also provides access to additional self-help resources including Togetherall (an anonymous, online peer support community with access to trained professionals), or WellTrack (an interactive self-help therapy platform), which provide resources and support to students 24-hours a day.

For more information:

Phone	281-283-2580 (press 2 for crisis line)
Web	www.uhcl.edu/counselingservices
Location	SSCB 3103

Dean of Students

The Dean of Students Office (DOS) serves as the central hub for all on-campus, student-related issues.

When a student joins UHCL, they become part of a community that promotes civility, respect and ethical behavior toward everyone, and in every situation. The Dean of Students Office strives to provide a safe and respectful educational environment that lends itself to learning by serving as an advocate and liaison for UHCL's students, faculty, staff and parents.

The Dean of Students Office also provides referrals and support for students who are experiencing difficulties or in need of professional assistance with issues including resolving concerns and conflicts; implementing student policies; and, resolving disputes and disciplinary problems. Through the interpretation and facilitation of the Student Code of Conduct, the Dean of Students Office holds all students to the highest standards of honor, character and excellence.

We also offer the following support services to assist our students in achieving their academic and co-curricular objectives:

- Conflict resolution
- Emergency support resources
- Behavior and conduct
- Parent and family resources

Student Travel Policy

The University of Houston System Travel Policy guides and directs all student travel. This policy, titled "Student Travel" (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. Travel must be organized and sponsored by the component university and funded by the institution. The vehicles must be owned by the institution or an organization registered at the institution."

Copies of the policy are available upon request at the Dean of Students office or online at the Dean of Students' website.

For more information:

Phone	281-283-2567
Email	deanofstudents@uhcl.edu
Web	www.uhcl.edu/dean-of-students
Location	SSCB 1201

Division of Student Affairs at University of Houston-Clear Lake at Pearland

The Division of Student Affairs at University of Houston-Clear Lake at Pearland works in collaboration with its counterpart offices at the Clear Lake campus to coordinator services and programs that enhance the learning environment and contribute to the student's academic and personal success. Pearland Student Affairs provides information, resources and services for the offices of Campus Recreation and Wellness, Career Services, Center for Student Advocacy & Community (CSAC), Counseling and Mental Health Center, Dean of Students, Health Services, Orientation and New Student Programs, Student Advocacy, Student Housing and Residential Life, Student Involvement and Leadership, Student Publications, Veterans Services and the Office of the Vice President for Student Affairs.

For more information:

Phone	281-212-1679
Email	SApearland@uhcl.edu

Web	www.uhcl.edu/pearland/student-affairs/
Location	Room P152, Pearland Academic Building (PAB) 1200 Pearland Parkway, Pearland, TX; 77581

Health Services

Licensed nurses, doctors and pharmacists provide a wide range of professional health care services to the UHCL student population. We are dedicated to promoting good health and providing short-term medical treatment to any student who becomes ill or injured.

Health Services includes both women's health care and general medical clinics, complete laboratory services and a limited pharmacy. Students may receive flu shots, immunizations, TB screening and routine injections. Nurses are readily available to address any health questions or concerns. Nursing visits do not require appointments; however, we do ask that you call before entering the clinic. Health Services also provides prevention programs including screenings and health education. Physician examinations are also available by appointment.

Enrolled undergraduate students with six or more credit hours, or graduate students enrolled in three or more credit hours are eligible for student health insurance coverage within the posted open enrollment period. Literature detailing the approved student health insurance plan is available at the Health Services clinic and on the UHCL website page. International students are required to have health insurance, and are charged automatically at the beginning of each semester. International students may have this insurance requirement waived if documented proof of an appropriate, alternative health insurance plan is provided by the AHP Student Health Insurance Company online (see Health Services webpage for details).

For more information:

Phone	281-283-2626
Email	healthcenter@uhcl.edu
Web	www.uhcl.edu/student-affairs/health-wellness/health-services
Location	SSCB 1301

Office of Student Advocacy

The Office of Student Advocacy (OSA) offers advocacy and support to students experiencing life challenges that may affect their academic and personal goals. OSA

provides students with the tools and guidance needed for self-advocacy, in addition to collaborative work with campus partners to help remove barriers to student success. OSA offers the Hawk Pantry and food access programs, support services for former foster youth/young adults, emergency assistance programs, guidance in the resolution of student complaints and grievances, notary services, and support for students experiencing academic challenges and personal hardships.

OSA Services

- **Hawk Pantry & Food Access Programs** - The Hawk Pantry provides free food (canned goods and non-perishables), toiletries, hygiene products, in addition to limited household/home essentials and school supplies. Food Access Programs include partnership events with local food banks and community agencies, and assistance applying for aid through community agencies.
- **Former Foster Youth/Young Adult Support Services** - UHCL's foster care liaison provides advocacy and support to former foster youth/young adults in their transition into college, as well as support through graduation. OSA connects students with campus support services and resources from government and community agencies.
- **Emergency Assistance Resources** - Students facing personal or financial hardships may apply for emergency assistance programs through the Office of Student Advocacy.
- **Student Advocate** - The student advocate provides guidance and support regarding student complaints and the process of filing a formal grievance.
- **Notary Services** - Notary services are provided free of charge to students. The student advocate is able to certify government, legal, travel, business, personal and most documents that require a notary seal.

For more information:

Phone	281-283-2720
Email	osa@uhcl.edu
Web	www.uhcl.edu/advocacy
Location	SSCB 1201

Orientation and New Student Programs

The Office of Orientation and New Student Programs facilitates orientation and transition programs to construct a bridge connecting new students to the resources and experiences needed to thrive in the university setting. Orientation and New Student Programs engages with the student population through intentional

programming, ensuring students feel comfortable and welcomed at the University of Houston-Clear Lake.

Orientation provided by the Office of Orientation and New Student Programs is not a university requirement for the majority of incoming graduate students. Orientation is only required for new international graduate students with an F-1 or J-1 visa. All other graduate students are welcome to attend our optional Transfer Student Orientation (TSO) program. Graduate students should contact their academic adviser or graduate program for more information about program-specific orientation requirements.

Graduate International Students - New International Student Orientation

Graduate international students with an F-1 or J-1 visa are required to participate in the mandatory New International Student Orientation (NISO) program. At NISO, students will join other international students and will receive valuable information to assist with their transition to UHCL, and life in the United States. Additionally, students will be able to connect with their fellow students, learn from UHCL staff administrators, and understand what it means to be a UHCL Hawk.

NISO is provided prior to the start of the fall, spring and summer semesters. Graduate international students who fail to attend the entire required program will have an orientation hold placed on their accounts and will not be able to enroll in classes the following semester.

Graduate Domestic Students - Transfer Student Orientation

Graduate domestic students are invited to attend the optional Transfer Student Orientation (TSO) program. At TSO, students will receive a snapshot of UHCL resources, an overview of services, and an understanding of academic policies. Students will also connect with their faculty members, fellow students and UHCL administrators.

New Student Programs

Orientation and New Student Programs also collaborates with different resources across campus to offer intentional activities that support student success. This on-going support is provided through a variety of transition programs including Welcome Back Bash, Weeks of Welcome, Global Buddies and much more.

For more information:

Phone	281-283-2420
Email	orientation@uhcl.edu

Web	www.uhcl.edu/student-affairs/campus-community/orientation
Location	SSCB 1202.01

Center for Student Advocacy and Community (CSAC)

Through educational opportunities, advocacy and community building, the Center for Student Advocacy & Community (CSAC) supports the personal and professional development of UHCL students navigating the college experience. CSAC empowers students by providing essential services that meet basic needs, along with resources and education that foster learning, critical thinking, self-advocacy and student success.

CSAC aspires to stand as a cornerstone of student success for all students to overcome obstacles, ignite their passions, and emerge as resilient leaders ready to make a positive impact on campus and the global society.

UHCL CSAC Programs and Resources:

Advocacy

- **Hawk Pantry & Food Access Programs** - CSAC's Hawk Pantry provides free food (canned goods and non-perishables), toiletries, hygiene products, in addition to limited household/home essentials and school supplies. Food Access Programs include partnership events with campus departments, local food banks, and assistance applying for aid through community agencies.
- **Basic Needs Persistence Grant -** Addresses insecurities related to food, housing, transportation, mental and physical health, childcare and technology. With existing academic support structures, strategic community partnerships, and direct financial assistance, this grant will promote persistence and degree completion for students experiencing a hardship adversely affecting their basic needs.
- **Advocacy Workshops & Education -** The Advocacy Workshops Series are in-person and virtual trainings for UHCL students. The series will be offered throughout the semester on various topics. The Advocacy & Education Workshop Series is designed to provide educational resources that assist in teaching self-advocacy skills, while promoting professional development opportunities to students wishing to increase their success on campus. The skill sets gained from attending these workshops are transferable skills that can be used in the workforce and life.

- **Notary services -** are provided free of charge to students. The student advocate is able to certify government, legal, travel, business, personal and most documents that require a notary seal.

Community

- **Community Gatherings** - Community Gatherings are a series of programs that explore different cultural traditions and practices. This series can cover topics such as dance, music, cooking and storytelling, providing an opportunity for students to learn about and engage with different cultural backgrounds.
- **Community Collaborations** - CSAC is committed to fostering a sense of community and welcomes collaborative partnerships with the various communities and stakeholders within the UHCL campus, UH System and the surrounding campus areas.
- **First Generation Scholars** - CSAC is dedicated to providing support and resources to help first-generation college students transition adjust, and negotiate the campus environment, promoting successful academic and social experiences.

For More Information:

Phone	281-283-2575
Email	csac@uhcl.edu
Web	TBD
Location	SSCB 1203

Student Housing

Hunter Hall

Living on campus involves much more than just having a place to sleep. Student Housing and Residential Life provides a "home away from home" environment and experience that fosters academic excellence and personal development in an inclusive and engaged community.

We have recently expanded our student housing options with an exclusive, traditional on-campus living community. Located in the heart of the UHCL campus, **Hunter Hall** offers students a safe and secure(electronic swipe access) living and learning environment with 24-hour staff available on site to assist them. With nearby access to many campus resources including Bayou, Campus Rec, as well as the STEM

and Classroom building, students are steps away from their classes and on-campus dining.

Hunter Hall offers a variety of room/suite layouts, including private singles, semi-shared singles and traditional doubles (with a roommate). Residents also have access to a fully furnished room, comfy study lounges, a community kitchen, high-speed Wi-Fi, all-inclusive utilities, free printing, on-site laundry facilities (unlimited use) and an outside patio area. In everything we do, we strive to augment the student's personal and academic growth.

Professional staff and Resident Advisers (highly trained student staff) live on site, throughout the hall. From offering hands-on guidance and valuable life skills to providing fun and engaging high-impact programs, our staff serves, challenges and supports. We want every student to find their place at UHCL.

Come join fellow UHCL Hawks at the exclusive, on-campus Hunter Hall! Live in a safe and inclusive community, learn more personally and academically, and engage with the campus community as a whole. Hunter Hall is here to help students live, learn and stay engaged on campus.

For additional information:

Phone	281-283-2615
Email	housing@uhcl.edu
Web	http://www.uhcl.edu/hunter-hall or www.facebook.com/UHCLSHRL
Location	On-campus at 635 Bayou Road, Houston, Texas 77058

Student Involvement and Leadership

The Office of Student Involvement and Leadership provides programs and services designed to enrich and support educational experiences through opportunities to express ideas, develop leadership skills and meet new people. The department provides students with a variety of campus activities, community service experiences, civic engagement education, leadership development programs, as well as support for registered student organizations. The department also provides direct oversight for the following organizations: Campus Activities Board, Hawk Spirit and Traditions Council, Hawks for Community, Student Government Association and The Mascot Program.

Student Organizations

There are over 100 registered student organizations at UHCL. These organizations represent a variety of academic areas, cultures, identities, as well as social and recreational interests of students at UHCL.

Student Government Association

The Student Government Association (SGA) advocates on behalf of the UHCL students. SGA provides registered student organizations with financial assistance, appoints students to university committees to ensure student representation, and conveys student concerns and initiatives to the university administration.

Campus Activities, Spirit and Traditions

There are a variety of events hosted by the Campus Activities Board and the Hawk Spirit and Traditions Council. These events include: Spirit Week, I HEART UHCL Day, Lighting of the Letters, our oldest campus tradition- the annual Chili Cook-Off, and more!

The Office of Student Involvement and Leadership also provides the following services:

- Flyer posting approval
- Space request assistance
- Student organization locker rentals

Leadership and Community Engagement

The Office of Student Involvement and Leadership encourages all students to develop their leadership skills, explore community service opportunities and enhance their civic engagement. Through our long-standing programs, including the Servant Leader Scholars Program, the Leadership Experience Development Series, the Big Event, and UHCL Cares Day, students can become the well-rounded leaders of tomorrow!

Honor Societies

Honor societies at UHCL recognize a student's academic excellence and achievement. The honor societies are affiliated with national organizations, where students are invited to become members based on the standards established by the chartering organization. Some societies recognize accomplishments within specific academic disciplines, while others recognize students from all academic disciplines.

For more information:

Phone	281-283-2560

Email	getinvolved@uhcl.edu
Web	www.uhcl.edu/student-affairs/student-engagement/student-involvement/
Location	SSCB 1204

Student Publications

The student newspaper, The Signal, is a digital newspaper published through the joint efforts of a paid and volunteer student staff and the contributions of an engaged student, faculty and staff campus community. Any UHCL students may join The Signal staff regardless of previous experience. The Signal is published year-round to provide news, features, entertainment and opinion pieces concerning university events and issues. The newspaper serves as a public forum and encourages students, faculty and staff to submit articles, essays, visuals, story ideas and comments.

The Signal has received numerous awards in state and national collegiate competitions from the Texas Intercollegiate Press Association, College Media Association, Columbia Scholastic Press Association and Associated Collegiate Press Association. The Signal can be read online at www.uhclthesignal.com, and submission guidelines are available at www.uhclthesignal.com/wordpress/contributorspage/.The Signal can be found on social media as @uhclthesignal.

Phone	281-283-2570
Email	thesignal@uhcl.edu
Web	www.uhclthesignal.com
Location	Bayou 1239

Veteran Services

It is the mission of the Capt. Wendell M. Wilson Office of Veteran Services to help veterans and their dependents flourish in their higher education pursuits. We act as a liaison between the military-connected student, the school, the Department of Veterans Affairs (VA), and the Texas Veterans Commission in order to ensure these goals are reached. Our staff members are committed to assisting veterans and their eligible dependents with federal or state education benefits gained through military service.

Military-connected students entering UHCL should contact the Capt. Wendell M. Wilson Office of Veteran Services immediately to establish their benefits in a timely manner. For one-on-one counseling regarding benefits, contact the VSO directly at vso@uhcl.edu or by phone at 281-283-3071.

Services include:

- Providing certification of enrollment for the following federal benefits: Post 9/11 GI Bill, Montgomery GI Bill, Reservist Educational Assistance, Vocational Rehabilitation and Employment Program and Dependent Educational Assistance
- Processing of Hazlewood Exemptions and Hazlewood Legacy Act
- Determining eligibility for House Bill 269 (military service credit)
- Establishing residency for those who are receiving federal or state veteran education benefits

Detailed information regarding Military and Veteran Services can be accessed here: Capt. Wendell M. Wilson Office of Military and Veteran Services

For more information:

Phone	281-283-3071
Email	vso@uhcl.edu
Web	www.uhcl.edu/veteran-services
Location	SSCB 3201

Student Success and Initiatives Division

Academic Advising

University of Houston-Clear Lake is committed to providing the most appropriate and effective academic direction, assistance and support for all its students. Please see below for each college's (College of Business, College of Education, College of Human Sciences and Humanities and College of Science and Engineering) distinctive and comprehensive academic advising services:

College of Business: Graduate students receive academic advising from their academic adviser who is assigned to them upon admission. Graduate students should contact their assigned academic adviser directly for assistance regarding degree progress and course confirmation for veteran's benefits, changing majors or other procedural assistance. For guidance on career goals and other professionally related questions, students may contact the faculty mentor that is listed on the Candidate Plan of Study (CPS).

College of Education: Graduate students receive academic advising from their faculty advisers who are assigned to them upon admission. Graduate students should contact their assigned faculty advisers directly for assistance on course selection, career goals and other professionally related questions. For assistance in connecting with their faculty advisers or with paperwork regarding veteran's benefits, changing majors or other procedural assistance, students may contact the COE Office of Academic Advising.

College of Human Sciences and Humanities: Graduate students receive academic advising from their declared program faculty. Graduate students should contact their assigned faculty adviser directly for advising on course selection, program completion and career planning. For assistance in connecting with the program and faculty advising, or with paperwork regarding veteran's benefits, changing majors or other procedural assistance, students may contact the HSH Office of Academic Advising.

College of Science and Engineering: Graduate students receive academic advising from their faculty adviser who is assigned to them upon admission. Graduate students should contact their assigned faculty adviser directly for assistance on course selection, career goals and other professionally related questions. For assistance in connecting with their faculty adviser or with paperwork regarding veteran's benefits, changing majors or other procedural assistance, students may contact the CSE Office of Academic Advising.

Preparation for a meeting with an adviser:

- Check to make sure the adviser will be available and make an appointment.

- Bring a current degree plan.
- Have a list of questions and/or concerns to promote judicious use of time.
- Remind the adviser of previous discussions.

Office	Location	Contact
College of Business	Bayou Building, 2111	281-283-3110
College of Education	Bayou Building, 1231	281-283-3600
College of Human Sciences and Humanities	Bayou Building, 1539	281-283-3333 hshadvising@uhcl.edu
College of Science and Engineering	Bayou Building, 3611	281-283-3711 cseadvising@uhcl.edu

More information on academic advising can be found at:
www.uhcl.edu/academics/advising

Accessibility Support Center

The Accessibility Support Center provides institution-wide advisement, consultation and training on disability-related topics; collaborates with partners to identify and remove barriers to foster an all-inclusive campus; and, provides individual services facilitating accommodations to students with disabilities. The Accessibility Support Center promotes each students' learning experience by facilitating accessible programs and services and fostering self-advocacy skills within the students with disabilities community. Accommodations include, but are not limited to testing accommodations, alternative formats, assistive technologies, classroom access and sign language interpreters. To be eligible for services, a student must submit the online application form, speak with a staff member about their disability, and provide appropriate documentation which validates their request.

For more information on the Accessibility Support Center, contact:

Phone	281-283-2648
Email	disability@uhcl.edu
Web	www.uhcl.edu/accessibility-support-center
Location	SSCB 1.302

Math Center

The Math Center provides private and drop-in tutoring services to students enrolled in math or physics courses. The center provides a fully equipped study space with enough whiteboards to help with working and learning. In addition, the center also provides a program for first-generation students called "First to Succeed," STEM-related events and supplemental instruction.

Students wishing to use the center's services may do so from 8 a.m. - 6 p.m. in Bayou 2127, or from 4 p.m. - 9 p.m. in the STEM building study lounges.

For more Math Center information, contact:

Phone	281-283-2460
Email	cox@uhcl.edu
Web	www.uhcl.edu/math-center
Location	Bayou 2127

Student Success Center

The Student Success Center is a comprehensive academic resource for the UHCL student community, which includes peer tutoring, supplemental instruction and academic coaching. The focus of the center is to help students enhance their academic skills in their current courses, whether seeking remedial support or needing assistance with maintaining good standing. Additionally, the center helps students manage their daily responsibilities through personalized guidance in skills including effective study habits and efficient time management.

The Student Success Center works cooperatively with the Writing Center, Math Center, Disability Services, Career Services, Counseling and Mental Health Center, academic departments, students, faculty and staff in an effort to maintain a strong consortium of resources aimed at increasing student success, retention and persistence. The center is open and free of charge to all UHCL students.

For more Student Success Center information, contact:

Phone	281-212-2643
Email	studentsuccesscenter@uhcl.edu
Web	www.uhcl.edu/student-success-center

Location	SSCB 3102

Testing Center

The Testing Center is a student-centered and community-minded department that exists to provide a wide variety of testing services that assist students, staff and community in reaching their educational goals.

The Testing Center is accredited by the National College Testing Association (NCTA), and is a certified center for PearsonVue, Certiport, ETS, CASTLE, Kryterion and CollegeBoard. The Center provides a quiet, secure environment with welcoming staff and fast check-in/check-out processes to ensure the testers can focus on their testing experience. For a complete list of offered tests, please refer to the testing center website below.

For more Testing Center information, contact:

Phone	281-212-3080
Email	uhcltesting@uhcl.edu
Web	www.uhcl.edu/testing
Location	Bayou 1408

Writing Center

In the Writing Center, students, faculty, staff and alumni can work with trained tutors on their writing projects. Tutors collaborate with writers as they analyze assignments and audiences, revise documents by clarifying ideas and structure, and learn stylistic conventions and editing strategies. The Writing Center offers one-on-one tutoring both face-to-face and online on UHCL's Clear Lake and Pearland campuses, as well as a variety of writing-related workshops, tip sheets and other resources.

For more Writing Center information, contact the Writing Center:

Phone	281-212-2910
Email	writingcenter@uhcl.edu
Web	www.uhcl.edu/writing-center

Location	SSCB 2105

Graduate Information

Graduate information contains an overview the services and policies that pertain to graduate students. This information becomes effective with the beginning of the fall 2023 semester.

Financial Aid

Financial Aid Programs

The financial aid programs listed below are available to students seeking a graduate degree at University of Houston-Clear Lake. Students who wish to apply for financial aid should complete the Free Application for Federal Student Aid (FAFSA) online at studentaid.gov. UHCL's federal school code is **011711**. More information regarding the types of aid listed below can be found at uhcl.edu/costs-aid.

Program

- Federal TEACH Grant
- Texas Public Educational Grant (TPEG)
- University Scholarships
- Full-Time to Finish Scholarship
- Resident Graduate Student Assistance Grant
- Federal College Work Study Program (FWSP)
- Texas College Work Study Program (TWSP)
- Hinson-Hazlewood Loan
- Federal Direct Grad PLUS Loan
- Federal Direct Unsubsidized Stafford Loan

***All students applying for their first Federal Direct Loan must complete Loan Entrance Counseling and the electronic Master Promissory Note (eMPN) at studentaid.gov before loan funds can be disbursed. Program availability is never guaranteed. Financial aid programs are subject to change at any time.**

Qualifying for Financial Aid Programs

Students must meet these minimum requirements:

- 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-151, I-551 or I-551C (permanent resident card).
- Be admitted to a degree-seeking graduate program.
- Be enrolled at least half-time at UHCL (half-time is considered at least five hours for a graduate student).
- Be making satisfactory academic progress toward a degree.

- Not be in default on any education loan or owe a refund on a federal and/or state grant.
- If male and requesting state funds, be registered with the Selective Service System.
- Possess a high school diploma, GED, Homeschool Completion Record or equivalent of a high school diploma.

Applying for Financial Aid

Because regulations governing financial aid change each year, students are required to reapply and submit new documentation annually. Applications for financial aid open October 1st of every year. 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:

- 2023-2024 Free Application for Federal Student Aid (FAFSA) available online at studentaid.gov.
- If the FAFSA is selected for a process called verification, the student/spouse must provide supplemental information requested by the Financial Aid Office.

The priority deadline is January 15th of each year. Students applying after January 15th can expect the majority of the grant money to be exhausted.

The FAFSA and any additional documents will not be reviewed or processed until admission requirements have been met.

Students must submit ALL requested documentation to the Office of Student Financial Aid one month before the end of the term they wish to receive financial aid. Failure to adhere to this deadline can prevent the student from being awarded and disbursed financial aid.

Awarding of Aid

Financial aid is awarded based on the information received on the FAFSA. It is our institutional policy to award available grant, scholarship and work study funds before considering the student for student loans.

UHCL's policy is to award all eligible students based on full-time enrollment. Students will be given the option to update their intended enrollment. However, final awards will be based on actual enrollment. 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 university-assigned campus e-mail address is the official communication vehicle for all student information and exchanges among academic administrative offices. The following notifications will be sent via e-mail:

- Requests for additional information
- Notices of scholarship deadlines and opportunities
- Award notices
- Disbursement notices
- Award revisions
- Required consumer disclosure information

Also, most required consumer disclosure information is contained in the UHCL Financial Aid Guidebook located on the UHCL financial aid website (uhcl.edu/costs-aid).

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, please visit go.uhcl.edu.

Students have the ability to forward their UHCL e-mail account to a preferred e-mail account. Students interested in this option should visit University Computing and Telecommunications' website at www.uhcl.edu/computing.

Students wishing to receive a paper copy of all notifications must submit their request in writing to:

Office of Student Financial Aid
Attn: Executive Director of Financial Aid
Box 5
2700 Bay Area Blvd.
Houston, TX 77058

Disbursement of Funds

Financial aid disbursement occurs when grants, loans or scholarships are applied to a student's UHCL account.

Financial aid disbursements begin approximately seven 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.

*Financial Aid disbursement for enrollment in a winter-mini class will not occur until the first disbursement of the spring regular session.

Aid applied to a student's account will be applied to the current balance first.

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

Some forms of financial aid, such as TEACH Grant, may not disburse until after the census date. Students concerned about a late payment due to these types of anticipated aid should contact the Office of Student Financial Aid.

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. The Office of Student Financial Aid also uses this requirement for awarding institutional funds.

Students receiving some waivers and exemptions must meet certain components of SAP.

Review for SAP is done at the time the student first applies for financial aid and at the end of each semester. SAP is based on the below qualitative and quantitative measures.

Grade Point Average

The qualitative measure requires that graduate students working on a master's degree or doctoral degree must maintain a cumulative GPA of 3.000 or better.*

***Financial Aid calculates a cumulative GPA for purposes of Satisfactory Academic Progress, which includes all grades received. Students repeating a course will have all grades included in their Financial Aid cumulative GPA calculation.**

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, WQ, I, U, F and IP coursework. Hours of WX, WQ, I, U, F and IP are considered "not completed," and negatively affect the ratio requirements. The percentage derived must be 75% or greater.

Timeframe to Complete Academic Program

For first or second master's degree or doctorate within a total of 54 UHCL hours--hours counted include all coursework taken at UHCL (including WX, WQ, I, U, F and IP grades) and transfer coursework.

Students enrolled in the following programs must complete their master's or doctorate within the specified timeframe listed below:

Early Childhood Education M.S.	73 hours
Clinical Psychology M.A.	63 hours
School Psychology SSP	70 hours
Family Therapy M.A.	63 hours
Healthcare Business Administration	84 hours
Education Leadership Ed.D.	69 hours

Students with two or more earned graduate degrees attempting additional graduate degrees will be reviewed on a case-by-case basis after exceeding 54 UHCL hours or 150% of the program of study (whichever is greater).

Note: Students changing plans are still held to timeframes originally begun with the first major chosen.

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 given a "financial aid warning" for the following semester. Students will be notified via UHCL e-mail of their warning status. Students who fail to meet SAP after their warning semester will not be eligible to receive financial aid, unless they complete a SAP appeal and academic plan, and that appeal is approved.

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

Appeals are considered for, but not limited to, the following reasons:

- Increase in workload at place of employment because of promotion or overtime. Documentation from the employer may be required.
- Personal illness or serious illness of immediate family members, such as spouse, child, parent, or sibling. Documentation is required. Acceptable forms of documentation include, but are not limited to receipts for doctor visits, insurance Explanation of Benefits (EOB), or a note from the doctor.

- Death of a family member. Documentation is required, such as a death certificate, obituary, prayer card, or brochure from the funeral or memorial service.
- Mitigating circumstances. Appropriate support documentation may be required.

Each appeal is reviewed on its own merit.

SAP Appeal forms are available online 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 credit hours remaining for the student to complete the degree program.

Academic Plan, pages 3-4 of SAP Appeal must be completed with an academic adviser. Students should contribute to the academic plan to ensure success.

Deadlines: Appeal forms and academic plans 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). Appeals must be approved before the close of the semester for financial aid to be reinstated for that semester.

A copy of the student's Candidate Plan of Study (CPS) must be submitted with the appeal. Incomplete appeals and academic plans will not be considered. The SAP committee will review all appeals at least twice per month. All decisions reached by the SAP committee are final. Students will be notified via their UHCL e-mail regarding the outcome of their appeal.

Students whose SAP appeals are approved will receive financial aid for one semester on a probationary basis. At the end of that semester, students who are meeting the three criteria for SAP or are following the terms and conditions of their academic plan will not have to appeal. Students who are not meeting SAP will be notified via their UHCL email and they may submit another SAP appeal to the Office of Student Financial Aid.

Financial Aid Policy for Students Withdrawing from the University

Per federal regulations, 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 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 returned.

A student who obtains all F grades or a combination of withdrawals and F grades will be considered an unofficial withdraw. The Office of Student Financial Aid will use the date of last attendance input by the professor on the grade roster as the date of withdrawal for the term. If the withdrawal date is on or before the 60% point in time of the semester enrolled, the student will have the percentage and amount of Title IV unearned assistance calculated by the university. The Office of Student Financial Aid will then determine the amount of money to be returned. Aid may also be adjusted or canceled if the student never attended the course.

While rare, some students may be eligible for a post-withdrawal disbursement. The Office of Student Financial Aid will contact these students. Students should carefully read the deadlines given to be eligible for the disbursement.

Refund Distribution Priority

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

- Federal Direct Loan Program (DL) - Direct Unsubsidized Stafford Loan
- Federal Direct Grad PLUS Loan
- Federal TEACH Grant
- Other Title IV programs

Dropping from a Class but Retaining Half-Time Status

Financial aid awards are based on full-time status. Students can request a package based on enrollment less than full-time. 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 may be required to make repayment of 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 can apply for jobs on the Office of Student Financial Aid's website (uhcl.edu/costs-aid).

Exit Counseling

When Federal Direct Loan recipients complete a degree or drop below half-time, federal statutes require those students to complete exit counseling. The purpose of exit counseling is to ensure loan recipients understand obligations and are prepared for repayment. Students' academic records may be encumbered if the student borrower does not complete exit counseling.

Exit counseling is completed online at studentaid.gov.

State Waivers and Exemptions

The Office of Student Financial Aid coordinates the application for several state waivers and exemptions listed below. Students can find detailed information for each waiver and exemption at: www.collegeforalltexans.com.

- Research Assistants and Teaching Assistants Waiver
- Competitive Scholarship Waiver
- Good Neighbor Scholarship Program
- Waiver for College Faculty and their Dependents
- Adopted Students Formerly in Foster or Other Residential Care
- Exemption for Students under Conservatorship of the Dept. of Family and Protective Services
- Blind/Deaf Student Exemption Program
- Peace Officer Tuition and Laboratory Fee Exemption Program
- Application deadline is one week before the end of Open Registration for the semester.
- Exemption is limited to no more than 20% of class enrollment receiving waiver. Students should apply early.

Exemptions allow special groups of Texas residents or nonresidents to enroll and pay a reduced amount of tuition and fees. Waivers allow special groups of nonresidents to enroll and pay a reduced nonresidents tuition rate.

Unless noted otherwise, all applications for waivers and exemptions must be submitted to the Office of Student Financial Aid by the census date for which the waiver/exemption would be applied. All applications after the census date will be reviewed on an individual basis and may be denied.

****Senate Bill 1210 (83rd Texas Legislature, Regular Session) adds a Grade Point Average requirement for persons to receive continuation awards on certain waivers/exemptions listed above. The Bill also establishes a Limit to the Total Number of Hours, cumulative, that a student may take and continue to receive awards. Please refer to www.collegeforalltexans.com or www.uhcl.edu/costs-aid for more information.**

Scholarships

The Office of Student Financial Aid is committed to awarding scholarships to students consistent with the educational mission of our university. Graduate students (including international students) entering UHCL for the first time may apply for a

Hawk Scholars scholarship award. Additionally, current/continuing UHCL students may apply for university scholarships annually. For information and to apply for scholarships, please visit uhcl.edu/costs-aid.

Enrollment Status

The amount of financial aid a student can receive is dependent upon the number of hours in which the student is enrolled. The following are enrollment statuses for graduate students based on the number of hours the student is enrolled:

Enrollment Status	**Credit Hours**
Full Time Enrollment	9 hours or more
Three Quarter Time Enrollment	7 hours to 8 hours
Half Time Enrollment	5 hours to 6 hours
Less Than Half Time Enrollment	4 hours or less

For fall, spring and summer terms, all hours are added together between sessions within each term to arrive at the total number of hours for the term.

Students enrolled less than half time will not be eligible for student loans.

Students are responsible for notifying the Office of Student Financial Aid if their enrollment changes.

General Program Requirements

Student Responsibility

Students are responsible for knowing their degree requirements and enrolling in courses appropriate for their chosen degree 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.

Graduate Standing

Graduate standing is given to those students who have earned a bachelor's degree and have indicated their intent to study at the graduate level or pursue teacher certification at UHCL by submitting a graduate studies application.

Degrees Offered

University of Houston-Clear Lake is authorized by the Texas Higher Education Coordinating Board to confer three doctoral degrees and six degrees in 46 graduate majors.

Degrees and Programs (A-Z)

Advanced TEA Certification

- Principal as Instructional Leader Certificate
- Probationary Principal as Instructional Leader Certification
- Reading Specialist Certification
- School Librarian Standard Certification EC-12
- Superintendent Certification

Bachelor of Science/Master of Science

- Computer Engineering Dual Degree Program
- Computer Information Systems 5-year B.S./M.S. Dual Degree Program
- Computer Science B.S./M.S. Dual Degree Program

Certificate

- Certificate of Engineering Data Analytics (CEDA)
- Data Science Basics Certificate
- Data Science Certificate
- Early Childhood Leadership Certificate
- Environmental Management Certificate
- Human Resource Management Certificate
- Management Information Systems Certificates
- Management of Technology Certificate Program
- Physics Candidacy Certificate
- Project Management and Six Sigma Certificate
- Project Management Certificate
- SAP Student Recognition Award
- School Library and Information Science Certificate
- Software Engineering Certificate
- Supply Chain and Analytics Certificate
- Systems Engineering Certificate
- UHCL Content Specialization Graduate Certificate
- UHCL Curriculum and Instruction Professional Development Certificate
- UHCL Distance Education Certificate
- UHCL Higher Education Professional Certificate
- UHCL Instructional Coach Graduate Certificate
- UHCL Instructional Technology Professional Certificate
- UHCL Performance Technology Professional Development Certificate
- UHCL Program Evaluation Professional Development Certificate
- UHCL Reading Professional Development Certificate
- UHCL Research and Statistics Professional Development Certificate
- UHCL Research for Administrators Professional Development Certificate
- UHCL Special Populations Professional Certificate
- Women's and Gender Studies Certificate

Doctor of Education

- Curriculum and Instruction, Ed.D.
- Educational Leadership, Ed.D.

Doctor of Philosophy

- Physics Ph.D. Collaborative UHCL/UH Program

Doctor of Psychology

- Health Service Psychology (Clinical Psychology/School Psychology), Psy.D.

Master of Arts

- Behavior Analysis, M.A.
- Behavioral Sciences - General M.A.
- Clinical Psychology M.A.
- Criminology and Criminal Justice, M.A.
- Cross-Cultural and Global Studies, M.A.

- Digital Media Studies, M.A.
- Family Therapy, M.A.
- History, M.A.
- Human Resource Management, M.A.
- Humanities, M.A.
- Industrial/Organizational Psychology, M.A.
- Literature, M.A.
- School Psychology (Specialist in School Psychology)
- Sociology, M.A.

Master of Business Administration

- Business Administration, MBA

Master of Business Administration/Master of Healthcare Administration

- Healthcare Administration/Business Administration, MHA/MBA

Master of Healthcare Administration

- Healthcare Administration, MHA

Master of Science

- Accounting, M.S.
- Biological Sciences, M.S.
- Biotechnology M.S.
- Chemistry, M.S.
- Clinical Mental Health Counseling, M.S.
- Computer Engineering, M.S.
- Computer Information Systems, M.S.
- Computer Science, M.S.
- Cooperative Doctor of Chiropractic Master of Science in Biology Degree Program
- Counseling M.S. with School Counselor Certificate
- Curriculum and Instruction, M.S.
- Curriculum and Instruction, Reading Specialist, M.S.
- Curriculum and Instruction, Specialization in Instructional Technology, M.S.
- Data Science, M.S.
- Dual Doctor of Chiropractic/M.S.
- Early Childhood Education, M.S.
- Educational Management M.S. with Social Justice Specialization
- Educational Management with Principal as Instructional Leader Certification M.S.with Social Justice Specialization
- Educational Management, M.S.
- Educational Management, Principal as Instructional Leader Certification and Reading Specialist Certification, M.S.
- Educational Management, Principal as Instructional Leader Certification, M.S.
- Engineering Management, M.S.
- Environmental Management, M.S.

- Environmental Science, M.S.
- Environmental Science, Online Option, M.S.
- Exercise and Health Sciences, M.S.
- Finance, M.S.
- Instructional Design and Technology, Game Theory and Design Specialization, M.S.
- Instructional Design and Technology, Human Resource Management Specialization, M.S.
- Instructional Design and Technology, Industrial/Organizational Psychology Specialization, M.S.
- Instructional Design and Technology, Information Science Specialization, M.S.
- Instructional Design and Technology, M.S.
- Management Information Systems, M.S.
- Mathematical Science, M.S.
- Mathematics M.S./Statistics M.S.
- Multicultural Studies in Education, M.S.
- Occupational Safety and Health, M.S.
- Physics, M.S.
- Psychology, Human Factors Concentration, M.S.
- Psychology, M.S.
- Psychology, Neuroscience and Behavior Concentration, M.S.
- School Library and Information Science M.S.
- School Library and Information Science, School Librarian Standard Certification (EC-12), M.S.
- School Library and Information Science, School Librarian Standard Certification (EC-12), M.S. with Social Justice
- Serious Games and Simulations, M.S.
- Software Engineering M.S.
- Software Engineering, M.S. 1.5 Year Degree Map
- Software Engineering, M.S. 2 Year Degree Map
- Statistics, M.S.
- Systems Engineering, M.S.

TEA Certification

- Graduate Teacher Certification Plan Core Subjects 4-8
- Graduate Teacher Certification Plan Core Subjects EC-6
- Graduate Teacher Certification Plan Core Subjects EC-6 with Bilingual Education Supplemental Certification
- Graduate Teacher Certification Plan Core Subjects EC-6 with EC-12 Special Education
- Graduate Teacher Certification Plan Core Subjects EC-6 with ESL Supplemental Certification
- Graduate Teacher Certification Plan English Language Arts and Reading 4-8
- Graduate Teacher Certification Plan English Language Arts and Reading 7-12

- Graduate Teacher Certification Plan English Language Arts, Reading and Social Studies 4-8
- Graduate Teacher Certification Plan History 7-12
- Graduate Teacher Certification Plan Life Sciences 7-12
- Graduate Teacher Certification Plan Mathematics 4-8
- Graduate Teacher Certification Plan Mathematics 7-12
- Graduate Teacher Certification Plan Science 4-8
- Graduate Teacher Certification Plan Social Studies 4-8
- Graduate Teacher Certification Plan Social Studies 7-12

Master of Arts in Teaching

- Teaching with Core Subjects 4-8 Certification, M.A.T.
- Teaching with Core Subjects EC-6 Certification, M.A.T.
- Teaching with Early Childhood PreK-3 Certification, M.A.T
- Teaching with Life Science 7-12 Certification, M.A.T.
- Teaching with Mathematics 4-8 Certification, M.A.T.
- Teaching with Mathematics 7-12 Certification, M.A.T.
- Teaching with Science 4-8 Certification, M.A.T.
- Teaching with Secondary Literacy Subjects 4-8 Certification, M.A.T.
- Teaching with Secondary Literacy Subjects 7-12 Certification, M.A.T.

Other Programs

- • Business
- • Education
- • Human Sciences and Humanities
- • Science and Engineering

Enrollment 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 12 hours for graduate students during the fall and spring semesters. For the summer semester, the limit is nine hours.

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, online credit hours per semester may be counted towards full-time enrollment for F and J student visa holders.

Full-Time/Part-Time Status Course Load

A student's enrollment status is determined by the number of credit hours for which the student is enrolled at UHCL each semester. Enrollment statuses are listed below:

Enrollment Status	Credit Hours
Full Time Enrollment	9 hours or more
Three Quarter Time Enrollment	7 hours to 8 hours
Half Time Enrollment	5 hours to 6 hours
Less Than Half Time Enrollment	4 hours or less

For the summer term, all hours are added together between sessions to arrive at the total number of hours for the summer.

When enrolled in a cooperative education course, students will be considered full-time for purposes of enrollment verification. The above hours requirement may differ for financial aid purposes. Please review the section of the catalog on Financial Aid or contact the Office of Financial Aid.

Resident Credit

Resident credit is defined in two ways:

- Credit awarded for successful completion of academic work undertaken at UHCL

or

- 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 adviser 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.

Graduate Courses

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.

Education Abroad Grade and Transcript Catalog Statement

Upon approval and receipt of the Education Abroad Course Approval Form, all courses and credits taken abroad will reflect on the student's official University of Houston-Clear Lake transcript. Courses taken abroad will not be factored into GPA.

For all programs in which students receive a transcript (foreign or domestic), courses will be transferred and reflected with the grade and credit earned. Students on affiliated, partner providers programs and exchange study abroad programs may not elect for any of their credit or grades from abroad to be posted as Credit/Not Credit.

Students may only earn credit for a class once. Courses and actual grades will appear on the transcript.

30-Hour Residency Requirement:

Courses taken on an approved education abroad program may be considered in residence per the approval of the academic program and the college dean. A letter or email confirming and approving this exception must accompany the Education Abroad Course Approval Form or official UHCL Education Abroad application.

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.

Dropping or Withdrawing from Classes

Drop/Withdrawal Time Frame

Students may drop one or all classes without a grade penalty through the census date of the semester or session. Classes that are dropped through the census date will not be posted on a student's official or unofficial transcript. Students may drop classes online through their E-Services account. Please see the Academic Calendar at www.uhcl.edu/registrar for the census dates of the semester or session.

Students who drop a class or withdraw from all classes after the census date of the semester or session, but no later than the withdrawal deadline as stated in the

Academic Calendar will receive one of the following grades: WQ (Student-initiated drop, No Evaluation) or WX (Administrative Drop or Withdrawal, No Evaluation). These grades imply no evaluation of students' performance prior to the withdrawal. Students may retain auditing privileges with the instructor's consent.

Student-Initiated Withdrawals

Once students have registered and paid tuition/fees for the course section, they are considered enrolled in the course(s) until they have officially dropped/withdrawn or received a grade. Nonattendance does not automatically terminate students' enrollment in the course(s) and does not exempt them from any academic or financial responsibilities. Students who stop attending class without officially dropping/withdrawing from the course(s) will receive a final grade based on coursework completed.

If a student wishes to drop any or all of their classes, they are responsible for doing so online through E-Services by the deadlines stated in the academic calendar. Withdrawal requests in writing can also be made by mail or by fax to 281-226-7230 and are effective on the date of receipt. Please contact the Office of the Registrar for additional assistance at registrar@uhcl.edu. The student assumes responsibility for written requests for drops/withdrawals that are delayed or not delivered. Drops/Withdrawal requests received after the deadlines stated in the Academic Calendar will not be processed. 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.

Course(s) dropped through the published census day will not appear on the transcript. Course(s) dropped after the Census Day and through the published withdrawal deadline will appear on the student's transcript with a grade of WQ. Census day and withdrawal deadlines are published online in the academic calendar.

All outstanding bills and university obligations must be paid/fulfilled. These obligations include any payment plans or loan agreements issued by Student Business Services. Contact Student Business Services for additional information. Students receiving financial aid are advised to contact the Office of Financial Aid prior to making changes in their enrollment status. Reducing semester hours to zero is considered a withdrawal and the refund schedule will be followed. Please refer to the refund schedule on the Student Business Services' website for information about deadlines.

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.

Students who are requesting a current semester medical withdrawal must submit a Student Appeal form to the Office of the Registrar before the end of the current semester if they cannot withdraw themselves by the withdrawal deadline. Please refer to the academic calendar for more information regarding deadlines. A medical withdrawal formally drops all courses in a term.

Written appeal for a medical withdrawal should address each of the following:

1. Describe the medical condition/circumstances that required you to withdraw from the university.
2. Explain in detail how/why the medical condition/circumstances prevented you from completing the academic term.
3. Detail the dates of the onset of your medical condition/circumstances, along with the dates of any treatment you received, if appropriate.
4. If you stopped attending classes, explain why and when. (Please note: nonattendance does not exempt you from academic and financial responsibilities).
5. If you did not utilize the regular withdrawal process, explain why not.
6. Explain what relief you are seeking from this request. Be as specific as possible. Note: Medical withdrawals do not refund tuition and fees.

Supporting Documentation

You must include a letter from your health care provider(s) or other pertinent sources. The documentation should be on clinic letterhead and should address the following:

- Describe the diagnosed medical or psychological condition or circumstances, and indicate when treatment commenced.
- Explain how the severity of the condition completely prevents the student from attending classes and completing the semester.
- Address potential health/clinical consequences if a medical withdrawal is not granted.

Review Process

1. Submit all materials to the Office of the Registrar. Any missing or incomplete information may delay consideration of your request.
2. After the materials are received, your request will be evaluated by the Office of the Registrar and you will be notified when it has been approved or denied. You may be asked to provide additional information to assist the university in its evaluation of your request. The decision of the Office of the Registrar is final.
3. Please note that a medical withdrawal is granted in rare instances where a student is faced with a serious and unexpected condition that completely precludes him/her from being able to function as a student. If a request is approved, the student may be required to submit documentation from a

health care provider to indicate his/her ability to function successfully prior to subsequent enrollment. Additional requests for a medical withdrawal are normally not granted for the same circumstances.

4. Withdrawal appeals should be submitted to the Office of the Registrar prior to the close of the following long semester. Appeals submitted after one long semester will not be considered.

IMPORTANT NOTES:

- International students, students with a disability, and students who are receiving financial aid, veteran's and/or other benefits and who are considering withdrawing from the university must meet with the appropriate official (e.g., international student adviser, staff from Disability Services, financial aid counselor, or veteran's services) before withdrawing since there may be legal, certification, and/or repayment penalties associated with withdrawing.
- Medical withdrawal typically results in withdrawal from all classes. Students who are considering the medical withdrawal process and wish to drop some, but not all of their classes for a term should instead contact their academic associate dean's office for information about administrative drops.
- Student Loans: Students who have borrowed from the Perkins or Direct Loan programs are federally required to schedule an Exit Counseling session. Contact the Office of Financial Aid for additional information.
- All outstanding bills and university obligations must be paid/fulfilled. These obligations include any payment plans or loan agreements issued by Student Business Services. Contact Student Business Services for additional information.
- Medical withdrawals do not provide for a refund of tuition and fees.

Final Exams

Final exams for the regular fall and spring terms must be scheduled the week following the last day of classes at the day/time indicated on the final exam schedule. Faculty teaching online courses during the regular fall and spring terms can schedule final exams anytime starting on the last day of classes until the end of the week following the last day of classes (the end of the regular exam week). During the summer sessions and fall/spring eight-week sessions, final exams are held on the last day of classes. Students and faculty should refer to the academic calendar and final exam schedule found online at www.uhcl.edu/registrar for additional information. Students with exam schedule conflicts must work with faculty to resolve conflicts.

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 of 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.

Academic Appeals

Academic appeals include those appeals related to grades and academic programs or degree requirements. 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.

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 associate dean of the degree granting college detailing the grounds for the appeal. The associate 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.

Grading Policies

Description of Letter Grades

• 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 Points Per Semester Hour	Grade
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

WQ* Student Initiated Drop, No Evaluation

WX* Withdrawal or Administrative Drop, 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, graduate option and TexES course work

++IP awarded for graduate option course work

Grade Point Average (GPA)

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

The cumulative grade point average is based on the grade points earned since admission to UHCL, excluding those hours for which grades are shown with asterisk (*) above. GPAs will round at three decimals. Grades earned for transferred courses are not calculated into grade point average at UHCL.

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 occur 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 grade can be converted to a final grade, also specifying 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 grade was assigned. Failure to resolve an I will result in its conversion to a final grade of F on students' permanent records. A grade of 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 grade, which has been changed to a grade, or has been converted to a grade of F will be recorded and academic action taken during the semester of the grade change.

In Progress Grade

Master's Thesis, Project, Dissertation, 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 or dissertation. Not all internships require continuous enrollment, but those that do are eligible for IP grades. The IP grade will

not automatically convert to a grade of F if not resolved within a specified time. At the time final grades for graduate 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 an 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 or a dissertation are automatically enrolled in the same course each fall and spring semester until a final grade is assigned. 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 program in which the course was taught. Grade changes must be filed in the Office of the Registrar 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. 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 in determining academic standing 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. Note: While the last grade earned will be used to calculate GPA and academic standing for the most recent term, academic standing history will not change. In addition, some courses are repeatable for credit and repeating a course will not

change the GPA. For example, each attempt of Special Topics courses will count towards the GPA.

Grade Reports

Students can access their semester grades online at www.uhcl.edu/eservices. The student's password is required for this confidential access. Grades can also be obtained by requesting a transcript. Grade reports are not mailed.

Grade Appeals

All appeals relating to specific course grades require that students first seek a satisfactory solution with the instructor. If a solution 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 college in which the grade was earned. This written request must be received by the associate dean within 45 days from the calendar 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.

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.

Graduate Academic Status

Graduate students must maintain a cumulative GPA of 3.000 or better in course work at UHCL. Each college may establish standards beyond the university's minimum cumulative GPA requirement. A minimum of 3.000 cumulative GPA is required to graduate. The last attempt of 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

Graduate students whose cumulative GPA falls below 3.000 will be placed on academic probation. Students who are on academic probation must earn a minimum 3.000 semester GPA on course work each subsequent semester until the grade point deficiency is removed. Students will be removed from Academic Probation when their cumulative grade point average is at or above 3.000. 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.

Mandatory Probation Counseling - International Students

In order to avoid the consequences of academic suspensions on an international student's immigration status, an international student placed on academic probation will be placed under mandatory academic counseling until such time that the student returns to good academic standing (cumulative GPA of 3.0). The academic probation counseling program is a comprehensive program that requires the student to meet with the Student Success Center to evaluate the academic support needs of the individual. The Student Success Center, in collaboration with the student's academic adviser will assist the student in developing an academic plan that guides the student's return to good academic standing.

Academic Suspension

What is Academic Suspension?

If you are on academic probation and your semester GPA falls below the required 2.0 for undergraduates or 3.0 for graduate students, you will be placed on academic suspension. Reinstatement from academic suspension is not automatic. You must petition the administrator indicated below in order to request consideration for reinstatement from suspension. If you are suspended, until you are reinstated, you will not be able to enroll, audit, or visit classes for a period of time, as follows:

- First suspension - one semester
- Second suspension - one year
- Third suspension - after one year

When can you return to UHCL?

Suspension and the end of:	First Suspension:	Second Suspension:	Third Suspension:
Fall	Following Summer	Spring of the following academic year	Spring of the following academic year
Spring	Following Fall	Summer of the following academic year	Summer of the following academic year
Summer	Following Spring	Fall of the following academic year	Fall of the following academic year

Reinstatement Process for First or Second Suspension

After serving your suspension period, before you can apply for reinstatement to UHCL, you must:

Determine whether you will remain in the degree program for which you were previously enrolled. If you are not seeking to change majors upon your return, you will need to submit a request for reinstatement to the associate dean of your college. If you intend to change your degree program, you will need to speak to an academic adviser in the college of your desired program, complete an Academic Record Change form, and send that form along with your reinstatement petition to the associate dean of the college housing your desired program.

Your written reinstatement petition should address:

1. the circumstances that led to your academic difficulties
2. how your circumstances have changed and,
3. what steps you intend to take to improve your academic performance if you are reinstated.

If you took courses at another institution while under suspension at UHCL, you should attach a copy of transcripts showing your academic activity. Be sure to ask institutions you have attended during your absence from UHCL to send your transcripts to the UHCL Office of Admissions. You may also be asked to provide additional documentation to support the identified circumstances that led to your academic difficulties. If you are applying for reinstatement after a year of non-enrollment at UHCL, once you are reinstated, you will need to submit a new admissions application and pay the appropriate application fee.

Reinstatement decisions will be made by the associate dean of your college or of the college to which you wish to transfer to in consultation with the department chair and designated program faculty. The international student adviser should be notified of the decision, if applicable. In addition to consultation with the faculty, the associate dean will consult with any and all appropriate offices who could have knowledge of the student (Ex: academic advising, student success, etc.). Decisions made by the associate dean may be appealed in writing to the dean of the college within 15 calendar days of the associate dean's communication of the reinstatement decision.

Reinstatement Process for Third Suspension

If you have been suspended for a third time, you may petition for reinstatement by writing to the associate dean of your college after a year of sitting out from your work at UHCL. Reinstatement is not automatic. The gravity of the circumstances and the academic history will be considered in determining if the petition should be granted. You may not apply for early reinstatement after the second suspension.

Your written petition should address:

1. the circumstances that led to your academic difficulties
2. how your circumstances have changed and,
3. what steps you intend to take to improve your academic performance if you are reinstated.

If upon reinstatement you wish to change majors, you must include a completed Academic Record Change form with your petition. If you took courses at another

institution while under suspension at UHCL, you should attach a copy of transcripts showing your academic activity. Be sure to ask institutions you have attended during your absence from UHCL to send your transcripts to the UHCL Office of Admissions. You may also be asked to provide additional documentation to support the identified circumstances that led to your academic difficulties.

The final decision to reinstate after the third suspension will be made by the Associate Vice President of Academic Affairs in consultation with your program faculty, college administrators and all appropriate offices who could have knowledge of your situation.

Early Reinstatement
If extenuating circumstances beyond your control affected your academic performance, you may submit a petition in writing for early reinstatement to the associate dean of your college or the college to which you are transferring. You may only apply for early reinstatement after the first or second suspension. No early reinstatement will be considered for the third suspension. Early reinstatement is not automatic. The gravity of the circumstances and the academic history will be considered in determining whether the petition should be granted. The final decision to grant early reinstatement will be made by the Associate Vice President of Academic Affairs in consultation with your program faculty, college administrators and all appropriate offices who could have knowledge of your situation.

Your written petition for early reinstatement should address:

1. the circumstances that led to your academic difficulties
2. how your circumstances have changed
3. the basis for your request to return from academic suspension early and,
4. what steps you intend to take to improve your academic performance if you receive early reinstatement.

If upon early reinstatement you wish to change majors, you must include a completed Academic Record Change form with your petition. If you took courses at another institution while under suspension at UHCL, you should attach a copy of transcripts showing your academic activity. Be sure to ask institutions you have attended during your absence from UHCL to send your transcripts to the UHCL Office of Admissions. You may also be asked to provide additional documentation to support the identified circumstances that led to your academic difficulties and reason for early reinstatement.

After Reinstatement
Once you are reinstated, your academic standing will change from academic suspension to academic probation. You will be placed under mandatory academic counseling until you return to good standing. This designation means that as long as you are on probation you will have a registration hold that will require you to meet with your academic adviser in order to register for classes. The administrator authorizing your reinstatement may also stipulate additional conditions until you return to good standing, such as limiting the number of hours you may take,

specifying courses that must be completed, or designating the course delivery mode for classes to be taken.

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 undergraduate students. A student who is reinstated must undergo mandatory advising and a registration hold will be placed on his/her record 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 Handbook.

Academic Policies

Academic Honesty Policy

I. GENERAL PROVISIONS OF 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 standard of personal behavior. The University can best function and accomplish its mission in an atmosphere of the highest ethical standards. The University expects all students, faculty, and staff to contribute to such an atmosphere by observing all accepted principles of academic honesty. This policy is designed to encourage honest behavior and outlines the processes and actions pertaining to any violation of the Academic Honesty Policy and Honesty Code.

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. The Honesty Code states:

I will be honest in all my academic activities and will not tolerate dishonesty.

Rationale.
The University of Houston-Clear Lake expects and encourages all students, faculty, and staff to abide by the Honesty Code. However, it is recognized that any university may include a few students who do not understand, appreciate, or choose to practice the accepted principles. As a consequence, alleged cases of academic dishonesty will inevitably occur. The following procedures are designed to handle these cases in fairness to all concerned: the accused student, the faculty, and the University of Houston-Clear Lake.

General Jurisdiction.

Matters relating to academic honesty are within the general jurisdiction of the Senior Vice President for Academic Affairs and Provost.

Questions Regarding Applicability of Policy.
All questions regarding the applicability of University of Houston-Clear Lake policy, code, or special provisions of either shall be determined finally by the Provost.

Compass of Actions Taken Against Students.
Actions taken against students are university-wide in their effect, unless otherwise specified.

Student Responsibility.
Students are expected to maintain complete honesty and integrity in all academic work attempted while enrolled at the University including following the Academic Honesty Policy. Each student acknowledges, by the mere act of turning in work for a grade, that they have honored the Honesty Code. Students shall have the responsibility of reporting incidents of alleged academic dishonesty to the instructor involved, or to the appropriate authority if the alleged act is not associated with a specific class, or if necessary, to the Dean of Students.

Teaching Assistant Responsibility.
Teaching assistants, including proctors, will have the responsibility of reporting incidents of alleged academic dishonesty to the instructor involved.

Instructor Responsibility.
Instructors are responsible for knowing the principles and procedures of the Academic Honesty Policy, and for enforcing the policy when academic honesty violations occur. Instructors must also remind students of the Academic Honesty Policy and help them comply with it.

Purpose of Procedures.
The purpose of these procedures is to provide for the orderly administration of the Academic Honesty Policy consistent with the principles of due process. Reasonable deviations from these procedures will not invalidate a decision or proceeding unless the Provost determines, upon written appeal from the accusing and/or accused parties, that the deviation will result in prejudice to one or more of the parties involved, including the student or instructor.

Notification.
All required written notices shall be addressed to the student via their UHCL email. It is the responsibility of the student to regularly check (at least once per week) their UHCL email. A notice properly addressed and so sent shall be presumed to have been received by the student.

Retaliation.
The University of Houston-Clear Lake prohibits retaliatory action against persons who report incidents of alleged academic dishonesty under this policy, who are suspected

of having reported incidents of alleged academic dishonesty under this policy, who are identified to serve or have served as witnesses in any academic honesty proceeding, or who are identified to serve or have served on a hearing panel. Any acts of retaliation will be referred to the appropriate office for review and response.

Academic Honesty Panel.
The Academic Honesty Panel is a group comprised of faculty, students, and academic administrators that conducts hearings in matters of academic dishonesty. It is the charge of the Academic Honesty Panel to uphold the Academic Honesty Policy of the University of Houston Clear Lake and to ensure that the policy process herein has been followed The Academic Honesty Panel includes one faculty member from each college, one student from each college, and an Associate Dean of the college in which the student is not enrolled.
The Student Government Association Executive Council will select a pool of students for each college. Each college Dean will select a student representative and an alternate from the college's pool of students. Members of the Academic Honesty hearing panel for a specific case will not include a member involved in the case of violation of the Honesty Code. Members are selected prior to the beginning of each academic year for a one-year term to begin September 1 through August 31 and they may serve consecutive terms. The Panel shall hold a hearing within ten working days of being notified by the Dean of Students.

II. PREVENTATIVE PRACTICES

Student Practices.
University of Houston-Clear Lake students may be required to participate in training on academic honesty and acknowledge their acceptance of the policy. Students will be provided with evidence of completion of training, which must be submitted to instructors as requested. Students are encouraged to read the Academic Honesty Policy and review as needed.

Instructor Practices.
Instructors can help students comply with the Academic Honesty Policy by noting the Honesty Code on the course syllabus and providing course-specific guidance. Instructors will use reasonable security precautions in the preparation, handling, and administering of graded work.

Instructors can help students comply with the academic honesty policy by minimizing temptation to act dishonestly. Measures instructors should consider are:

1. Maintaining adequate security precautions in the preparation and handling of tests;
2. Structuring the type and sequence of examination questions so as to discourage dishonesty;
3. Providing ample room for proper spacing of students during examinations, when possible;

4. Monitoring examinations, especially in large classes and in classes where not all students are known to the instructor or the assistant;
5. Making clear to their students the rules concerning the use of electronic devices;
6. Making clear to their students, in writing, what constitutes academic dishonesty, particularly in those classes where group activities (laboratory exercises, generation of field reports, etc.) are part of the instructional process;
7. Requiring students to submit their own work and defining for their students particular aspects of dishonesty, such as plagiarism and self-plagiarism;
8. Requiring students to show a picture ID and sign major assignments and exams; and
9. Helping raise consciousness of the issue of academic honesty by asking students to sign an honor pledge in the first week of class and to write a short honor pledge in their own hand on their major assignments.

University Practices.
The University will help students comply with the Academic Honesty Policy by informing students about academic honesty. Information about the Academic Honesty Policy will be provided to students at the time of admission and highlighted during orientation programs. The University shall establish guidelines to monitor that students and faculty follow the guidelines set forth in II.A and 11.B. Additional awareness efforts can be made at the College- and University-level that engage all members of the University community, with a particular focus on informing students and instructors about the Academic Honesty Policy each academic year.

III. CATEGORIES OF ACADEMIC DISHONESTY

Application of the Academic Honesty Policy.
This policy applies to those acts of dishonesty committed by a student while enrolled at the University of Houston-Clear Lake.

Academic Dishonesty Prohibited.
"Academic dishonesty" means employing a method or technique or engaging in conduct in an academic endeavor that contravenes the standards of ethical integrity expected at the University of Houston-Clear Lake or by a course instructor to fulfill any and all academic requirements. 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 and deemed academic dishonesty. Academic dishonesty includes, but is not limited to, the following:

1. Plagiarism
Plagiarism can include, but is not limited to, the following acts:

a. Using the words of another author without indicating that these words belong to another author.

b. Summarizing the words of another author without indicating that the summary has been derived from another author.

c. Using the ideas of another author without indicating that these ideas belong to another author.

d. Engaging another writer, whether a professional, friend, or family member to write a document that the student writer is expected to be solely responsible for writing. Or, stealing, copying, purchasing, or "borrowing" the writing of another author for the purpose of submitting the work as the writer's own.

e. Copying the organizational strategy of another author by presenting ideas in the text in exactly the same order as in the primary text.

2. Cheating

a. Openly cheating in an examination, such as copying from another's paper;

b. Being able to view during an examination, quiz or any in-class assignment an electronic device that allows communication with another person, access to unauthorized material, access to the internet, or the ability to capture an image, unless expressly permitted by the instructor;

c. Using and/or possessing "crib notes," as unauthorized use of notes or the like to aid in answering questions during an examination;

d. Giving or receiving unauthorized aid during or after an examination, such as trading examinations, whispering answers, passing notes, or using electronic devices to transmit or receive information;

e. Informing any person or persons of the contents of any examination prior to the time the examination is given;

f. Securing another to take a test in the student's place. Both the student taking the test for another and the student registered in the course are at fault;

g. Providing answers for any assigned work when not specifically authorized by the instructor to do so;

h. Working with another person or persons on any assignment when not specifically permitted to do so;

i. Taking credit for work contributed by the group that was not done by the student;

j. Completing work for other students who receive credit;

k. Purchasing or otherwise obtaining unauthorized course work solutions;

3. Fabrication, Falsification, and Misrepresentation

a. Changing answers or grades on a test that has been returned to a student in an attempt to claim instructor error;

b. Using another's laboratory results as one's own, whether with or without the permission of the owner;

d. Falsifying results in laboratory experiments;

e. Misrepresenting academic records or achievements as they pertain to course prerequisites or corequisites for the purpose of enrolling or remaining in a course for which one is not eligible;

f. Representing oneself as a person who has earned a degree without having earned that particular degree;

g. Misrepresenting one's qualifications, forging signatures, or falsifying information on official documents for the purpose of academic gain;

4. Stealing and Abuse of Academic Materials

a. Stealing, as theft of tests or grade books, from faculty offices or elsewhere, or knowingly using stolen tests or materials in satisfaction of exams, papers, or other assignments; this includes the removal of items posted for use by the students;

b. Mutilating, destroying, concealing, stealing, or altering any materials provided 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;

c. Copying of any data files or copyrighted computer program(s) for one's own personal use or the use of others;

d. Sharing usernames and passwords with another to allow unauthorized access to restricted information or uploading course materials (e.g. exams, assignment solutions, graded work) to the internet;

5.Complicity in Academic Dishonesty

a. Failing to report to the instructor an incident which the student believes to be a violation of the academic honesty policy;

6. Academic Misconduct

a. Any other conduct which a reasonable person in the same or similar circumstances would recognize as dishonest or improper in an academic setting.

IV. ACADEMIC HONESTY ENFORCEMENT PROCEDURES

The instructor has primary responsibility and authority in the classroom. Since each instructor has specific responsibilities to inform students of the contents of the

Honesty Code, encourage compliance with the Honesty Code, and enforce the Honesty Code in the classroom, it is incumbent upon the instructor to administer the Academic Honesty Policy in a fair and judicious manner in all instances of alleged academic dishonesty.

Course Level Resolution
When an instructor has evidence that a violation of the Honesty Code may have occurred, whether through their personal witness or through a report made by another person, the instructor should immediately investigate the alleged violation to determine the facts. If a student or other member of the University community suspects that another student has committed an act of academic dishonesty, that person shall notify the instructor in the course in question.

The instructor shall notify the student, via UHCL email, of the allegation and proposed sanction. The instructor will include the Department Chair on the notification email. Once informed of the alleged violation, the student has ten working days to respond and, if desired, meet with the instructor to discuss the alleged violation. The meeting represents an opportunity for the student to present a defense on their own behalf.

After the ten-day period, and after consideration of any new evidence, the instructor will notify the student and Department Chair of their decision regarding the alleged violation with the proposed sanction. If it has been determined that a violation has occurred, the following will occur:

1. The instructor will document the violation and sanction on the Honesty Code Violation Form, and email the completed form to the student, Department Chair, and Dean of Students. This form must be completed for all instances of violation of the Academic Honesty Code, regardless of the severity of the alleged violation or the sanction imposed.
2. The Honesty Code Violation Form will include notification to the student that the decision may be appealed to the Academic Honesty Panel, and that, to appeal the decision, the student must contact the Dean of Students by email, with a copy to the instructor and Department Chair, within ten working days of receiving the completed Honesty Code Violation form.

    a. If the decision is appealed, the Academic Honesty Panel Resolution procedures will be followed as outlined below.

    b. If the decision is not appealed, the Dean of Students will advise students with no academic honesty violations on record that the case is closed, unless the instructor requests sanctions beyond those available in a course.

Students with academic honesty violations on record or facing additional disciplinary action(s) will be required to appear in front of the Academic Honesty hearing panel.

    c. The Dean of Students will advise the student that, in addition to academic sanctions by the instructor, the student may also be subject to

disciplinary action. Such action may be imposed by the Academic Honesty Panel if evidence exists of repeated violations of the Honesty Code.

In the event a case of academic dishonesty is not resolved prior to the deadline for reporting final grades to the registrar, the student shall receive a grade of Incomplete ("I") until the appropriate grade can be determined.

Academic Honesty Panel Resolution

An Academic Honesty Panel hearing will be held in the following instances:

The instructor determines that a student has committed an act of academic dishonesty and such act warrants sanction more severe than those available for a course (e.g. Suspension). In this case, the instructor must attach a copy of the complaint to request sanctions beyond the course level sanction to the Honesty Code Violation Form. The instructor shall recommend what they believe to be the appropriate sanction to the Academic Honesty Panel. The Dean of Students will initiate a formal hearing process as soon as possible but no later than thirty working days from receipt of the complaint from the instructor, notifying the student of the alleged violation and setting a date and time for the hearing before the Academic Honesty Panel.

The student has a pre-existing record of academic dishonesty. The Dean of Students will notify the student, instructor(s), and the Department Chair(s) of the series of alleged violations and set a date and time for a hearing before the Academic Honesty Panel.

The Dean of Students is timely notified within 10 working days that the student wishes to appeal a course level sanction. The Dean of Students will initiate a formal hearing process as soon as possible but no later than thirty working days from receipt of the appeal, notifying the student, instructor, and Department Chair of the date and time for the hearing before the Academic Honesty Panel.

Academic Honesty Panel Hearing

The Dean of Students or his designee, shall be required to convene these hearings to serve as the facilitator of the hearing(s). This individual shall not have a vote at the hearing or be present during the deliberations of the panel.

The hearing shall be held in two phases. The first phase is the determination of violation, followed if necessary, by the sanction phase.

The student may bring an advisor to the hearing for support and advice during the hearing. The advisor may attend the hearing but shall not directly participate in the hearing or enter into discussion with the parties present. Procedures for the Academic Honesty Panel hearing process are detailed in Appendix A.

If either party intends to have legal counsel attend the hearing, the Dean of Students must be notified at least three working days before the hearing. The hearing cannot be held with such counsel in attendance unless a representative from University of Houston System legal counsel is also present.

The student and instructor will have the opportunity to present their case during the hearing. This may include the introduction of documents and/or physical evidence as well statements of individuals who have knowledge of the circumstances.

If either party intends to have witnesses attend the hearing for such statements, the Dean of Students must be notified at least three working days before the hearing along with a written statement from the witness. The Dean of Students will provide the written statement(s) to both parties prior to the hearing.

If physical evidence or witness testimony is presented in the hearing, and if either party needs reasonable time to review the evidence and/or consider the witness testimony, either party may request a postponement of the the hearing. Decisions on postponement of the hearing will be made at the discretion of the Dean of Students or designee.

The cases presented to the panel must be made by the accusing individual and the accused student. The instructor or other individuals who reported the alleged misconduct shall present the relevant information, including statements by witnesses. The accused student shall then present his/her statement and relevant information, including statements by witnesses. Neither party shall ask questions of or solicit answers directly from the other party or its witnesses. Where it appears that there are matters of disputed fact, the Dean of Students shall request the panel to ask appropriate questions of either or both parties and/or their respective witnesses so as to clarify the points in dispute. The panel shall have the right to question any and all witnesses and to examine documentation presented.

At the conclusion of the first phase of the hearing, the panel shall meet in a closed session to render a decision. The Academic Honesty hearing panel deliberates and renders a vote.

A student is found in violation of the academic honesty policy by a vote of 6 or more members of the panel present at the hearing. In order for the hearing to proceed, at least 8 out of the 9 members of the panel must be present for the hearing. Upon reaching a decision in either phase, the phase shall reconvene with all parties present and inform all parties of its decision.

After resolution of an alleged violation, the Dean of Students will email the final decision to the student, instructor, Department Chair, and Academic Dean (or the Associate Vice President for Academic Affairs if the student is non-degree seeking) within five working days of receipt of the panel's judgment.

The decision of the Academic Honesty Panel should be considered final, unless there are specific grounds for appeal (see IV.E).

The hearing shall have an audio recording. The parties involved may obtain a copy of the recording from the Dean of Students at the expense of the requesting party.

Sanction Phase
During the sanction phase of the hearing, the student will have an opportunity to present relevant information regarding misconduct, including witness statements, documents and other information in accordance with hearing procedures.

The faculty and student will have an opportunity to present a sanction statement. The panel shall have the right to ask questions of both parties.

If the panel decides that a violation has occurred, then the instructor's recommended sanction will be considered before a final decision is rendered by the panel. If repeated violations of the Academic Honesty Policy are documented, then the panel may impose additional penalties beyond the instructor's recommended sanction. These may include, but are not limited to:

1. **Grade**: A grade penalty of "F" or "zero" for the course or for the academic assignment, respectively;
2. **Probation**: The student shall not represent the University in any extracurricular activity or run for office in any University sponsored group or organization. Additional restrictions or conditions may be imposed;
3. **Suspension**: Separation of the student from the University for a definite period of time, after which the student is eligible to return. Conditions for re-admission may be specified. When suspended, a student may not attend class or participate as a student in any University activity;
4. **Expulsion**: Permanent separation of the student from the University.

Provost Appeal and Resolution

Within five work days of the panel's decision, either party (i.e. student or instructor) may file an appeal for review with the provost or that officer designated by the provost. The appeal shall be in writing and shall specifically address the issues to be reviewed based on one or more of the following grounds:

1. Significant procedural error inconsistent with the processes as outlined in this policy
2. Discovery of any new information unknown or not reasonably foreseeable at the time of the hearing that was material to and could have reasonably impacted the disciplinary decision.
3. The sanction(s) determined by the panel was significantly disproportionate to the violation.

If an appeal is submitted, the other party and Dean of Students will be notified by the Provost and will receive the appeal documentation prior to an appeal decision. The other party may submit a response within five working days. The Provost shall

consider the appeal and deliver a decision within 15 working days of receipt of such appeal, except where adherence to such time period would be impracticable, in which case such time period shall be extended as warranted by the particular circumstances. If the other party submits a response to the appeal within 5 working days, the provost will have 20 working days to deliver his decision from initial receipt of the appeal. Any additional delays will be communicated via UHCL email to the parties, Department Chair and Dean of Students.

Actions Which the Provost May Take:
The Provost may decide to:

1. Approve the findings and/or sanctions of the panel.
2. Reverse the findings and/or sanctions of the panel.
3. Return the case back to the Dean of Students to provide a new proceeding, or allow the party to have the case handled beginning at any specific stage of the Academic Honesty Hearing Process.
4. In rare cases, return the case to the Dean of Students to provide a new proceeding with a different panel.

The Provost's or designee's written decision, and when applicable justification, will be sent to the parties, Department Chair and Dean of Students within the articulated time period.

Once the Provost has issued a decision, the matter shall be considered final and binding upon all involved.

Group Violations of the Academic Honesty Policy.
In instances where two or more students are alleged to be involved in the same infraction of the Academic Honesty Policy, at the discretion of the Dean of Students and in consultation with the relevant instructor, the case against the whole group will be heard by a single Academic Honesty Panel. The facts common to all cases will be presented, with all students allegedly involved, in attendance. Each student shall be allowed to present their case and/or statements to the panel separately. If requested by the presenting student, such statements shall be presented independently without the other accused student(s) in the room.

V. RECORDS

Records of Academic Honesty Proceedings.
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.

Records of proceedings under this policy are considered a student's educational record in accordance with Family Educational Rights and Privacy Act.

Notations on a Student's transcript.

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 specified suspension period at the written request of the student. In the case of expulsion, the entry is noted permanently.

VI. DEFINITIONS

Working Days.
Working days, for purposes of this policy, are defined as days the University of Houston Clear Lake is open (excluding Saturdays and Sundays) as posted in the university academic calendar.

Academic Record.
Academic record includes documents, forms, copies, reports, statements, recordings, etc. that are acquired while a student attends the University of Houston-Clear Lake. The information is available to outside sources according to the procedures established by the Family Education Rights and Privacy Act.

Sanction.
Sanction means the penalty assessed for a violation of the Academic Honesty Policy.

Instructor.
Instructor refers to a faculty member, lecturer, teaching assistant, adjunct instructor, or teaching fellow in charge of the course section in which an alleged violation of this Academic Honesty Policy has occurred. Such individuals will typically be the instructor of the course section in question. In instances where this is not the case, instances of alleged cheating should be reported to the instructor.

Student.
Student refers to any individual who has ever registered and paid (made a complete payment or has made at least one installment payment) for a course, or courses, at the University of Houston-Clear Lake. This definition would normally include undergraduate students, graduate students, doctoral students, post-baccalaureates, professional school students, and individuals auditing courses.

Textbook and Educational Material Policy

1. POLICY
The following principles pertain to the role and responsibilities of faculty in the development and selection of instructional materials at the University of Houston-Clear Lake:

1.1 The selection and production of educational materials by faculty members and instructors is essential to providing quality instruction. Therefore, the decision on the use of such materials properly rests with individual faculty members, instructors and/or faculty units, consistent with policies of the department, college and University.

1.2 The practice of contributing to a body of knowledge by faculty members and instructors in their chosen fields of study through the development of educational materials, e.g., textbooks, case studies, custom books, workbooks, is a practice that is not only acceptable, but actively encouraged by peers, department chairs, and deans.

1.3 In the case of educational materials produced by faculty members or instructors such that the materials are self-published by the faculty member or instructor; or are reproductions, custom books, or other materials, produced for the course; or are published by entities wholly or substantially owned by the faculty member or instructor or by a member of his or her family, then such materials shall be made available to students at the University of Houston-Clear Lake at the cost to produce. Similarly, the case where departments or other instructional units produce educational materials, the items shall be available to students at no cost or at a cost no more than the cost to produce such material. Textbook and educational materials, published through learned societies, professional organizations and/or professional publishers, must be made available to students at a reasonable price consistent with national norms and selected according to national standards of scholarship. In no case should students be charged for information that normally is available without charge, e.g., a course syllabus, practice exams.

1.4 Any instructional material utilized in the classrooms shall be aligned with the content of the course and the respective required curriculum.

1.5 In order to implement items 3 and 4, and to manage any conflict of interest, a faculty member or instructor of record at the University of Houston-Clear Lake, who receives revenue from the sale of instructional materials, must submit these materials for review by the curriculum committee of the college which offers the course where the material is used. After the review, the college curriculum committee will make a recommendation to the dean. Dean approval is necessary before requiring students to purchase educational materials that have been written, co-written or edited by the faculty member or instructor, and from which the faculty member or instructor shall receive royalties of any kind. Review and approval is necessary to ensure the material is consistent with the requirements in 3 and 4 above, along with the University's conflict of interest policy.

University Degree Requirements

UHCL has established minimum requirements for graduate course work leading to the Doctor of Education, Doctor of Health Service Psychology (Clinical Psychology/School Psychology), 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 Candidate Plan of Study (CPS) that fulfills all university requirements and all degree program requirements. The university requirements for doctoral degrees are:

- Fulfillment of specific degree program requirements. Requirements are reported in the relevant school sections of this catalog.
- Courses selected from those numbered 7000 or higher (see specific requirements for numbers of hours in the relevant school section).
- At least six (6) hours of dissertation are required as specified in the relevant school section of this catalog.
- The residency requirement may be met by taking nine (9) or more hours in each of two consecutive long terms, in each of three consecutive summer terms, or in each of two consecutive summer terms and in one of the two intervening long terms.

Please see the College of Education or the College of Human Sciences and Humanities for the details of courses required in doctoral programs.

UHCL requirements for the master's degree are:

- Fulfillment of specific degree program requirements. These requirements are reported in the college section of this catalog.
- Each master's degree must require a total of no less than 30 credit hours. Each school within the university retains the right to set minimum hour requirements in excess of 30 hours for its degrees.
- At least 24 hours must be selected from courses numbered 5000 or higher.
- At least 18 of the final 30 semester hours must be taken in residence.
- 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.
- Colleges 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.
- 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.
- Correspondence and non-resident credit may not be applied toward a graduate degree.
- 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.

Assessment

The University of Houston-Clear Lake may use educational assessment tools. "Educational Assessment" is defined as the systematic collection, interpretation, and use of information about student demographics, educational environments, learning

outcomes, and professional success. These assessment tools will not affect student grades, but will provide faculty with confidential detailed information that will be used to improve student learning, courses, curriculum, and program accreditation.

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. It is the prerogative of the department chair, in consultation with the faculty member responsible for the corresponding rubric to determine whether the courses meet current standards of the discipline; and, whether students can demonstrate sufficient retention of the previous content. The department chair will forward the recommendation to the dean of the college.

Limitation on Courses in the College of Business for Graduate Students

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

Dual Degrees: Bachelor's to Master's

The dual bachelor's\master's programs allow students to earn both degrees in five years. Students begin work on their master's degree during the final year of their bachelor's degree.

- Bachelor's (minimum 120 hours) to master's (minimum 30 hours) degrees provides students the opportunity to earn degrees at an accelerated pace. In this program undergraduates with 90 or more credit hours may be allowed to enroll in graduate classes, and count up to six graduate credit hours toward their bachelor's degree. The same six graduate credit hours may also count toward a master's degree.
- Graduate courses utilized for a bachelor's degree cannot be utilized for a graduate degree outside of the accelerated bachelor's to master's degree program.
- No more than six graduate hours can be taken as an undergraduate.
- In the dual degree program, no more than six hours of graduate work may be counted toward the requirements of both degrees and at least 24 of the required 30 graduate hours must be taken at the 5000 level or 6000 level.
- Students must apply to the dual degree program the semester before completing their bachelor's degree requirements.
- Students interested in this program must meet with a dual degree adviser in their college before enrolling in graduate courses.
- Students admitted to dual degree programs should have an overall GPA of 3.0 or better. Students with a GPA of less than 3.0 must take the GRE or GMAT (see individual college requirements for appropriate examination and for acceptable scores).

- A student who becomes ineligible to participate in or withdraws from the accelerated bachelor's to master's program cannot double count any courses for both bachelor's and master's degrees. However, courses successfully completed with a 3.0 or better may count toward the bachelor's degree as appropriate substitutions.
- Students in dual degree programs receive the bachelor's degree upon completion of the master's degree.
- Students in dual degree programs not completing the master's degree may apply for graduation with the bachelor's degree.
- Dual degree program students must complete the undergraduate residency requirements.

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 college.

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 master's 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 college. With respect to the provisions which follow, colleges choosing to offer additional masters degrees reserve the right to set additional requirements for degrees awarded by that college including the right to not offer such degrees. Students should be aware that the faculty of the individual colleges as set forth in the colleges' procedures determine the approved Candidate Plan of Study (CPS) 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 college 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.
- Colleges may allow no 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 college section of this catalog.
- At least 24 unique hours must be selected from courses from the 5000 and 6000 level or their equivalents for the additional degree.
- At least 24 semester hours must be taken in residence.
- College may allow no 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.

Master's and Doctoral Degree Options

All master's and doctoral option course work requires continuous enrollment until completion. See Automatic Enrollment - Graduate Option Course Work. Students enrolled in at least three hours of graduate 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. 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 adviser. 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 college. Individual colleges may provide additional information regarding specific college 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 college will provide, on request, a copy of the procedures for registering for thesis work, selecting an adviser and thesis committee, writing a proposal in advance of starting work, preparing the manuscript, presenting the thesis for approval and submitting the thesis in approved electronic format for archiving by Neumann Library. The Library will make the thesis freely available online through the UHCL Institutional Repository. Students may have hard copies of their thesis bound for personal use.

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 college will provide a copy of the procedures for registering for project work, selecting an adviser, preparing the proposal and the report and presenting it for approval. After approval, the project will be submitted in approved

electronic format for archiving by Neumann Library. The Library will make the project freely available online through the UHCL Institutional Repository. Students may have hard copies of their project bound for personal use.

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 six hours. A grade of In Progress (IP) will be recorded on the transcript until completion. For details, please consult the appropriate academic adviser.
- 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 adviser.

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 24 hours of course work numbered 5000 or higher. Option 4 also requires successful completion of a capstone course or a comprehensive examination.

Option 5: Exhibition

The master's exhibition requires continuous registration until completion for a minimum of six hours. If a student does not maintain continuous registration in the master's exhibition, previously accumulated master's exhibition 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 exhibition must present evidence of:

- The ability to work independently to develop, produce, and exhibit work that meets industry standards for distribution to arts organizations and placement in public arenas such as museums and galleries.
- The preparation of materials that meet or exceed discipline-specific professional and scholarly standards. These include: a digital portfolio; an artist's statement, biography, and resume; an artist's web presence; and a reflective report on the exhibit. The dean of the college will provide a copy of

the procedures for registering for exhibit work, selecting an adviser, preparing the proposal, and submitting the required work in approved electronic format to the student's exhibit committee, the Office of the Dean, and the UHCL Neumann Library. The Library will make the work freely available online through the UHCL Institutional Repository. Students may retain rights to their work for later use.

Master's Option Appeals

Students may appeal previous academic actions or decision by faculty members regarding master's degree options 1, 2, 3 or 5 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 college by the deadline set by the college for 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 the next 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.

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 effective 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 adviser 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

Degrees are not awarded automatically upon completion of degree requirements. To be considered a candidate for graduation, the student must submit an online

application for graduation via their student E-Services account. Degree candidates must officially apply for graduation 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. Please refer to the academic calendar for online graduation application dates and deadlines to avoid additional late fee charges.

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 is required of all students who intend to complete their degree regardless if they choose to participate in the commencement ceremony. Degree candidates, who are in two separate programs and anticipate completing the degree requirements for each program, must apply and pay separate non-refundable graduation application fees for each program. If students do not successfully complete their degree requirements at the close of the semester for which they have applied, they will be required to reapply and pay another fee during the subsequent semester in which they intend to graduate.

Students who elect to participate in the commencement ceremony must "walk" in the semester they graduate. As there is no commencement ceremony in the summer, students who graduate in August will be eligible to participate in the December ceremony. Diplomas are mailed after the final approval is received from the graduating student's college. Diplomas are mailed to students 10 to 12 weeks after the end of the semester. Diplomas are mailed to the mailing address on record at the time of graduation. Students who graduate from UHCL must complete a new application and pay the applicable fee in order to continue taking classes.

Applying for a Certificate

Students must officially apply through their E-Service account for the award of certificate completion the semester in which they plan to earn the certificate. During their last semester of enrollment, students must complete an application for the award of certificate completion by the stated deadline, as specified in the academic calendar. Please refer to the academic calendar for online graduation application dates and deadlines. If students do not successfully complete their certificate requirements at the close of the semester for which they have applied, they will be required to reapply and pay another fee during the subsequent semester in which they intend to complete.

Awards of the certificate will be posted to the official college transcript but students will not participate in the graduation ceremony or receive a diploma.

International Admissions and Programs

The Office of International Admissions and Programs welcomes prospective and current students, alumni, faculty and staff. Our services include international admissions and international advising for F-1 students, alumni and F-2 dependents.

General Information and Definitions

General Information

For general information, please refer to relevant sections of the New Student Admissions chapter in this catalog, including but not limited to English Proficiency Requirements for Students Educated Outside of the United States, Examinations for Graduate Candidacies, Examination Exemptions, Readmission or Status Change Process and Graduate Transfer Credit Information.

Definitions

International Applicant- Individuals who apply to the university and either (a) hold a U.S. visa or (b) anticipate entering the U.S. with a visa. Individuals who are legal permanent residents, on Temporary Protective Status (TPS), U.S. citizens (naturalized or by birth), refugee/asylee, or undocumented are not considered international applicants.

International Student- Students who are in the U.S. or will be in the U.S. in F-1 status.

Conditional Admissions-A process in which the university reviews the application and submitted documentation to determine if the applicant meets the admission requirements outside of English language proficiency and graduate examinations. This determination may be limited to UHCL-recognized English language programs (such as ELS) and government-sponsored students.

Conditionally Admitted- Application status that signifies the student hasn't met English language proficiency requirements or standardized test score requirement such as GRE/GMAT, but meets other academic requirements such as a minimum GPA, proof of degree and academic background.

Application Fees

International applicants: **$75**
International doctoral applicants: **$135**

Application fees can be paid by credit card (MasterCard, VISA, American Express or Discover) during online application or after the application's submission. To submit

the application fee online after applying, students must use their E-Services account or pay in person at the Office of Student Business Services.

Application Deadlines

Some programs may have earlier deadlines. Please refer to the catalog for deadlines specific to your program.

Fall Enrollment

Final Deadline: Apply by April 1
Document Deadline: April 15

Spring Enrollment

Final Deadline: Apply by October 1
Document Deadline: October 15

Summer Enrollment

Final Deadline: Apply by March 1
Document Deadline: March 15

*** Students interested in qualifying for scholarships and/or applying for visas outside the U.S. should apply and submit the application documents/test scores by the priority deadline.**

Deferral Process

Graduate applicants who do not enroll are eligible to defer their application within three semesters of submitting their original application. To defer to a new semester, students should submit an Application Update Request form, which can be found on the Office of International Admissions and Programs' website. This form can also be used to request a change in academic programs during the admission process. Students who are ineligible to defer their application can re-apply and pay the application fee.

Notification of Admission

Upon receipt of appropriate documentation, the Office of International Admissions and Programs will determine the applicant's eligibility, and will notify them of the program's admissions decision. If accepted, the applicant will receive important information regarding registration dates and procedures. This information is also available on the university's website through E-Services.

Admissions Requirements

After submitting an International Graduate Application through GoApplyTexas.org along with the appropriate application fee, international applicants must meet the university's admission standards (as explained in the New Student

Admissions chapter of this catalog), in addition to the English proficiency requirement.

International graduate applicants must submit official documents from each higher education institution attended (inside and outside of the U.S.). Documents must meet requirements for U.S. documents and international documents (**see Documents for Acceptance**). Upon acceptance, the student will be required to submit additional documents (**see Additional Document Requirements**).

Applicants with Pending Bachelor's Degrees

Graduate program applicants may be admitted while they are pending receipt of a bachelor's degree. To qualify, students must meet current admission requirements and provide proof that they will earn at least a bachelor's degree prior to their first day of classes at UHCL.

Current UHCL Undergraduate Students

Current UHCL undergraduate students who apply to graduate programs prior to the conferral of a bachelor's degree must have a Pending Graduation Application form on file in the Office of Academic Records. The Office of International Admissions and Programs will verify that the application for graduation has not been denied prior to admission. Admitted students must earn their bachelor's degree prior to the first day of classes. Those needing additional time to complete requirements for pending undergraduate degrees will be returned to undergraduate status to complete those requirements before being allowed to enroll in graduate studies.

International Conditional Admission

International applicants who meet the university's admission requirements for their chosen degree programs, but who have not yet met the English proficiency requirement, can be conditionally admitted to some graduate programs. Please note that conditional admission is not available for all programs and it does not allow registration or enrollment at UHCL.

Once an applicant completes ELS Level 112 or otherwise demonstrates proficiency in English,* the applicant will be required to submit graduate exam scores as described in the New Student Admissions chapter.

***See English Proficiency Requirements for Students Educated Outside of the United States.**

Non-Degree-Seeking Status

International students, who hold F-1 visas, are not eligible for admission as non-degree-seeking students. They must enroll as degree-seeking in specific degree plans or programs. Although their primary programs must be degree-seeking, these students can simultaneously enroll in secondary, non-degree certificate or certification programs. International students, who hold J-1 or other visas, may be

admitted to non-degree-seeking status or certificate programs. Students can refer to the certificate programs section of New Student Admissions for more information.

Graduate Transient Status

Graduate students in good standing at another institution may be admitted to University of Houston-Clear Lake as transients for one semester. These students generally plan to transfer coursework back to their home institution.

Transient students must submit official transcripts showing proof that a bachelor's degree or higher has been conferred. Due to prerequisite requirements, some programs may also require a Letter of Standing from the transfer institution indicating the coursework being requested at UHCL.

All required documentation for admission must be provided, prior to registration. Students in F-1 or J-1 status must also provide a letter from the immigration adviser at their respective institution allowing them to enroll as a transient student at UHCL. See Transient Admission Requirements in New Student Admissions.

Transients who wish to enroll in a second semester must obtain permission from the associate dean of their academic program. They must then reapply by submitting a new application and application fee to the Office of International Admissions and Programs. Students enrolling under this option, who subsequently decide to become degree-seeking, must reapply, pay the appropriate application fee, (**see Application Fees**) and meet the university's and academic program's current admission requirements.

Documents for Acceptance and Enrollment

Applicants must indicate on their admission application all previous schools attended. Degree-seeking students must submit official transcripts from each college or university attended. Transient students must provide documents from each institution attended to be eligible to register, and must be eligible to return immediately to the last school attended.

The Office of International Admissions and Programs must receive all documents by the appropriate deadline (**see Application Deadlines**). An official transcript of any coursework in progress and proof of diploma/degree, prior to or during enrollment at University of Houston-Clear Lake should be sent to the Office of International Admissions and Programs immediately after grades are posted.

To expedite processing, applicants should request that domestic (U.S.) transcripts be sent electronically. UHCL's preferred method of transcript delivery is via EDI or SPEEDE download for transfer work and Trex electronic downloads for high school work. Hand-delivered transcripts must be no more than 60 days old and enclosed in a sealed envelope from the issuing institution.

If students knowingly withhold information or submit fraudulent information regarding enrollment at another accredited institution, their application to UHCL will

be considered invalid and they may be administratively withdrawn from classes without a refund of fees paid.

International Transcript and Document Requirements

School Accreditation Status

Applicants submitting international college or university transcripts/documents must have attended an international institution recognized by the International Association of Universities (UNESCO) or Ministry of Education.

Transcripts from International Institutions

Students must provide the Office of International Admissions and Programs with official transcripts, mark (grade) sheets and confirmation of degrees or diplomas for all academic studies attempted and completed at those colleges/universities. Transcripts and/or mark (grade) sheets must be in the original language and accompanied by official English translations (if applicable). These documents should clearly indicate dates of attendance, subjects taken and marks (grades) earned and reflect any degrees or diplomas awarded.

Official transcripts must be sent to UHCL by the registrar of each institution attended. When this is not possible, documents certified by an embassy or consulate, Education USA official, university authority (such as principal, registrar, controller of examinations, vice rector or rector), Ministry of Education or Ministry of Foreign Affairs official as "true copies" may be accepted. Copies of documents that are not certified will not be accepted.

English Proficiency Requirements for Students Educated Outside of the United States

Applicants educated in countries where English is not the official language must demonstrate English proficiency. This requirement must be met during the admissions process. The intent of this policy is to ensure applicants have reasonable chances to succeed academically, based on their ability to comprehend, speak and write in English. The English proficiency requirement may be met by meeting one of the following criteria:*

- Earning a U.S. high school diploma or conferral of a U.S. associate degree or higher from regionally accredited institutions of higher education. (Applied Science degrees cannot be used to waive the English Proficiency requirement).
- Earning qualifying test scores from the SAT, ACT, TAKS, STAAR or Stanford exams. (see TSI Assessment Exemptions through Test Scores).
- Achievement Tests (for deaf students only). Specific exemption information can be obtained by contacting the Office of Admissions.
- Earning 12 or more transferable hours in the following subjects (English, Speech and heavy reading-related subjects such as Government, Political Science, History, etc.) from regionally accredited institutions of higher

education. Grades earned must be C or higher; and, six (6) of the 12 hours must be in English Composition. English as Second Language courses (ESL or ESOL) do not count toward English proficiency exemptions.

To satisfy English Proficiency by Test Results, one of the following is required:

- Official Pearson Test of English (PTE) score of 53 or higher,
- Official International English Language System (IELTS) score of 6.0 or higher,
- Successful completion of ELS Level 112 - Intensive English Program, or • iBT TOEFL Test total of 79 or higher
- GRE Verbal score 11% or higher

Additional Document Requirements

Prior to being allowed to enroll, accepted students who are in the U.S. or plan on entering the U.S. in F or J visa status are required to submit:

- Signed Sponsor's Affidavit of Support with an attached financial statement.
- Signed Statement of Understanding.
- Copy of photo page of the passport.
- Students who are already in the U.S. must also submit:
    - Copy of current I-94.
    - Copy of SEVIS I-20 or DS-2019 (if applicable).

The following documents are required for students entering the U.S. in another visa status:

- Copy of photo page of the passport.
- Copy of current I-94.

The university recommends submitting these documents immediately after the student applies so that there isn't a delay in the enrollment process.

Other Policies Applicable for International Students

Transfer-In Policy

Students who hold F-1 visas and are currently studying at another SEVIS-approved institution of higher education in the United States must do the following:

- Be accepted by University of Houston-Clear Lake
- Request the "transfer-out" school to transfer their SEVIS record to UHCL
- Request that the "transfer-out" school set up the SEVIS transfer to UHCL, prior to the student receiving eligibility to enroll.

Health Insurance

All international students holding F or J visas 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 with private health insurance comparable to the university's coverage may request a waiver of the university's health insurance.

To be considered for a waiver, students must submit a waiver request online by the dates posted. University of Houston-Clear Lake will not accept waiver requests by U.S. mail, e-mail, fax, or documents brought to the university. Incomplete requests, late requests or insurance policies not meeting the minimum requirements will not be approved. Each F or J visa holder is responsible for any late fees associated with the waiver process.

Check-In

All international students holding F and J visas are required to check in with the Office of International Admissions and Programs upon arrival to campus. Students must complete this check-in process through the International Student Document Portal. Also, students must submit all official transcripts, other academic documents showing degree completion and final semester coursework. Failure to complete the check-in process and/or submit the final transcript or degree will cause a hold to be put on the student's account. This hold will prevent the student from registering for a future semester.

International Student Orientation

New international student orientation is offered prior to each fall, spring and summer semester and is mandatory for all new international students. 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, transition to college, negotiating campus setting, academic and peer advising.

Co-Enrollment (International Students)

International students may obtain an international student adviser's permission to co-enroll at another institution. Permission for concurrent enrollment must be obtained from a UHCL international student adviser through the International Student Document Portal prior to attempting to register and enroll concurrently at a different institution. At the beginning of the semester, a registration printout or transcript from the concurrent school must be provided to the UHCL international student adviser as proof of student's enrollment status. International students must provide official transcripts after completing the semester from the other institution.

Education Abroad and Scholar Services

Education Abroad at UHCL is committed to helping students expand their global awareness. We promote, support and develop international and intercultural educational opportunities for students, and subsequently contribute to defining the

international character of UHCL. EA&SS services include education abroad, J-1 exchange visitors, scholar services, and some university international agreements.

Education Abroad is here to help you connect to the right program--one that aligns with your academic goals, challenges your perspectives, and empowers students to become engaged global citizens. Students interested in education abroad opportunities should contact Education Abroad to attend an Education Abroad 101 information session. All students who participate in an education abroad program are required to complete the University's education abroad participation forms, purchase the approved education abroad health insurance, pay any applicable education abroad program fees and attend a pre-departure orientation meeting.

Types of Education Abroad Programs

UHCL Faculty-Led

UHCL administers faculty-led programs, either fully or in partnerships with other institutions. Programs are led by full-time UHCL faculty associated with a UHCL course. Students earn regular UHCL credits and grades that count towards degree requirements (upon written approval).

Exchange Programs

UHCL students may study for a semester or academic year at institutions in which UHCL has established international student exchange agreements for which they will receive transfer credit at UHCL upon written approval.

Partner Providers

UHCL has a list of partner providers that facilitate and administers education abroad programs all over the world. The providers take the guesswork out of the education abroad process. Even before leaving for your new host country, providers assist in securing visas, transfer credit documentation, organizing flights, and picking housing and roommate options for you. Written course transfer approval is required to obtain financial aid.

Students who register for education abroad programs administered by institutions other than UHCL will pay the tuition and fees of the administering university or program, in addition to any applicable education abroad fees payable to UHCL to maintain the student's enrollment at UHCL.

J-1 Exchange Scholar Program

The goal of UHCL's J-1 Exchange Visitor Program is to promote cultural and educational exchange between international and domestic students, faculty, staff and community members, as well as to promote greater diversity and global awareness within the UHCL community. Components of this program include:

- Educational, research and teaching activities

- Cultural exchange programming
- Cultural adjustment support
- Immigration advising

Education Abroad Accident and Sickness Medical Insurance

The University of Houston-Clear Lake requires students who are accepted to participate in an approved education abroad program (regardless of credit or funding) to secure and maintain the required student international accident and sickness medical insurance coverage. Insurance coverage must be secured from the university-recognized insurance provider for the students' approved UHCL education abroad dates. Education Abroad program types may include, but are not limited to:

- Internships
- Service-learning programs
- Volunteering/humanitarian outreach activities
- Research missions
- Academic-related meetings or programs
- Professional Association conferences/meetings
- Student organization events

As part of a student's education abroad process, students will either be directed to the appropriate source to purchase their insurance or be automatically enrolled under Education Abroad and Scholar Services international travel accident and sickness insurance.

Currently, insurance costs run between $11-20 per week for basic coverage. This fee will cover the cost of student travel accidents, sickness insurance and travel services while on UHCL approved programs. The current policy brochure is available online.

Students are advised to maintain their primary healthcare coverage while abroad. Students must have the UHCL-approved education abroad insurance policy regardless of any other insurance they may have, including personal/private insurance, insurance required by partner-party providers, or a foreign government. Waivers are not permitted.

Education Abroad Travel Registry

The UHCL-approved designated travel registry vendor provides up-to-date, in-depth and trusted traveler information. With the travel registry app, students, faculty and staff will obtain real-time destination reports and alerts pushed to their smart phones. The Office of Education Abroad and Scholar Services will be able to communicate and keep education abroad groups updated to make informed decisions.

Students must register with the designated UHCL travel registry vendor to obtain safety and security alerts. The app's instant check-in option allows students to report

their status back to UHCL in case of an emergency or at the Office of Education Abroad and Scholar Services' request.

New Student Admissions

Office of Admissions

Admission Statuses

Admission is defined as permission to enroll in courses for academic credit. Students can be admitted as degree-seeking or non-degree-seeking. Admission to the university does not guarantee admission to specific majors or academic programs. Graduate applicants may be admitted as new or returning students.

New UHCL Graduate Students:

Graduate students who have never enrolled or have not been enrolled at University of Houston-Clear Lake beyond the census date of any semester are considered new students. Former graduate students returning to enroll in a different graduate program are also considered to be new.

These students are considered new graduates and must meet the following published deadlines for **New Graduate Students**:

- Applicants to graduate programs who have not been enrolled at University of Houston-Clear Lake beyond the census date of any semester.
- Current UHCL undergraduates, who are completing bachelor's degrees, and will be applying as first-time graduate students. UHCL students in this category are eligible for student scholarships available to new graduate students.
- Undergraduates, currently completing bachelor's degrees at other institutions, who apply to UHCL graduate programs
- Former UHCL graduate students, who have completed a graduate degree, and will apply to a new graduate program.

Returning UHCL Graduate Students

Former graduate students are those who have previously attended UHCL but have not enrolled during the past three-consecutive semesters. Former students can return immediately to their prior program, by submitting the following:

- Graduate Re-admit Application (via the online GoApplyTexas.org application site)
- Application fee
- Official transcript(s) of any coursework completed since the last semester of enrollment at UHCL. Other transcripts of completed coursework may be required, if not previously submitted or if that information is no longer on file.

Former students applying to enroll in a different degree program must meet current admissions requirements for the new program, and apply by the deadline for **New UHCL Graduate Students**.

Classifications:

New and Returning students can enroll under the following classifications:

Degree-seeking students

> Degree-seeking students are those applying for admission to academic degree programs.

Non-degree-seeking students

> Non-degree-seeking students are those applying to UHCL for reasons other than the pursuit of degrees (e.g., personal enrichment, job enhancement or graduate certificates).
>
> Non-degree-seeking students are not eligible for financial aid, and must reapply as degree-seeking to pursue degrees at UHCL in future semesters.
>
> Credit earned in non-degree status will not automatically be applicable to academic degree programs.
>
> A maximum of 12 semester credit hours can be taken in non-degree-seeking status. (Some graduate-level courses are restricted to only degree-seeking students and the number of hours that can be applied to their Candidate Plans of Study (CPS) may be limited).

Certificate program students are applying to complete a specific, non-degree certificate, prior to enrolling in the coordinating degree-seeking program.

> These programs require the completion of 12 hours of coursework, prior to entering the coordinating degree program. All transcripts are required for admission and students must have earned a 3.000 GPA or higher on the last 60 hours of coursework (some certificates have different GPA requirements).

For specific policies regarding course availability, application procedures and GPA requirements, please refer to the appropriate academic department's program section of this catalog.

Visiting Graduate Students

Visiting students generally plan to enroll in non-degree-seeking status at UHCL for only one semester, in order to transfer coursework back to their current graduate school.

Visiting graduate students must provide:

- An official transcript that includes their highest degree earned.
- Correspondence directly from their adviser (letter or email) verifying the student's enrollment in a graduate program at their home school, their

current academic standing, as well as the coursework they are approved to complete at UHCL.

To enroll in a subsequent semester, visiting students must submit a new application and fee to the Office of Admissions. Because the application fee is non-refundable, students should obtain permission from the associate dean's office of their academic program prior to submitting a new application.

Graduate Application Fees

Application Fees

The current Application Fees are as follows:

- Graduate applicants (general programs) - **$45**
- College of Education Doctoral applicants - **$105**

Applicants who do not enroll in the semester for which they applied can update their application for the next two available semesters. To request an update to a new semester, applicants should submit a **Transfer/Graduate Application Update Form**, found on the Office of Admissions' website.

Application fees are non-refundable and can be paid by credit card (MasterCard, VISA, American Express or Discover) during the online application process, or after the application's submission. To submit the application fee online after applying, students may use their E-Services account (under Application Fees), pay in person at the university's Student Business Services Office, or send a check or money order to the Office of Admissions.

(Some graduate departmental programs have separate applications and fees. These fees will be listed in the specific department's section of the catalog or on their website).

Graduate Deadlines - General Programs

Fall - August 1

Spring - December 1

Summer - May 1

General deadlines may be extended. For extension information of general programs, see the Office of Admissions' website.

Transcripts and Records Information

Records Information

Applicants must indicate all previously attended institutions on their application for admission. The Office of Admissions must receive all documents by the appropriate deadline (**see Deadlines**). If students knowingly withhold information or submit fraudulent information regarding enrollment at another college or university, their

application to University of Houston-Clear Lake will be considered invalid and the students may be administratively withdrawn from classes, without a refund of fees paid.

U.S. Transcript Requirements

For Admission purposes, UHCL will accept applicable credit listed on official transcripts from regionally accredited colleges and universities. UHCL will also consider credit from institutions recognized by The Council on Higher Education (CHEA) and The Department of Education (DOE). The Electronic Download method (EDI or SPEEDE download) is the fastest, and UHCL's preferred method of transcript delivery. Some other widely used electronic transcript services include National Clearinghouse, eScrip-Safe and Parchment services.

Official transcripts may also be mailed directly from issuing institutions to the Office of Admissions. Additionally, UHCL may accept hand-delivered transcripts as official, if they are printed within the past 60 days, and are received in sealed envelopes from the issuing institutions. Unofficial transcripts, student grade reports, emailed documents, or transfer work listed on transcripts from different institutions will not be accepted as a student's official record of coursework.

Generally, UHCL only considers academic credit in transfer. Consideration of other transfer credit toward UHCL graduate degrees must be reviewed for applicability by the program department, and approved by the college dean (**see Graduate Transfer Credit Information**).

International Document Requirements

School Accreditation Status

UHCL applicants who attended international institutions must provide the Office of Admissions with official transcripts confirming all academic studies attempted and completed for the admissions review. Required transcripts must also include:

- Individual Mark sheets and,
- Any earned or pending degree(s) or diploma(s).

Confirmation of course completion or graduation is required for re-enrollment at UHCL. A course syllabus may also be requested, if needed.

Transcripts and/or mark sheets must be in the original language and accompanied by English translations (if applicable). These documents should clearly indicate dates of attendance, subjects taken, marks (grades) earned and reflect any degrees/diplomas awarded.

Students requesting to transfer specific coursework completed outside of the U.S. should be prepared to provide an official evaluation of coursework completed by an acceptable evaluation service such as:

- SDR,
- AACRAO, or
- any member of NACES

Official transcripts for U.S. students must be sent directly to University of Houston-Clear Lake Office of Admissions by the registrar of each institution attended. When a direct submission is not possible, documents certified by an embassy or consular official as "true copies" may be accepted. Copies of documents without certification will not be accepted.

Any appropriate credit will be granted according to UHCL degree requirements in effect, at the time of enrollment or reapplication to the university. If all required documentation is received, an official evaluation for transferring students will be completed in the first semester of enrollment.

Repeated Transfer Courses

Generally, graduate programs consider only the last 60 hours of coursework taken from regionally accredited institutions, in determining the admissions GPA. Any applicable coursework attempted, including repeated courses will be used to determine the cumulative transfer GPA for admission purposes.

Records Retention and Release

Records from transfer institutions are kept on file for a period of five years after students' final enrollment at UHCL. Former students who did not enroll during the past five years, must reapply, pay the application fee and resubmit transcripts and/or required documentation, if those documents are no longer available.

Once documents are submitted to University of Houston-Clear Lake, they become the property of the university and will not be returned to students or sent to other transfer institutions or entities via email, fax or U.S. mail. Students may receive copies of their previously submitted transcripts or scores in person by bringing a valid Texas Driver's License or State Issued ID to the Office of Admissions. Completion of an **Information Request Form** is required.

University Policy Regarding Discretionary Authority

The university reserves the right to reject applicants whose records do not indicate potential success at the University of Houston-Clear Lake, as well as other requirements deemed necessary. It also reserves the right to further evaluate applicants by using psychological, achievement and/or aptitude tests and personal interviews.

Additionally, the university reserves the right to reject applicants who falsify information that was submitted for admission consideration or used to determine admissibility to the university. UHCL may also reject applicants who display (during the application process) acts of misconduct or conduct unbecoming of UHCL students, as defined in Section B of the UHCL Student Conduct Code policies.

Readmission may be denied to former students who have falsified university documents or who have used a university official's signature inappropriately, for personal benefit or gain.

Notification of Admission

Upon receipt of required documentation, the Office of Admissions and/or program department will determine the applicant's eligibility to the university. Applicants will be notified of their admissions decision by the Office of Admissions or the program department, as applicable. If accepted, important information regarding registration dates and additional procedures will be sent by email or letter. Important enrollment information is also available on the university's website.

Acceptance into a Degree Program

Acceptance into a degree program is determined by each academic college or department's admissions standards. Any applicable transfer credit from other institutions, or previous credit earned at UHCL is not automatically applied toward the completion of UHCL degrees.

Course requirements and applicability to UHCL degree requirements are confirmed, once the Candidate Plan of Study (CPS) has been completed by college departments and provided to students. Students who do not enroll for 12 months must reapply for admission and contact their academic adviser to receive a revised CPS, based on new or revised degree requirements.

Admissions Requirements and Procedures

Applicants will be considered for admission to University of Houston-Clear Lake, if they have earned bachelor's degrees or higher (as applicable) from regionally accredited institution(s) of higher education, and are eligible to return immediately to the last institution attended.

- All applicants are encouraged to apply online and must present documented evidence that they meet the appropriate admission requirements.
- All graduate score reports being sent online or by paper to the university should be directed to the Office of Admissions, so that they download into the UHCL Student Information System. In order for information to be applied to an official admissions record and to be available for

departmental access, students should not include department codes on their test score requests.

Degree-seeking Applicants

Degree-seeking applicants must submit:

1. Admissions application - Online applications are accessible via the Office of Admission's website. Some programs have a dual application process and require the submission of both a university application through GoApplyTexas.org and a program application, to the department. Late applications that are submitted online, after the posted deadlines may not be considered or may be automatically updated to the next available semester.
2. Non-refundable application fee (*see Application Fees*)
3. Official transcript(s) from each institution attended
4. Official Graduate Score Report requirements:
   A Graduate Management Assessment Test (GMAT), Graduate Records Examination (GRE) or Miller Analogies Test (MAT) is required, based on the specific requirements of academic programs or departments. (**Department codes should not be used when requesting that score reports be sent to the university**).

   College of Education will allow applicants to the Ed.D. in Educational Leadership to take the UHCL Doctoral Writing Assessment examination, in lieu of the GRE.

Transcripts should reach the Office of Admissions by published deadlines in which students plan to enroll. Students who are currently enrolled at transfer institutions, at the time admission is granted to UHCL; or, those who enrolled in coursework at other institutions after enrollment at UHCL should send completed documentation to the Office of Admissions, immediately upon completion of that coursework.

Applicants with Pending Bachelor's or Master's Degrees

Applicants transferring to University of Houston-Clear Lake or current UHCL undergraduate students applying to a graduate program, may be admitted while pending the receipt of bachelor's or master's degrees. To qualify, students must:

- Meet current admission requirements, and
- Provide proof that they will earn the required degree, prior to their first day of classes at UHCL (see Currently Enrolled Transferring Students and Current UHCL Undergraduate Students Applying to a Graduate Program)

Currently Enrolled Transferring Students

Applicants transferring to UHCL from another institution must have already completed graduation requirements, or be currently enrolled in coursework that will complete graduation requirements for their intended program. Students pending a required degree, must meet graduation requirements at their current institution, prior to the first day of classes at UHCL. An official **Letter of Standing** from their home institution's program adviser, registrar or associate dean is required. The letter must document that the appropriate degree will be earned prior to enrollment at UHCL.

Current UHCL Undergraduate Students Applying to a Graduate program

Current UHCL students may apply to a masters or doctoral program prior to the conferral of the required degree. To be accepted, students must have a **Pending Graduation Application** on file in the Office of Academic Records. The Office of Admissions must verify that pending student applications for graduation have not been denied before admission to graduate or doctoral programs are granted.*

Admitted students must earn required degrees prior to the first day of classes. Students requiring additional time to complete pending degree requirements will be returned to their previous undergraduate or master's status, in order to complete the current degree prior to being eligible to enroll in a new program.

***Programs may accept certification of pending graduation from UHCL advisers in lieu of the application for graduation being filed with the Records Office.**

Non-degree-seeking Graduates

Non-degree-seeking graduate students are those who will enroll in classes, but do not plan to pursue a degree at University of Houston-Clear Lake. These students must submit an official transcript from the last institution attended and an official transcript showing their highest degree conferred, if different.

Non-degree-seeking students, who plan to enroll in graduate coursework in the College of Business must have permission from the associate dean or designee prior to registering for classes.

Students may earn up to 12 semester credit hours in non-degree status and must reapply and pay the application fee, in order to change to degree-seeking status (**see Degree-seeking Applicants**).

Credit earned in non-degree-seeking status will not automatically be applicable to a specific academic degree program. Additionally, some graduate level courses are restricted to only degree-seeking students; and, the number of hours that can be applied to a Candidate Plan of Study (CPS) may be limited.

For specific program policies regarding course availability and application of credit, please refer to the appropriate section of this catalog or contact the departmental adviser.

Graduate Transient Status

Graduate students in good standing at other institutions may be admitted to University of Houston-Clear Lake as non-degree-seeking transients on a per-semester basis. These students generally plan to transfer coursework back to their home institution. Transient students must submit an official transcript(s), showing proof that a bachelor's degree or higher has been conferred. Due to prerequisite requirements, some programs may also require a Letter of Standing from the transfer institution, indicating the specific coursework being requested at UHCL.

Transients who wish to enroll in a second semester must again obtain permission from the associate dean of their academic program. Approved students must then reapply by submitting a new application and application fee to the Office of Admissions.

Students enrolling in transient status, who subsequently decide to become degree-seeking must reapply, pay the general application fee, and meet the university's and academic program's current admission requirements.

Certificate Programs (Non-degree-seeking)

Applicants who only wish to earn a graduate certificate must apply for admission, pay the application fee and submit transcripts from all previously attended institutions. Graduate test scores are not required.

Certificate programs are awarded upon the successful completion of 12 hours of coursework in non-degree-seeking status. Once completed, this coursework can be applied toward meeting the course requirements in the coordinating degree-seeking program.

When applying via the online GoApplyTexas.org website, applicants must apply directly for a specific certificate program. Since certificate programs are considered non-degree-seeking, students in these programs are not eligible for either financial aid or scholarship awards.

Teacher Certification

Degree-seeking students, enrolled in master's degree programs, may also be simultaneously enrolled in a teacher certification program. Students applying to undergraduate teacher certification programs, without the intention of pursuing graduate degrees should apply as undergraduate students in post-baccalaureate status.

Teacher certification applicants are encouraged to seek appropriate advising through their academic department.

English Proficiency Requirements for Students Educated Outside of the United States

Applicants educated in countries where English is not the official language must demonstrate English proficiency. This requirement must be met during the admissions process. The intent of this policy is to ensure applicants have reasonable chances to succeed academically, based on their ability to comprehend, speak and write in English. The English proficiency requirement may be met by meeting one of the following criteria:*

- Earning a U.S. high school diploma or conferral of a U.S. associate degree or higher from regionally accredited institutions of higher education. (**Applied Science degrees cannot be used to waive the English Proficiency requirement**).
- Earning qualifying test scores from the SAT, ACT, TAKS, STAAR or Stanford exams. (**see TSI Assessment Exemptions through Test Scores**).
- Achievement Tests (**for deaf students only**). Specific exemption information can be obtained by contacting the Office of Admissions.
- Earning 12 or more transferable hours in the following subjects (English, Speech and heavy reading-related subjects such as Government, Political Science, History, etc.) from regionally accredited institutions of higher education. Grades earned must be C or higher; and, six (6) of the 12 hours must be in English Composition. **English as Second Language courses (ESL or ESOL) do not count toward English proficiency exemptions**.

To satisfy English Proficiency by Test Results, one of the following is required:

- Official Pearson Test of English (PTE) score of 53 or higher,
- Official International English Language System (IELTS) score of 6.0 or higher,
- Successful completion of ELS Level 112 - Intensive English Program, or
- iBT TOEFL Test total of 79 or higher
- Duolingo Test of 105 or higher
    - Duolingo will be accepted until December 2022

*** Applicants for Teacher Certification may require additional criteria for English Proficiency; see Teacher Certification.**

Teacher Certification English Language Requirements

Students may complete a Teacher Certification program, with or without earning a degree at UHCL. Those who have already earned bachelor's degrees, and have plans to complete undergraduate teacher certification without simultaneously enrolling in graduate degree programs can complete certification coursework in post-baccalaureate (PB) status.

Required Scores are as follows:

Students must earn UHCL's minimum scaled total score requirement of 79 on the Test of English as a Foreign Language Internet- Based TOEFL (iBT) examination.

Other required minimum scores that must be submitted directly to the TEA, agency code 8225, as well as degree requirements are as follows:

- Speaking: 24
- Listening: 22
- Reading: 22
- Writing: 21
- Completion of an undergraduate or graduate degree at an accredited institution of higher education in the United States, not including U.S. Territories.
- Completion of an undergraduate or graduate degree, at an institution of higher education in a country outside of the U.S. that is approved by the State Board for Educator Certification (SBEC) as listed below:*

American Samoa	Anguilla	Antigua and Barbuda
Australia	Bahamas	Barbados
Belize	Bermuda	British Virgin Islands*
Cayman Islands	Canada (except Quebec)	Dominica
Gambia	Ghana	Gibraltar
Grand Canyon	Grenada	Guyana
Jamaica	Liberia	Nigeria
Saint Kitts and Nevis	Saint Lucia	Trinidad/Tobago
Turks and Caicos	United Kingdom*	U.S. Pacific Trust

*British Virgin Islands include - England, Northern Ireland, Scotland and Wales. United Kingdom includes - West Indies.

Examinations for Graduate Candidacies

All new graduate students must provide official standardized test results from GRE, GMAT or MAT examinations, as required by the appropriate academic department. Test scores must be sent directly to the Office of Admissions, in order to be viewed by campus departments and for completion of applicant admissions files.

Former students, who pursue new degrees in different programs or academic departments, must apply by the posted deadlines for new graduate students and may be required to submit a different graduate examination for admission purposes. In these situations, students are encouraged to contact their academic department for more information.

Scores must be received directly from the testing agency. Hand-carried or student copies of test score results, or those that are more than five years old at the time of application are considered unofficial and will not be accepted.

Students enrolling as non-degree-seeking are generally exempt from standardized test requirements (please check the appropriate program's requirements). Non-degree-seeking students who change to degree-seeking status are required to meet current admissions requirements, submit any required documentation not yet received, and must reapply and pay the appropriate application fee.

Examination Exemptions

University of Houston Clear Lake may provide both university and college examination exemptions. UHCL will waive graduate test score requirements for applicants with conferred academic doctorate degrees from accredited U.S. institutions (e.g., Ph.D. or Ed.D.). Graduate score exemptions will also apply to applicants who have earned other doctorate degrees such as M.D., D.D.S. or J.D. degrees, and who are also licensed to practice in the United States.

Applicants who do not meet the university waivers may meet requirements for some college or departmental graduate test score waivers, as follows:

College of Science and Engineering

College of Science and Engineering's graduate acceptance committee may request a dean's examination exemption. This exemption may apply to applicants who have earned graduate degrees from regionally accredited institutions of higher education in programs related to their field of study. Other exemptions may apply by program. For the most current waiver information, consult the appropriate program's requirements in the catalog or on their website.

College of Human Sciences and Humanities

College of Human Sciences and Humanities will waive the graduate examination requirement for applicants who have earned a 3.000 GPA or higher on the last 60 hours of coursework or who hold doctorate degrees. Examination exceptions do not apply for applicants in the following degree programs:

- Behavior Analysis M.A.
- Psychology and I/O Psychology M.A. programs
- Professional Psychology degree programs
- The Doctor of Psychology degree program

College of Education

College of Education will waive the graduate examination requirement for applicants who have earned a 3.000 GPA or higher on the last 60 hours of coursework, and have earned a bachelor's degree or higher, or for counseling applicants who have earned a master's degree.

College examination exemptions do not apply for applicants to the doctor of education programs. However, students may complete the UHCL Doctoral Writing Assessment Examination, in lieu of the GRE. Please contact the department for details.

College of Business

Applicants may qualify for a standardized test waiver if they have earned an undergraduate or graduate degree from a **qualified institution** which meets any of the following criteria:

(a) a regionally accredited U.S. school, college, or university, or

(b) an accredited school, college, or university in a country where English is the native or first language, or

(c) an accredited college or university in a country on the SBEC-approved list of countries (see Teacher Certification English Language requirements).

The applicant must ALSO meet the degree **performance** requirements set by the program they are applying to, as follows.

Masters of Business Administration (MBA)

Applicants to the MBA program may qualify with a standardized test waiver if any of the following conditions are met:

(a) earned a bachelor's degree from a qualified institution with a 3.000 or greater cumulative GPA (on a 4.0 scale) from the degree granting institution, or

(b) earned an advanced degree from a qualified institution, or

(c) completes the **MBA certificate start** with a 3.000 or greater GPA in the certificate.

MBA Certificate Start

Domestic applicants who have completed a bachelor's, degree from a qualified institution with **less than a 3.0 GPA**, may choose admission to the MBA program with a **standardized test waiver** through the *MBA certificate start*.

Applicants to the MBA certificate start must have a minimum cumulative GPA of 2.500 (on a 4.0 system).

Qualified applicants who are admitted to **MBA certificate start** program must complete their graduate certificate in either Environmental Management, Human Resource Management, or Management of Technology **with a 3.000 or greater GPA in the certificate** to be granted acceptance into the MBA core program.

Masters of Healthcare Administration (MHA), or Joint Masters of Healthcare Administration and Business Administration (MHA/MBA)

Applicants to either of these programs are eligible for a standardized test waiver if they meet **one (1)** of the following criteria:

(a) earned a bachelor's degree from a qualified institution with a 3.000 or greater cumulative GPA on the last-60 hours of coursework attempted, or

(b) earned an advanced degree from a qualified institution.

Applicants who are not eligible for the standardized test waiver must also include three letters of recommendation, a current resume, and a statement of career goals.

M.A. Human Resource Management

Applicants to the MBA program may be admitted with a standardized test waiver if they meet **one (1)** of the following criteria

(a)Earned a bachelor's degree from a qualified institution with a 3.000 or greater GPA from the degree granting institution, or

(b) Earned a bachelor's degree from a qualified institution with a 3.000 or greater GPA on the last-60 hours of coursework attempted, or

(c) Earned an advanced degree from a qualified institution.

M.S. Accounting

Applicants to the M.S. Accounting program are eligible for a standardized test waiver if they meet **one (1)** of the following criteria:

(a) Majoring in a business-related area at an institution with AACSB business accreditation; AND have at least 18 credit hours of upper-division business-related courses at an institution with AACSB business accreditation with an overall GPA of at least 3.0 in those courses; or

(b) Earned a bachelor's degree in a science, engineering, or mathematics related major at an institution accredited by an agency recognized by the U.S. Department of Education; AND has a GPA of at least 3.0 in upper-division courses at the institution; or

(c) Earned a graduate degree in business from an AACSB-accredited university or a Ph.D., M.D., Ed.D., D.D.S., or J.D. from an institution accredited by an agency recognized by the U.S. Department of Education (or U.S. licensure).

M.S. Environmental Management or M.S. Finance

Applicants to any of these programs are eligible for a standardized test waiver if they meet **one (1)** of the following criteria:

(a) earned a bachelor's degree from a qualified institution with a 3.000 or greater cumulative GPA on the **last 60 hours** of coursework attempted, or

(b) earned an advanced degree from a qualified institution.

M.S. Management Information Systems

Applicants to the M.S. Management Information Systems program are eligible for a standardized test waiver if they meet **one (1)** of the following criteria:

(a) earned a bachelor's degree from a qualified institution with a 3.250 or greater cumulative GPA from the degree granting institution, or

(b) earned an advanced degree from a qualified institution, or

(c) have a terminal degree and U.S. licensure.

Test Center Telephone Numbers and Information

Test Center Information for the Graduate Record Examination (GRE), Graduate Management Admission Test (GMAT) and Miller Analogies Test (MAT) is listed below. For more specific examination requirements by college, program or plan, please refer to the appropriate college's section of the catalog.

Graduate Record Examination (GRE)

- Phone 1-609-771-7670 or 510-654-1200
- Institution code - R6916

Miller Analogies Test (MAT) Miller Analogies Test (MAT)

- Phone 1-800-622-3231

Graduate Management Admission Test (GMAT)

- Phone 1-800-717-4628
- Select code by program of interest as follows: 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 M.A. in Human Resource Management

- 1FD-BS-29 M.S. in Accounting
- 1FD-BS-71 M.S. in Environmental Management
- 1FD-BS-86 M.S. in Finance
- 1FD-BS-81 M.S. in Management Information Systems
- 1FD-BS-93 MHA/MBA Joint Degree
- 1FD-BS-97 M.S. in Computer Information Systems

Majors that accept both GMAT and GRE scores are as follows:

- MHA
- M.S.-M.I.S.
- M.A.-HRM
- M.S.-Environmental Management
- M.S. -Computer Information Systems

Majors that accept the UHCL Doctoral Writing Assessment Examination

- Ed.D. in Educational Leadership

Re-admission or Status Change Process

Former UHCL Students

Former students seeking readmission to UHCL, after three semesters of non-enrollment should submit the following:

- Completed admissions application
- Non-refundable $45 application fee, and
- Official transcript(s) of any coursework completed since enrolled at UHCL, or coursework that was pending receipt when last enrolled at University of Houston-Clear Lake

Former students, who have not been enrolled at UHCL within the past five years or whose information is no longer on file are required to resubmit documents from other institutions.

Students who leave the university on academic probation will be readmitted on academic probation.

- Degree-seeking students, whose ability to enroll was terminated due to academic deficiency, must be reinstated by the appropriate associate dean or designee before readmission.
- Non-degree-seeking students must be reinstated by the Associate Vice President of Enrollment Management or designee.

Changing Careers or Enrollment Status

Enrolled students who would like to change their academic careers from undergraduate to graduate (or vice versa), or who would like to change their

classification from non-degree-seeking to degree-seeking, must reapply to the university.

To reapply, students must submit a new application to the Office of Admissions, pay the application fee and meet appropriate admission criteria and deadlines. Students who enrolled as degree-seeking and wish to change to non-degree-seeking the following semester, should complete an Academic Records Change form (ARC). This form is available through their program's academic advising office.

Applicants to the university, who applied to either an undergraduate or graduate career and would like to change their career before officially enrolling, can do so once without submitting a new application. These students should complete a **Graduate Application Update Request Form.**

If an additional career change is needed, students must reapply and submit a new application fee. (**Some applicants may be asked to submit a new application, if applicable; however, the fee will not be assessed**). Applicants interested in changing their program or degree status, while remaining in the same career, can do so prior to the first day of classes.

Records Retention and Release

Records from other institutions are kept on file for a period of five years after enrollment. Former students who did not enroll during the past five years must resubmit transcripts, documentation and pay the application fee, when reapplying to the university. Once documents are submitted to University of Houston-Clear Lake, they become the property of the university and will not be returned or otherwise sent to other institutions or entities via email, fax or U.S. mail.

Students may receive a copy of their previously submitted transcripts or scores in person, by bringing a valid Texas driver's license or state-issued ID to the Office of Admissions and completing a request form to release the information.

Graduate Transfer Credit Information

Transfer of Graduate Credit

Course equivalencies for any graduate transfer work is determined through the student's academic program department.

Master's degree programs require a minimum of 30 semester credit hours. A minimum of 24 semester credit hours must be earned through instruction at UHCL. No more than 25% of the semester credit hours required for a graduate degree can be accepted in transfer from other institutions. Therefore, the possibility of transferring credit toward a master's degree is in most cases limited to no more than six (6) hours for a master's degree requiring 30 semester credit hours, and no more than nine (9) hours for programs requiring 36 semester credit hours.

Doctoral degree programs require a minimum of 69 hours beyond the master's degree. The possibility of transferring credit toward doctoral degrees is limited to no more than 21 hours, but in most cases may not exceed 12 semester credit hours.

Credit applied toward previous graduate degrees may not be used to fulfill requirements of a different degree. Additionally, this credit is not necessarily applicable to subsequent degree programs.

Only graduate courses with grades of B- or above are transferable; grades of C or below are non-transferable.

The dean of the academic program will determine whether the content of such coursework is pertinent to current degree objectives. Courses completed more than five years prior to admission into graduate programs at UHCL may not be counted toward fulfilling the required number of hours, unless approval is granted by the dean.

Online and Off-Campus Education

To meet the need for flexibility, the university offers classes in a variety of formats and at several convenient locations. Students can opt to complete selected master's degrees or a Doctor of Education in Educational Leadership 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 time students actually spend in the classroom.

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

Course Delivery Formats

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

- **Online (Internet)** - This format is delivered via the internet using Blackboard, a course management tool with all class instruction delivered and course requirements fulfilled online. No face-to-face interaction is required. Courses offered online provide an environment for flexible learning and teaching while delivering the same high-quality content as in a traditional setting. Some online courses require proctored exams. 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 (Hybrid)** - With this format, classroom instruction is delivered and course requirements are fulfilled via a combination of face-to-face instruction at the UHCL campus and off-campus sites and online. In a web-enhanced class, an instructor can deliver all instruction online but require students to attend mandatory orientation, class presentations, and in-class examinations. The number of face-to-face meetings is determined by the instructor and can be found on the footnotes for the class on the UHCL class schedule. The web-enhanced format is popular both on the UHCL campus and at the off-campus learning centers.
- **Off-campus courses** - UHCL offers courses for selected graduate degree programs and certificates at off-campus learning centers. Courses at our off-

campus learning centers may be offered in a traditional classroom, or as a web-enhanced class. UHCL is committed to using the most current instructional techniques to ensure comparable learning outcomes between coursework delivered in a traditional, web-enhanced or online format.

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.

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. Program options at different off-campus locations and for master's degrees offered online are listed on the application and in the catalog.

Schedule of Classes

Each semester, students can review course offerings via the online search engine on the UHCL website. See class schedule available online at www.uhcl.edu. To search for distance education courses, select the location of choice and/or instruction mode of delivery then search. The distance education class schedule can also be found at the DE website at www.uhcl.edu/disted.

Registration

Upon successful completion of the application process, students can register for classes online through E-Services. Tuition and fees can be paid by credit card or students can arrange to make installment payments. Students that register to take classes at an off-campus location must attend classes at that particular location.

Financial Aid and Scholarships

UHCL provides quick and easy access to financial aid and scholarship information to students at a distance. Eligibility for this assistance is the same as for on-campus students. All forms, a complete list of scholarships, timelines and instructions are available online at the Financial Aid website. Financial assistance is available to distance education students, as it would be for on-campus students. Please refer to www.uhcl.edu/finaid for more information.

Student Services

The Online and Off-Campus Education office has developed unique advising procedures to serve the needs of its students. Advisers are available to assist students via face-to-face appointments, telephone or email. Academic advising is available at each of our off-campus locations. To schedule an appointment, please email Disted@uhcl.edu or call 281-212-1615.

UHCL also provides student services to off-campus and online students. For assistance in accessing these services, call the Online and Off-Campus office at 281-212-1615 or the Welcome Center at 281-283-2722. Examples of these services include:

- Student photo IDs available at off-campus locations.
- Academic advising for students in online programs.
- Career exploration online and at the UHCL Pearland.
- Online tutors in writing and specific content areas. Tutoring is also available at the UHCL Pearland and Texas Medical Center.
- Online bookstore.
- Online course support.
- Online study skills assessment.
- General university information, via email and phone from the Welcome Center.
- Online access to the student news publication, The Signal.
- Disability services, available both online and off-campus.
- Virtual Library services.
- Counseling information available online and personal counseling available at the UHCL Pearland.

UHCL email 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 email accounts. Students are responsible for checking email regularly to ensure they receive important university information in a timely manner. Students who choose to use email addresses other than the one assigned to them by University of Houston-Clear Lake must log in to E-Services and forward their UHCL email to another valid email account to ensure access to important information and requests.

Online Programs and Certificates

All online programs and certificates offered by UHCL can be found at www.uhcl.edu/online.

Off-Campus Programs

Distance education off-campus sites in the greater Houston area are made possible by collaborative agreements with other educational institutions and school districts.

Currently, UHCL provides courses through distance education at eight ISDs (Alief, Clear Creek, Dickinson, Fort Bend, Katy, Pasadena, Spring Branch and Texas City).

All off-campus programs offered by UHCL can be found at www.uhcl.edu/off-campus-education.

Registration and Records Services

Registration

Enrollment is necessary for every period of attendance at University of Houston-Clear Lake. The Office of the Registrar sends announcements to specify times and other instructions for completing the enrollment process. Registration is completed online by logging into E-Services at www.uhcl.edu/eservices. Please refer to the online academic calendar for registration dates and deadlines. Students who need assistance with registration may visit the Welcome Center on the UHCL campus or Enrollment Services at Pearland. Registration is not complete until tuition and fees have been paid in full. If tuition and fee payments are not received by the stated deadlines, payment will be considered late. Additional questions regarding registration should be directed to the Office of the Registrar.

Degree-Seeking Versus Non-Degree-Seeking Status

- **Degree-seeking** students must select courses complying with provisions of their Candidate Plan of Study (CPS). 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. 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 regarding the requirements of any other university policies. Non-degree students who have earned at least 12 credit hours by the end of the current semester will have an advising hold placed to restrict future enrollment. The student and academic school adviser must make appropriate course selections or select a specific degree program before future enrollment will be allowed. Non-degree-seeking students are not eligible for financial aid.
-

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 which, according to state policies, enrollment is deemed insufficient to split into classes that are over-enrolled and to change the instructor and/or classroom without advance notice.

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 ensuring 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 may be dropped from the course.

Time Conflict Enrollment

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

Automatic Enrollment-Graduate Option Course Work

The first semester of registration for master's thesis, project, internship, dissertations or residency must be completed in person. After the initial semester of registration in master's thesis, project, internship, dissertations 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 the Registrar prior to the beginning of the summer semester.

Late Registration

Final schedule revisions (drop/add) and late registration will be permitted during the first week of classes of a long semester. The late registration and drop/add period for the summer terms is less than one week.

Times and dates will be announced by the Office of the Registrar. No registrations or schedule changes will be permitted after late registration. A late registration fee will be charged to students who register during late registration. Students who have not paid by the payment deadline date will be charged a late payment fee.

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 for regular sessions and is adjusted in accordance with THECB rules for all other sessions. The census date is 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.

Registration Discrepancies

If students become aware of registration discrepancies (e.g., 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 the Registrar in order to correct any discrepancies. Only the Office of the Registrar is authorized to make official changes in students' registration status.

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 the Registrar before the first class day of the term (refer to Refund Policies). Requests for cancellations may be completed through E -Services or in writing and received by the Office of the Registrar prior to the first class day of the term. Such notices may be faxed to the office at 281-226-7230 or submitted via email at registrar@uhcl.edu.

Auditing Courses

Application forms to audit a course may be obtained from the appropriate associate dean's office. A student ID will be required in order to register for classes. Contact the Office of Admissions at 281-283-2500 or admissions@uhcl.edu for assistance if a new student ID needs to be created. 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. Audit students can make payment for audited classes in person at the Clear Lake and Pearland Student Business Services offices. Audit students must provide the approved Audit Application and completed Campus Audit Permit when making payment. 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 Student Business Services when requesting waiver of fees.

Each school's academic advising office will be responsible for assisting senior citizens to determine course availability, approval of instructor, registration procedures and general auditing regulations. Applicants should contact the appropriate academic advising office for the course(s) in which they wish to audit.

College of Business Advising
College of Education Advising
College of Human Sciences and Humanities Advising
College of Science and Engineering Advising

Academic Record Services

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

Academic Record Changes

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

Personal Information Changes

University records of student names and addresses are based on information given on the Application for Admission. Subsequent changes must be reported to the Office of the Registrar. Requests for name changes must be accompanied by supporting documentation. Please refer to the Personal Information Change form available online at www.uhcl.edu/registrar.

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

Transcripts

Students may request official copies of their transcript from the Office of the Registrar. Transcript requests can be made online through student E-services, fax or mail. There is no additional charge for transcripts. Transcript requests by fax or mail must include all of the following:

- The name of the student
- UHCL student ID
- A clear copy of a government issued photo ID
- The number of copies requested
- The address it is to be mailed to or whether it will be picked up
- A phone number where the student may be reached
- The signature of the student whose record is requested

Requests without a verifiable signature cannot be processed. Written requests can be mailed to University of Houston-Clear Lake, Office of the Registrar, 2700 Bay Area Boulevard, Houston, Texas 77058-1098 or faxed to 281-226-7230. Telephone requests or e-mails will not be honored. For same day requests, please visit the Welcome Center on the UHCL campus or at the Enrollment Services counter at the Pearland Campus.

Students who have encumbrance holds placed on their permanent records 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 3 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.

Enrollment and Degree Verifications

The University of Houston-Clear Lake has authorized the National Student Clearinghouse to provide degree and enrollment verification through their enrollment verify services. Students have access to print a proof-of-enrollment verification online through their E-services account. For more information about the National Student Clearinghouse, please visit www.uhcl.edu/registrar.

Student Notification of Rights under FERPA

The Family Educational Rights and Privacy Act (FERPA) afford eligible students certain rights with respect to their education records (an "eligible student" under FERPA is a student who is 18 years of age or older or who attends a post-secondary institution). These rights include:

1. The right to inspect and review the student's education records within 45 days after the day the University of Houston-Clear Lake receives a request for

access. A student should submit to the registrar, dean, head of the academic department, or other appropriate official, a written request that identifies the record(s) the student wishes to inspect. The school official will arrange for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the school official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. The right to request the amendment of the student's education records that the student believes is inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA.

A student who wishes to request amendment of a record should write the school official responsible for the record, clearly identify the part of the record the student wants changed and specify why it should be changed.

If the school decides not to amend the record as requested, the school will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to provide written consent before the university discloses personally identifiable information (PII) from the student's education records, except to the extent that FERPA authorizes disclosure without consent.

The school discloses education records without a student's prior written consent under the FERPA exception for disclosure to school officials with legitimate educational interests. A school official is a person employed by the University of Houston-Clear Lake in an administrative, supervisory, academic, research, or support staff position (including law enforcement unit personnel and health staff); a person serving on the board of regents; or, a student serving on an official committee, such as a disciplinary or grievance committee. A school official also may include a volunteer or contractor outside of the University of Houston-Clear Lake who performs an institutional service or function for which the school would otherwise use its own employees and who is under the direct control of the school with respect to the use and maintenance of PII from education records, such as an attorney, auditor, or collection agent or a student volunteering to assist another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for the University of Houston-Clear Lake. The University of Houston-Clear Lake may disclose a student's education records to other institutions if the student seeks or intends to enroll in the other institution and the institution has requested the records.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the school to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education

400 Maryland Avenue, SW
Washington, DC 20202

See the list below of the disclosures that post-secondary institutions may make without consent.

FERPA permits the disclosure of PII from students' education records, without consent of the student, if the disclosure meets certain conditions found in §99.31 of the FERPA regulations. Except for disclosures to school officials, disclosures related to some judicial orders or lawfully issued subpoenas, disclosures of directory information, and disclosures to the student, §99.32 of FERPA regulations requires the institution to record the disclosure. Eligible students have a right to inspect and review the record of disclosures. A postsecondary institution may disclose PII from the education records without obtaining prior written consent of the student-

- To other school officials, including faculty members, within that school whom the school has determined to have legitimate educational interests. This includes contractors, consultants, volunteers, or other parties to whom the school has outsourced institutional services or functions, provided that the conditions listed in §99.31(a)(1)(i)(B)(1) - (a)(1)(i)(B)(2) are met. (§99.31(a)(1))
- To officials of another school where the student seeks or intends to enroll, or where the student is already enrolled if the disclosure is for purposes related to the student's enrollment or transfer, subject to the requirements of §99.34. (§99.31(a)(2))
- To authorized representatives of the U. S. Comptroller General, the U. S. Attorney General, the U.S. Secretary of Education, or State and local educational authorities, such as a State post-secondary authority that is responsible for supervising the university's State-supported education programs. Disclosures under this provision may be made, subject to the requirements of §99.35, in connection with an audit or evaluation of Federal- or State-supported education programs, or for the enforcement of or compliance with Federal legal requirements that relate to those programs. These entities may make further disclosures of PII to outside entities that are designated by them as their authorized representatives to conduct any audit, evaluation, or enforcement or compliance activity on their behalf. (§99.31(a)(3) and 99.35)
- In connection with financial aid for which the student has applied or which the student has received, if the information is necessary to determine eligibility for the aid, determine the amount of the aid, determine the conditions of the aid, or enforce the terms and conditions of the aid. (§99.31(a)(4))
- To organizations conducting studies for, or on behalf of, the school, in order to: (a) develop, validate, or administer predictive tests; (b) administer student aid programs; or (c) improve instruction. (§99.31(a)(6))
- To accrediting organizations to carry out their accrediting functions. (§99.31(a)(7))

- To parents of an eligible student if the student is a dependent for IRS tax purposes. (§99.31(a)(8))
- To comply with a judicial order or lawfully issued subpoena. (§99.31(a)(9))
- To appropriate officials in connection with a health or safety emergency, subject to §99.36 (§99.31(a)(10))
- Information the school has designated as "directory information" under §99.37 (§99.31(a)(11))
- To a victim of an alleged perpetrator of a crime of violence or a non-forcible sex offense, subject to the requirements of §99.39. The disclosure may only include the final results of the disciplinary proceeding with respect to that alleged crime or offense, regardless of the finding. (§99.31(a)(13))
- To the general public, the final results of a disciplinary proceeding, subject to the requirements of§99.39, if the school determines the student is an alleged perpetrator of a crime of violence or non-forcible sex offense and the student has committed a violation of the school's rules or policies with respect to the allegation made against him or her. (§99.31(a)(14))
- To parents of a student regarding the student's violation of any Federal, State, or local law, or of any rule or policy of the school, governing the use or possession of alcohol or a controlled substance if the school determines the student committed a disciplinary violation and the student is under the age of 21. (§99.31(a)(15))

If you have any questions regarding these policies, please feel free to contact the Office of the Registrar at 281-283-2525 or via email at registrar@uhcl.edu.

Policy on Release of Student Records

The Family Educational Rights and Privacy Act (FERPA) of 1974 is a federal law stating that (a) a written institutional policy must be established and that (b) 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 with exceptions permitted under the act (see Student Notification of Rights Under FERPA).

Within UHCL, only those members individually or collectively acting in students' educational interests 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, student business services, accounting, career and counseling and mental health 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 University of Houston-Clear Lake may provide "directory information" to the general public without student consent.

Directory information is defined by the University of Houston-Clear Lake as follows (within guidelines of the Family Educational Rights and Privacy Act of 1974):

- Student name
- Address
- Telephone number
- University e-mail address
- Date and place of birth
- Major field of study
- Dates of attendance
- Classification
- Hours enrolled
- Date of graduation
- Photographs
- Degrees, awards and honors received
- Most recent previous educational agency or institution attended
- Participation in officially recognized activities and sports

"Student" means a person who (a) is currently enrolled at the University; (b) is accepted for admission or readmission to the university; (c) has been enrolled at the University in a prior semester or summer term and is eligible to continue enrollment in the semester or summer term that immediately follows; or, (d) is attending an additional program sponsored by the university while that person is on campus. Students who do not wish that public information (including their name, address and phone number) be released can go online at www.uhcl.edu/eservices and select all information to be restricted from release (with the noted exceptions for Release to Publications) according to Family Educational Rights and Privacy Act of 1974 guidelines and policies.

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. To review records, a student must make a request in writing to the Office of the Registrar. The request must identify the record or records he or she wishes to inspect. In compliance with FERPA, UHCL will provide the student's records for review within 45 days from the day the university receives the request.

Students may delegate access to their records to a third party. Students wishing to give individuals (such as parents) access to their records may complete in person an Authorization to Release Educational Records.

This form can be completed in person at the following offices: Office of Financial Aid, Student Business Services, Welcome Center, or academic advising offices.

Students may request letters of recommendation or evaluations from faculty and staff. Typically, letters of recommendation or evaluations will be very general in nature. These documents will not disclose identifiable information obtained from a student's education record (GPA, grades, etc.). As such, letters of recommendation and evaluations may be provided without a formal written release. However, the student must request the letter of recommendation or evaluation (either verbal or written). If the student requests identifiable information to be disclosed (GPA, grades, etc.) in the document, the student must provide a written release. In addition, faculty and staff members may request a written release for any circumstance if desired. Faculty and staff reserve the right to decline a request to provide a recommendation or evaluation.

Communication with Students

The university-assigned campus email address is the official means of communication for all student-related information and exchanges among academic and administrative offices.

Students should check their UHCL e-mail accounts regularly to receive information from university offices. For information regarding UHCL e-mail, or to log in, go to http://webmail.uhcl.edu. Students have the ability to forward their UHCL e-mail account to a preferred e-mail account. Students interested in this option should visit University Computing and Telecommunications' website at www.uhcl.edu/uct.

From time-to-time, university offices may employ other means of communication. Those avenues of communications include texting, calling, and the USPS. In some circumstances, automated calling (typically referred to as robocalls) and texting may be used to notify students of important deadlines.

If students do not wish to receive automated text messages or phone calls, students may call 1-855-502-7867 to opt out of these communications. Students opting out may miss important deadlines, which could jeopardize enrollment at the University of Houston-Clear Lake.

For additional information on opting out of automated text messages or phone calls, please contact the Office of the Registrar.

Welcome Center

The Welcome Center is a multi-service center designed to answer questions about campus services, and to provide guidance in navigating university policies, procedures and resources. The Welcome Center offers advocacy, referral and support for matters relating to admissions, registration, financial aid, student billing, academic support, course drop/withdrawal, student records, transcripts, E-Services, Hawk Card services, foster care alumni services, student affairs and general university information. The Welcome Center operates the Bayou Building HAWK Help Desk, and supports students enrolled in online classes and students enrolled at off-campus locations. The Welcome Center strives to educate and empower students in making informed decisions concerning their academic and personal pursuits.

For more information:

Phone	281-283-2722
Email	TBD
Web	TBD
Location	SSCB 1202

Tuition and Fees

The tuition and fees 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 fees charged.

E-Mail as Official Communication

The university-assigned campus email address is the official communication vehicle for all student information and exchanges among academic administrative offices. The following notifications will be sent via e-mail:

- 1098T
- Set Aside
- Collection Notices

Students should check their UHCL e-mail accounts regularly to receive information from Student Business Services, as well as other university offices. For information regarding UHCL e-mail, or to log in go to http://webmail.uhcl.edu.

Students have the ability to forward their UHCL e-mail account to a preferred email account. Students interested in this option should visit the Office of Information Technology website at https://www.uhcl.edu/computing/

In some circumstances, Student Business Service may send a text to notify students of important deadlines.

Definition 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 $100 per semester credit hour for students.

Non-residents of Texas and foreign students will be charged tuition at the rate of $490 per semester credit hour for students.

A non-American 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.

General Residency Requirements

The general rules for meeting eligibility requirements in the state of Texas are summarized below. 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.collegeforalltexans.com in the Get All The Facts section.

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 a 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.

Reinstatement Fee

The reinstatement fee is charged to students who are approved for reinstatement after being dropped/withdrawn from classes for non-payment of tuition and fees.

Recreation and Wellness Facility Fee

This fee may be used only for the purpose of financing, constructing, operating, maintaining, improving and equipping a recreation and wellness facility and for the operating recreation and wellness programs at the University of Houston-Clear Lake.

Academic Record Fee

The proceeds from the Academic Record Fee shall be used to cover the costs of maintaining online registration system components and cover the costs of university publications and reproduction of transcripts. This fee is non-refundable.

Orientation Fee

This one-time fee funds costs for the new student orientation programs.

Tuition Designated Fee

The Tuition Designated Fee is required of all students, graduate or undergraduate, resident or nonresident, enrolling in higher education institutions. As authorized by state law House Bill 3015 in the 78th Legislature in 2003, the university governing boards have been authorized the flexibility to "charge any student an amount designated as tuition that the governing board considers necessary for the effective operation of the institution."

Parking Fee

A Parking Fee of $95 for an annual permit, or $60 for each fall and each spring, and $45 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 page at www.uhcl.edu/parking for additional information.

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

Lost or stolen parking permits must be reported at https://uhclparking.t2hosted.com/cmn/index.aspx so that a replacement permit may be purchased. Lost or stolen permits may be purchased at a cost of $20.00 at https://uhclparking.t2hosted.com/cmn/index.aspx.

Information Resource Fee

The Information Resource Fee will be used to provide operational and personnel support and resources for the Neumann Library and for the UHCL Pearland Library. The libraries provide students with a learning environment that includes instructional services and research material in print, video and electronic forms. Additionally, this fee will be used to provide students with access to computing facilities for activities and uses that are part of the 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 $7 per credit hour, up to a maximum of $63 per semester for all students registering for classes.

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.

Designated Differential Tuition

The Designated Differential Tuition (DDT) is charged separately by the colleges in order to improve and enhance resources available to students.

The College of Business uses its DDT to hire full-time faculty to facilitate meeting the faculty sufficiency and qualifications standards for AACSB International business college accreditation.

The College of Human Sciences and Humanities uses its DDT to increase and improve resources available by hiring more full-time faculty and improving the instruction of adjunct faculty.

The College of Education uses its DDT to maintain and improve programs by hiring additional faculty and providing student financial support.

The College of Science and Engineering uses its DDT to hire more full-time faculty and teaching assistants and to buy and maintain state-of-the-art equipment for use in labs and classrooms.

Incidental Fees

A fee may be charged to students or prospective students to cover the cost of providing materials or services which are not the subject of a charge under any other statutory authorization. Incidental fees may be course related or non-course related.

Co-Op Fee

A fee that may be assessed to support additional requirements associated with cooperative education.

Practicum Fee

A fee that may be assessed to support fieldwork at off-campus locations.

Malpractice Fee

A fee that may be assessed to pay for insurance to support students at off-campus locations.

College of Education Doctoral Program

The Designated Differential Tuition charged by the College of Education applies to doctoral-level courses only and will be used as excellence funding to support faculty development and research initiatives.

International Education Fee

The International Education Fee of $4 is assessed to each student to provide scholarship support for those who participate in education abroad programs.

Graduate Programs Research Capability Fee (BUS)

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

BUS Computer Support Fee

This fee will support labs for dedicated College of Business use.

Credit Card Processing Fee

Texas Education Code Section 54.5011 authorizes the institution to charge an amount reasonable and necessary to reimburse the university, for expenses incurred by the university in processing credit card transaction or a debit card that is processed as a credit card. The current credit card processing fee rate is 1.40% (see Catalog Updates) and will apply to payments that are related to student tuition and fees only.

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 Student Business Services.

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 subject to change without notice as necessitated by university or legislative actions. Questions should be directed to Student Business Services.

Fee	Amount In U.S. Dollars
Academic Record Fee (non-refundable)	30
Certificate (award is posted to transcript)	25

Certificate, Teacher	78
Certificate, Professional	78
Cooperative Education	75
Differential Designated Tuition (BUS) - Graduate	77
Differential Designated Tuition (COE) - Graduate	12
Differential Designated Tuition (HSH) - Graduate	20
Differential Designated Tuition (CSE) - Graduate	25
Differential Designated Tuition - COE Doctoral Program	20
Differential Designated Tuition - HSH Doctoral Program	50
Extended Access Fee	7/hr - 63/max
Duplicate Fee Statement, each	3
Duplicate Diploma	36.50
Excessive Undergraduate Hours - 3 Peat ($390 per 3-hour course)	130/hr.
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)	45
Graduate Program Research Fee (BUS only)	80

Graduate Studies Application	45
Graduation Application (includes diploma but not cap/gown)	90
Information Resource Fee	29/hr. - 348/max
International Education Fee	4
International Student Insurance (annual)	3317
International Student Application/Evaluation	75
International Student Fee (per semester/non-refundable)	65
Internship	30 - 72
Laboratory, per course	Variable
Late Payment (per semester)	50/ per deadline- 100/max
Late Registration (per semester)	50
Matriculation (for withdrawal prior to first class day)	15
Transfer Student Orientation (TSO)	50/1-time-35 for guest
New International Student Orientation (NISO)	50/1-time
Parking (annual)	95
Parking (per long term)	60
Parking (summer)	45
PsyD Application Fee	50
Recreation and Wellness Center Fee	121 per term
Reinstatement Fee	200

Returned check charge, per check	25
Special course fee, when required; an amount sufficient to defray the cost of materials and/or supplies required. May include malpractice insurance.	Variable
Student Center Fee (per semester)	30
Student Service Fee	44.10/hr.-264.60/max
Thesis binding, per volume	20
Thesis publishing by UMI	55
Tuition Recovery	130

Additional Special Fees by College

Certain courses incur additional special fees. For a complete listing of special fees associated with UHCL courses by college, please refer to the online catalog:

» https://catalog.uhcl.edu

» The current catalog year will display at the top of the page. To select a different catalog year, use the drop-down menu at the top right of the page.

» Select Undergraduate or Graduate Information on the left navigation bar. » Select the Tuition and Fees link.

» Select the Additional Special Fees by College link.

» Select the college link where the course resides.

Tuition and Fee Schedule for Graduate Students

CRHR	RES GRAD	NR/F GRAD	TUI DESGD	TUI DES NR/FGD	ST SVC	INFO RES	REC WELL	EXT ACC	INT EDU	ST CENT	ACDM RCRD	R-GR TOTAL	NR/F GRAD TOTAL
1	100	490	320	464	44.10	29	121	7	4	30	30	685.10	1,219.10
2	200	980	640	928	88.20	58	121	14	4	30	30	1,185.20	2,253.20
3	300	1,470	960	1,392	132.30	87	121	21	4	30	30	1,685.30	3,287.30
4	400	1,960	1,280	1,856	176.40	116	121	28	4	30	30	2,185.40	4,321.40

5	500	2,450	1,600	2,320	220.50	145	121	35	4	30	30	2,685.50	5,355.50
6	600	2,940	1,920	2,784	264.60	174	121	42	4	30	30	3,185.60	6,389.60
7	700	3,430	2,240	3,248	264.60	203	121	49	4	30	30	3,641.60	7,379.60
8	800	3,920	2,560	3,712	264.60	232	121	56	4	30	30	4,097.60	8,369.60
9	900	4,410	2,880	4,176	264.60	261	121	63	4	30	30	4,553.60	9,359.60
10	1,000	4,900	3,200	4,640	264.60	290	121	63	4	30	30	5,002.60	10,342.60
11	1,100	5,390	3,520	5,104	264.60	319	121	63	4	30	30	5,451.60	11,325.60
12	1,200	5,880	3,840	5,568	264.60	348	121	63	4	30	30	5,900.60	12,308.60
13	1,300	6,370	4,160	6,032	264.60	348	121	63	4	30	30	6,320.60	13,262.60
14	1,400	6,860	4,480	6,496	264.60	348	121	63	4	30	30	6,740.60	14,216.60
15	1,500	7,350	4,800	6,960	264.60	348	121	63	4	30	30	7,160.60	15,170.60
16	1,600	7,840	5,120	7,424	264.60	348	121	63	4	30	30	7,580.60	16,124.60
17	1,700	8,330	5,440	7,888	264.60	348	121	63	4	30	30	8,000.60	17,078.60
18	1,800	8,820	5,760	8,352	264.60	348	121	63	4	30	30	8,420.60	18,032.60
19	1,900	9,310	6,080	8,816	264.60	348	121	63	4	30	30	8,840.60	18,986.60

20	2,000	9,800	6,400	9,280	264.60	348	121	63	4	30	30	9,260.60	19,940.60
21	2,100	10,290	6,720	9,744	264.60	348	121	63	4	30	30	9,680.60	20,894.60
22	2,200	10,780	7,040	10,208	264.60	348	121	63	4	30	30	10,100.60	21,848.60
23	2,300	11,270	7,360	10,672	264.60	348	121	63	4	30	30	10,520.60	22,802.60
24	2,400	11,760	7,680	11,136	264.60	348	121	63	4	30	30	10,940.60	23,756.60
25	2,500	12,250	8,000	11,600	264.60	348	121	63	4	30	30	11,360.60	24,710.60
26	2,600	12,740	8,320	12,064	264.60	348	121	63	4	30	30	11,780.60	25,664.60
27	2,700	13,230	8,640	12,528	264.60	348	121	63	4	30	30	12,200.60	26,618.60
28	2,800	13,720	8,960	12,992	264.60	348	121	63	4	30	30	12,620.60	27,572.60
29	2,900	14,210	9,280	13,456	264.60	348	121	63	4	30	30	13,040.60	28,526.60
30	3,000	14,700	9,600	13,920	264.60	348	121	63	4	30	30	13,460.60	29,480.60

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 Financial Aid 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 Financial Aid at least one month prior to registration for the term in which they plan to utilize the exemption provision, and 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 Financial Aid. In the case of a rebate, the student must apply for the rebate at the time of graduation in the Office of the Registrar. Once the rebate is verified by the Office of the Registrar, the refund will be issued by Student Business Services.

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 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 Jan. 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.

Good Neighbor Waiver

Qualified native-born students from the other nations of the American hemisphere and from Latin American countries designated by the United States Department of State may be exempt from the payment of certain tuition and fees.

Child of Protective Services or Child of Foster Care or other Residential Care

Exemption for payment of tuition and fees for students meeting the qualifications outlined in Texas Education Code 54.366 or 54.367.

Payment Plans Available for Payment of Tuition and Fees

Installment Plan

At the time of original registration, UHCL students may pay their tuition and fees in full or they may elect a four-payment option (one quarter of tuition and fees at the time of registration and the remaining balance split in three equal installments). There is a $25 non-refundable fee for the multiple payment plan. The installment plan is not available for summer semesters. Courses added after the original registration period will adjust into the installment plan, and an additional amount may be due depending on the add/drop activity.

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 $20 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.

Short-Term Loan

At the time of original registration at UHCL students may pay their tuition and fees in full or they may elect a two-payment option (one quarter of tuition and fees due at the time of registration and the remaining amount due later in the term). There is a $25 non-refundable fee for the payment plan. Courses added after the original registration period will adjust into the payment plan and an additional amount may be due, depending on add/drop activity.

The subsequent due date of the remaining payment will be listed in the student's E-Services account under the "charges due" tab. Additional payment notices are not mailed. The short-term loan bears a five percent (5%) interest per annum. Students who do not meet the final payment deadline 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 short-term loan contract will have their records encumbered and no grades or transcripts will be issued. 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.

Vocational Rehabilitation

The Texas Department of Assistive and Rehabilitative Services (DARS) offers tuition and required fees assistance to students having certain physical or emotional disabilities, provided vocational objectives selected by the individuals with disabilities have been approved by appropriate representatives of DARS. Through this state agency, other rehabilitation services are available to assist persons with disabilities to become employable. Applications for assistance should be made to the nearest DARS office.

Refund Policies

Refunds on Withdrawals

A student is considered withdrawn if they are no longer enrolled in the current term. Students receiving financial aid are advised to contact the Office of Financial Aid prior to making changes in their enrollment status. Student services and privileges, including library services and use of computer labs terminate when a student withdraws from the university. Class days are counted from the first official class day of a semester or session and include weekdays and Saturdays. Refunds will first be applied to outstanding obligations.

Students who pay tuition and fees for any term and who subsequently cancel their registration through the Office of the Registrar 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 $30 Academic Record 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 on the courses in which students are enrolled on the date of official withdrawal. Refunds are based on the amount billed and not what has been paid.

Once a student registers, he or she is responsible for the total fees assessed regardless of whether the installment or short-term loan option is used. Refund percentages are applied to total fees assessed and not the amount paid. This stipulation means if you withdraw after making your first payment of tuition and fees, but after the 100% withdrawal period, a credit balance will first be applied to any outstanding amount due.

Withdrawal from courses or from the university can be made 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 the Registrar at 281-226-7230. The university reserves the right to deduct from the refund any outstanding financial obligations to the university.

No refund will be made to students who leave the university without officially withdrawing. Refunds are made in accordance with the following 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 the completion of all university registrations for that semester. Refunds will be processed through BankMobile or credit card used for payment.

Refunds on Dropped Courses

Dropped course refunds only apply when one or more classes from a student's schedule are removed but the student remains enrolled in at least one course. Students receiving financial aid are advised to contact the Office of Financial Aid prior to making changes in their enrollment status. Reducing semester hours to zero is considered a withdrawal and the refund on the withdrawals schedule will be followed. Please refer to the Refund on Withdrawals section of the catalog.

Students who drop classes within the first 12 class days of a 15-week session; within the first four class days of an eight-week or nine-week session, or within the first two class days of a three-week, four-week and five-week session and who remain enrolled in the university for that semester may be refunded the applicable tuition and fees for classes dropped. No refunds will be made for courses dropped after the 12th class day during a 15-week session, the fourth class day of an eight-week or nine-week session, or the second class day of a three-week, four-week and five-

week session. Refunds will be processed through BankMobile. UHCL has partnered with BankMobile to provide disbursement services for financial aid and tuition refunds. 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.

Payment Agreement

The state of Texas requires that any student unable to pay their tuition and fees in full by the due date established by the university must enter into a payment plan with the university. The payment agreement constitutes a contract between the student and the university, wherein the student acknowledges the financial obligation to the university in writing (electronic signature) through their self-service student account.

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

Students who have written a bad check to the university (unless due to bank error) will be assessed a $25 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.

Students must always be in good financial standing with the university. 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 with a collection agency, additional collection fees charged, and being reported to the Credit Bureau of Greater Houston.

Veteran Services

- Federal VA Education Benefits
- Hazlewood Act
- Hazlewood Exemption Deadline
- Satisfactory Academic Progress for Veteran Benefits
- Disabled Veteran Parking
- Residency
- House Bill 269
- Priority Registration

It is the mission of the Capt. Wendell M. Wilson Office of Veteran Services to help veterans and their dependents flourish in their higher education pursuits. We act as a liaison between the military-connected student, the school, the Department of Veterans Affairs (VA), and the Texas Veterans Commission to ensure these goals are reached. Our staff members are committed to assisting veterans and their eligible dependents with federal or state education benefits gained through military service.

Military-connected students entering UHCL should contact the Capt. Wendell M. Wilson Office of Veteran Services immediately to establish their benefits in a timely manner. For one-on-one counseling regarding your benefits, contact us directly at vso@uhcl.edu or by phone at 281-283-3071.

Services include:

- Providing certification of enrollment for the following federal benefits: Post 9/11 GI Bill®, Montgomery GI Bill®, Reservist Educational Assistance, Vocational Rehabilitation and Employment Program and Dependent Educational Assistance
- Processing of Hazlewood Exemptions and Hazlewood Legacy Act
- Determining eligibility for House Bill 269 (military service credit)
- Establishing residency for those who are receiving federal veteran education benefits

Federal VA Education Benefits

Covered individuals (**students entitled to Chapter 33, Post 9/11 GI Bill® or Chapter 31, Vocational Rehabilitation and Employment**) are permitted to attend courses during the period beginning on the date that the individual provides to the University of Houston-Clear Lake Office of Veteran Services a certificate of eligibility for entitlement to educational assistance under Chapter 31 or 33 (a "certificate of eligibility" can also include a "Statement of Benefits" obtained from the Department of Veterans Affairs' (VA) website - eBenefits, or an electronic IPPS/Tungsten authorization form for Chapter 31 authorization purposes) and ending on the earlier of the following dates:

- The date which payment from VA is made to the institution.

- 90 days after the date the institution certified tuition and fees following the receipt of the certificate of eligibility.

No penalty will be imposed due to a delayed disbursement funding from VA under Chapter 31 or 33.

Students entitled to Chapter 33 or Chapter 31 must note the following additional requirements for processing:

- Submit to the Office of Veteran Services: a certificate of eligibility for entitlement no later than the first day of term, a certification request form each semester to request your entitlement be used, a Joint Service Transcript or CCAF transcript, a DD214 and a matriculated degree plan.

Any amount ineligible to be paid under the VA education benefit disbursement is subject to regular payment due dates and fees as outlined Payment Due Dates schedule available from Student Business Services.

Fall and Spring Semesters

Under the Post-9/11 GI Bill®, a student enrolled at more than one-half time can qualify for a monthly housing allowance based on the DoD's Basic Allowance for Housing (BAH) rate for an E-5 with dependents.

Graduate students (enrolled in at least one lecture-based course or a hybrid course, which includes a lecture component):

- Full-time enrollment = 9 hours or more
- Three-quarter-time enrollment = 7 hours to 8 hours
- Half-time enrollment = 5 hours to 6 hours
- Less than half-time enrollment = 4 hours or less

Students are responsible for notifying the Office of Veteran Services if their enrollment changes after certification.

Summer Semesters

Summer enrollment varies by the term in which the student is enrolled. To ensure your summer enrollment meets full time during the summer, please contact the Department of Veteran Affairs at 888-442-4551.

Students are responsible for notifying the Office of Veteran Services if their enrollment changes after certification.

Online Courses

Individuals only enrolled in distance learning courses will be eligible for a monthly housing allowance equal to 50 percent of the national average of all Basic Allowances for Housing. For the current rate, please visit www.va.gov.

Training Time (Chapters 30, 35, 1606, and 1607)

VA benefits, for the chapters listed above are paid based on training time. In a standard fall and spring semester, VA measures training time as follows:

Graduate students:

- 9 credits: full-time
- 7-8 credits: ¾-time
- 5-6 credits: half-time
- 4 credits or less: less than half-time

Hazlewood Act

The Hazlewood Act passed by the Texas Legislature provides a waiver of tuition and certain fees for Texas veterans. Hazlewood benefits are not transferred from one state university to another; therefore, veterans must reapply and provide the Capt. Wendell M. Wilson Office of Veteran Services with all necessary documents. For a complete list of documents, please visit www.uhcl.edu/veteran-services.

A veteran may qualify for benefits under the Hazlewood Act if he or she:

- Has received an honorable discharge or separation, or a general discharge under honorable conditions as indicated on the Veteran's Certificate of Release or Discharge from Active Duty (DD Form 214).
- At the time of entry into active duty in the U.S. Armed Forces, designated Texas as Home of Record; or entered the service in Texas; or, was a Texas resident.
- Served at least 181 days of active-duty service (excluding training).
- Has no federal veteran's education benefits, or has no federal veterans education benefits dedicated only to the payment of tuition and fees (such as Chapter 33 or 31) for term or semester enrolled that do not exceed the value of Hazlewood benefits.
- Is not in default on a student loan made or guaranteed by the State of Texas.
- Enrolls in classes for which the college receives tax support (e.g., a course that does not depend solely on student tuition and fees to cover its cost), unless the college's governing board has ruled to let veterans receive the benefit while taking non-funded courses.
- Meets the GPA and excessive hour requirements of the institution's satisfactory academic progress policy in a degree or certificate program as determined by the institution's financial aid policy and, as an undergraduate student, not be considered to have attempted an excessive amount of credit hours.

Spouses and dependent children of eligible active duty, reserve and Texas National Guard who died in the line of duty or as a result of injury or illness directly related to military service, are missing inaction or who became totally disabled for purposes of

employability as a result of a service-related injury or illness are entitled to each receive a 150 credit hours exemption. For more information, please visit www.tvc.texas.gov.

The Legacy Act allow veterans eligible for the Hazlewood Act to transfer unused Hazlewood hours to an eligible child. A child (legacy recipient) must:

- Be classified by the institution as a Texas resident.
- Be the biological child, stepchild, adopted child or claimed as a dependent in the current or previous tax year.
- Be 25 years old or younger on the first day of the semester or term for which the exemption is claimed (unless granted an extension due to a qualifying illness or debilitating condition).
- Meet the GPA and excessive hour requirements of the institution's satisfactory academic progress policy in a degree or certificate program as determined by the institution's financial aid policy, and as an undergraduate student, not be considered to have attempted an excessive amount of credit hours.

Students interested in using this benefit should contact the Capt. Wendell M. Wilson Office of Veteran Services for application instructions at vso@uhcl.edu.

Hazlewood Exemption Deadline

If the student provides his or her eligibility for the Hazlewood Exemption before the end date of each semester, then the institution must honor the waiver. Applications and all supporting documentation must be received by the institution no later than the last day of class in order to be evaluated for the semester or term.

Satisfactory Academic Progress for Veteran Benefits

Satisfactory academic progress for veterans receiving federal veteran educational benefits is defined by the Department of Veteran Affairs. Graduate students must maintain a cumulative GPA of 3.0.

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 VA as making unsatisfactory academic progress.
- Have achieved the required semester GPA but not the required cumulative GPA will continue to be on probation.

Satisfactory academic progress is also required of veterans, spouses and dependents utilizing the Hazlewood Exemption. Students must:

- Meet the GPA requirements of the institution's satisfactory academic progress policy in a degree or certificate program as determined by the institution's financial aid policy.
- Not be considered to have attempted an excessive amount of credit hours as determined by the institution's financial aid policy.

Disabled Veteran Parking

In accordance with Texas Transportation Code 681.008 and 504.202, qualifying veterans will be issued a parking permit free of charge. The free permit is to be used for the veteran only or while they are in the vehicle. Those exempt from paying a fee must display the following license plates on the vehicle:

- Disabled veteran
- Congressional Medal of Honor
- Former prisoner of war
- Pearl Harbor survivor
- Purple Heart recipient
- Legion of Valor (Air Force Cross, Distinguished Service Cross, Army Distinguished Service
- Cross, Navy Cross
- Legion of Merit license plates
- Bronze Star medal
- Distinguished Service medal
- Silver Star medal

To request a free parking permit, the following items will need to be submitted to the Capt. Wendell M. Wilson Office of Veteran Services:

1. Supporting documentation, which proves their status listed above (this proof is the same as shown at the Tax Assessor's Office to obtain your specialty license plates).
2. Current UHCL student/faculty/staff ID.
3. Texas driver's license.

Residency

Pursuant to Texas Education Code, Section 54.058 (k), military personnel, veterans and dependent students who are receiving federal VA education benefits may qualify for in-state tuition and fee rates, regardless of the length of time residing in Texas. If you are receiving federal VA education benefits and are being assessed out-of-state tuition, please contact the Capt. Wendell M. Wilson Office of Veteran Services for assistance.

House Bill 269

House Bill 269 allows veterans who enroll in Texas universities to be eligible to receive undergraduate college credit for the time they spent in the services if certain requirements are met.

Eligible veterans can receive college credit for an additional 12 semester credit hours of general elective course work to satisfy the degree requirements for your program of choice.

In order to be eligible to receive college credit for military service, you must have:

- Graduated from a public or private high school accredited by a generally recognized accrediting organization or from a high school operated by the U.S. Department of Defense.
- Completed a minimum of two years of active-duty service in the Armed Forces, unless medically discharged.
- Been honorably discharged from the armed forces.

Contact the Capt. Wendell M. Wilson Office of Veteran Services to discuss your eligibility.

Priority Registration

Veterans who have self-identified in the Office of Veteran Services will be eligible for priority registration. The Office of the Registrar sends announcements to specify times and other instructions for completing the enrollment process. Registration is completed online by logging into E-Services at www.uhcl.edu/eservices. Please refer to the online academic calendar for registration dates and deadlines.

College and Departments

College of Business

College of Business Mission Statement

The mission of the College of Business is to develop aspiring learners and the organizations which employ them. We build resilience through marketable skills - providing undergraduate and graduate degree programs; producing applied, basic, and pedagogical business research; and offering continuing education opportunities to one of the nation's most diverse populations.

College of Business Vision Statement

To provide future executives with the knowledge, preparation and critical thinking skills to excel in the continuously evolving global business environment.

Accreditations and Approvals

The graduate and undergraduate accounting and business administration degrees in the College of Business are accredited by the Association to Advance Collegiate Schools of Business (AACSB). A variety of undergraduate and graduate degrees are offered in the business discipline. 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.

Contact Us

Office of the Dean
Phone: 281-283-3100
Web: www.uhcl.edu/business
Bayou Building 2239

Office of Academic Advising
Phone: 281-283-3110
Email: busadvoff@uhcl.edu
Web: www.uhcl.edu/business/advising
Bayou Building 2111

General Degree Requirements for all Business Degrees

Students applying for College of Business graduate plans must have a bachelor's degree. All College of Business 5000- and 6000-level courses, including foundation courses, are reserved exclusively for graduate degree-seeking and graduate certificate-seeking students.

All graduate plans require the completion of a minimum of 30 hours, including a required capstone course, designated in the plan listing.

Students seeking a Master of Science in Accounting, Finance, Management Information Systems or Environmental Management, the Master of Business Administration, the Master of Healthcare Administration, the MHA/MBA dual degree, or the Master of Arts in Human Resource Management are required to submit applications, transcripts for all prior college coursework and GMAT scores (unless the requirement for waiver has been met) in accordance with these deadlines:

Fall Enrollment	Aug. 1
Spring Enrollment	Dec. 1
Summer Enrollment	May 1

Deadlines for international students transferring from outside the U. S. are April 1, Oct. 1 and March 1.

The College of Business degrees prepare students to assume administrative, managerial and professional positions in their respective fields. Graduate degrees in the College of Business include the Master of Science in Accounting, the Master of Science degree in Finance, the Master of Arts in Human Resource Management, the Master of Science in Management Information Systems and the Master of Business Administration.

Pre-Foundation Requirements

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 business school 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 the 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 College of Business.

Foundation courses may be waived by presenting equivalent courses taken. Equivalent courses must have a grade of C or better. International students may be asked to acquire a subject-analysis evaluation from World Education Services (wes.org) and have the results sent to the College of Business prior to matriculation for foundation courses to be reviewed for a possible waiver.

Prior to registering for classes, students should contact their academic advisers to see if courses they have already completed in their undergraduate degree satisfy

foundation courses required for their graduate programs. This process ensures that students do not enroll in courses they do not need.

Grade Requirements

A minimum of a 3.000 cumulative grade point average is required 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.

Transfer of Credits

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 coursework but may not include more than 12 hours.

Department of Accounting

University of Houston-Clear Lake's Department of Accounting offers students a robust foundation in contemporary accounting and business principles and the well-rounded education that modern employers desire. As one of only two universities in Houston with an AACSB International accreditation specifically for accounting, UHCL can provide the edge graduates need as they prepare for a career in auditing, forensic accounting, financial accounting, financial analysis, internal auditing, managerial accounting or tax planning.

Accounting Mission Statement

The mission of the accounting department is to provide undergraduate- and master's-level students in the Houston/Galveston metropolitan population with an education designed to instill accounting knowledge, skills, abilities and attitudes necessary to be successful in their careers. The undergraduate program gives students the opportunity to obtain and develop the core competencies necessary for the diverse profession of accounting. The graduate program serves both working professionals in the region and full-time students and provides the qualifications to take the CPA examination. The department delivers instruction through flexible hours, through traditional and online courses, and at Clear Lake and Pearland campuses. The faculty pursue a blend of research contributing to knowledge in discipline-based scholarship, innovative pedagogy and professional practice. The faculty members interact with professional organizations and the business community.

Accounting Vision Statement

To provide future leaders with the knowledge, preparation, and critical thinking skills to excel in the continuously evolving field of accounting.

Master of Science

Accounting, M.S.

The objective of the Master of Science degree in Accounting is to provide a broad-based background in business and depth and breadth in accounting. This combination will provide students with a strong basis for exercising judgement in accounting-related decisions within managerial and professional positions and enhance career development. The program serves both working professionals and full-time students and satisfies the educational requirements to take the Texas Certified Public Accountant (CPA) examination.

Students with a bachelor's degree in any major are qualified to apply for the MS in Accounting program. **Students who possess an undergraduate degree in accounting can complete the MS in Accounting degree program in as few as 30 credit hours.** Students who enter the MS in Accounting program with an undergraduate business-related major outside of accounting will likely have satisfied the Business and Principles of Accounting I foundation requirements and thus can complete the degree in as few as 42 credit hours. Students who have not taken business courses may need to take 10 foundations courses and thus can complete the degree in 60 credit hours.

Major Requirements

The major requirement courses for MS in Accounting students are as follows:

- ACCT 4346 - Business Ethics for Accountants **Credit Hours:** 3
- ACCT 5231 - Individual Income Tax **Credit Hours:** 3
- ACCT 5234 - Corporate and Pass-Through Entity Taxation **Credit Hours:** 3
- ACCT 5332 - Accounting Information Systems **Credit Hours:** 3
- ACCT 5431 - Advanced Accounting **Credit Hours:** 3
- ACCT 5432 - Acct for Government and Not-For-Profit Organizations **Credit Hours:** 3
- ACCT 6732 - Seminar in Fraud Examination and Audit Risk (Capstone) **Credit Hours:** 3
- DSCI 5431 - Management Science and Operations **Credit Hours:** 3
- LEGL 5131 - Legal Concepts for the Business Professional **Credit Hours:** 3

Additional Information

- A three-hour accounting elective (ACCT XXXX) is also required.
- If the MS in Accounting with a concentration in Data Analytics and MIS is declared, the Accounting Elective is replaced with a Data Analytics/MIS concentration course.
- In some cases, a major course can be replaced with an elective course if a student has recently achieved a satisfactory grade in an undergraduate course covering similar material. If an accounting major course is replaced, the student must substitute that course with a graduate accounting elective. If a non-accounting major course is replaced, the student must substitute

that course with a graduate business elective, which includes graduate accounting elective courses.

Accounting Electives

The accounting elective courses for MS in Accounting students are as follows:

- ACCT 5331 - Accounting Analysis for Management Decisions **Credit Hours:** 3
- ACCT 5333 - Fundamentals of Databases and Business Intelligence **Credit Hours:** 3
- ACCT 5334 - Advanced Database Applications Development **Credit Hours:** 3
- ACCT 5336 - Systems Analysis and Design **Credit Hours:** 3
- ACCT 5436 - Principles of Internal Auditing **Credit Hours:** 3
- ACCT 5438 - Fundamentals of Data Analytics in Accounting **Credit Hours:** 3
- ACCT 5531 - International Accounting **Credit Hours:** 3
- ACCT 5631 - Data Warehousing and Data Mining **Credit Hours:** 3
- ACCT 5632 - Advanced Data Analytics in ERP System **Credit Hours:** 3
- ACCT 5633 - Data Analytics Application Development **Credit Hours:** 3
- ACCT 5931 - Research Topics in Accounting **Credit Hours:** 3
- ACCT 6731 - Seminar in Financial Statement and Accounting Information Quality Analysis **Credit Hours:** 3
- ACCT 6735 - Oil and Gas Accounting **Credit Hours:** 3
- ACCT 6739 - Internship in Accounting **Credit Hours:** 3
- ACCT 6939 - Master's Thesis Research **Credit Hours:** 3
- ACCT 6969 - Master's Thesis Research **Credit Hours:** 6

Foundation Courses

In some cases, a student will need to take one or more foundation courses to obtain the necessary prerequisite knowledge to take the major courses and meet the education requirements to take the Texas CPA examination.

The foundation courses that may be required for some MS in Accounting students are as follows:

- ACCT 2301 - Principles of Accounting I **Credit Hours:** 3
- ACCT 5131 - Accounting for Administrative Control **Credit Hours:** 3
- ACCT 5133 - Financial Accounting I **Credit Hours:** 3
- ACCT 5134 - Financial Accounting II **Credit Hours:** 3
- ACCT 5137 - Principles of Auditing **Credit Hours:** 3
- ECON 5136 - Managerial Economics **Credit Hours:** 3
- FINC 5133 - Corporate Finance **Credit Hours:** 3
- FINC 5231 - Quantitative Methods in Finance **Credit Hours:** 3
- ISAM 5330 - Management Information Systems **Credit Hours:** 3
- MGMT 5032 - Human Behavior in Organizations **Credit Hours:** 3

Accounting Concentration in Data Analytics and Management Information Systems (MIS)

Students may choose the data analytics and management information systems concentration in their Master of Science Degree in Accounting.

- ISAM 5030 - Fundamentals of Business Programming Applications **Credit Hours:** 3
- ACCT 5333 - Fundamentals of Databases and Business Intelligence **Credit Hours:** 3
- ACCT 5335 - Information Systems Audit and Security **Credit Hours:** 3
- ACCT 5438 - Fundamentals of Data Analytics in Accounting **Credit Hours:** 3

Also, students must take 1 of the 5 courses listed below:

- ACCT 5334 - Advanced Database Applications Development **Credit Hours:** 3
- ACCT 5336 - Systems Analysis and Design **Credit Hours:** 3
- ACCT 5631 - Data Warehousing and Data Mining **Credit Hours:** 3
- ACCT 5632 - Advanced Data Analytics in ERP System **Credit Hours:** 3
- ACCT 5633 - Data Analytics Application Development **Credit Hours:** 3

Additional Information

- ISAM 5030 - Fundamentals of Business Programming Applications is waived for students with six hours of college-level programming with grades of C or better.

Texas House Bill 1508

Texas House Bill (HB) 1508 amended the Texas Occupations Code Section 58.001 to require educational centers that offer programs that lead to occupational licensure to share the following information with their students:

1. An individual who has been convicted of an offense may be ineligible for issuance of an occupational license upon completion of the educational program.
2. Each licensing authority that may issue an occupational license to an individual who completes an educational program must establish guidelines that state the reasons a particular crime is considered to relate to a particular license and any other criterion that affects the decisions of the licensing authority.
3. Local or county licensing authorities may issue additional guidelines related to criminal history. Applicants should contact their respective local or county licensing authority for more details.
4. A person may request a criminal history evaluation letter regarding the personal eligibility for a license issued by a licensing authority under Texas Occupation Code 53.102.

Please check with the agency issuing the license for additional information.

Department of Decision Sciences, Economics, Finance and Marketing

Students who enroll in a degree program with the Department of Decision Sciences, Economics, Finance and Marketing in University of Houston-Clear Lake's College of Business will receive sound management principles and the skills necessary for professional advancement, taught by professionals with vast real-world knowledge and practical experience. Students will gain valuable insights throughout the coursework at UHCL, complete with hands-on learning opportunities and a highly motivated faculty to support and assist every step of the way.

Master of Science

Finance, M.S.

The degree requirements for the Master of Science degree in Finance requires 30 hours of course work, including 24 hours of required courses and 6 hours of electives.

Degree Requirements

Required Graduate Courses (24 hours)

- ECON 5136 - Managerial Economics **Credit Hours:** 3
- FINC 5133 - Corporate Finance **Credit Hours:** 3
- FINC 5231 - Quantitative Methods in Finance **Credit Hours:** 3
- FINC 5332 - Financial Statement Analysis **Credit Hours:** 3
- FINC 6131 - Commercial Banking **Credit Hours:** 3
- FINC 6231 - Investment Management **Credit Hours:** 3
- FINC 6531 - International Finance **Credit Hours:** 3
- FINC 6731 - Seminar in Finance (Capstone) **Credit Hours:** 3

Additional Information

FINC 6731 must be taken in the last long semester of the program.

Graduate Elective Requirements (6 hours)

Elective Requirements (6 hours)

Choose two courses from the list:

- FINC 5134 - Real Estate Investment Analysis and Financing **Credit Hours:** 3
- FINC 5331 - Treasury Management Practices **Credit Hours:** 3
- FINC 5333 - Personal Wealth Management **Credit Hours:** 3
- FINC 5931 - Research Topics in Finance **Credit Hours:** 3
- FINC 6233 - Options and Futures **Credit Hours:** 3
- FINC 6234 - Portfolio Management **Credit Hours:** 3
- FINC 6739 - Internship in Finance **Credit Hours:** 3

MS Finance Concentration in Healthcare Administration

Students may complete a 12-hour concentration in Healthcare Administration within the MS in Finance. Students choosing this option will have a 36-hour program of study. In the graduate course work listed above, the six hours of graduate finance electives will not be required. Listed below are the Healthcare Administration courses for the concentration.

Concentration Requirements (12 hours)

- HADM 5233 - Financial Management of Healthcare Organizations II **Credit Hours:** 3
- HADM 5335 - Planning and Marketing Healthcare Services **Credit Hours:** 3
- HADM 6132 - Legal Aspects of Healthcare Systems **Credit Hours:** 3
- HADM 6235 - Integrated Delivery Systems **Credit Hours:** 3

Additional Information

All four courses must be completed to fulfill the requirement for MS Finance Concentration in Healthcare Administration. Healthcare Administration concentration is not available online.

Department of Healthcare Administration

The Department of Healthcare Administration in University of Houston-Clear Lake's College of Business addresses the growing need for more qualified healthcare administrators nationwide and prepares students for long-term career success. We will ensure that students are ready for a management role in a hospital, insurance provider, pharmaceutical company, physician practice or public health advocacy group. Our prime location in the greater Houston area provides access to one of the leading healthcare centers in the world and the leaders who helped create it.

Master of Business Administration/Master of Healthcare Administration

Healthcare Administration/Business Administration, MHA/MBA

The joint degree in Healthcare Administration and Business Administration leads to the Master of Healthcare Administration/Master of Business Administration degree. 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, and a statement of career goals. All materials must be received by the application deadline so that the applicant can be considered for admission. Only completed applications will be considered. The résumé, three letters of recommendation, and statement of career goals should be sent to the Office of Admissions, University of Houston-Clear Lake, 2700 Bay Area Blvd, Houston, TX 77058-1098.

Degree Requirements

Foundation requirements (3 hours)

- MGMT 5031 - Survey of Business Principles **Credit Hours:** 3

M.H.A. Plan Requirements (36 hours)

Required Courses (36 Hours)

- HADM 5033 - Leadership of Organizations in Healthcare Administration **Credit Hours:** 3
- HADM 5131 - Healthcare Human Resources Management **Credit Hours:** 3
- HADM 5232 - Financial Management of Healthcare Organizations I **Credit Hours:** 3
- HADM 5233 - Financial Management of Healthcare Organizations II **Credit Hours:** 3
- HADM 5333 - Healthcare Economics **Credit Hours:** 3
- HADM 5335 - Planning and Marketing Healthcare Services **Credit Hours:** 3
- HADM 5432 - Healthcare Predictive Analytics **Credit Hours:** 3
- HADM 5731 - Healthcare Quality **Credit Hours:** 3
- HADM 6132 - Legal Aspects of Healthcare Systems **Credit Hours:** 3
- HADM 6235 - Integrated Delivery Systems **Credit Hours:** 3
- HADM 6738 - Seminar in Healthcare Policy and Leadership **Credit Hours:** 3

HADM Electives (3 hours)

Select one course (3 hours) from the following list:

- HADM 5531 - Group Practice Management **Credit Hours:** 3
- HADM 6236 - Healthcare Facilities Operations **Credit Hours:** 3

- HADM 6539 - Graduate Residency in Healthcare Administration **Credit Hours:** 3

MBA Plan Requirements (24 hours)

Required courses (24 hours)

- ACCT 5131 - Accounting for Administrative Control **Credit Hours:** 3
- MGMT 5131 - The Global Environment of Business **Credit Hours:** 3
- DSCI 5431 - Management Science and Operations **Credit Hours:** 3
- ECON 5136 - Managerial Economics **Credit Hours:** 3
- FINC 5133 - Corporate Finance **Credit Hours:** 3
- MGMT 5032 - Human Behavior in Organizations **Credit Hours:** 3
- MGMT 6731 - Strategic Management Seminar (Capstone) **Credit Hours:** 3
- MKTG 5332 - Executive Decisions in Marketing **Credit Hours:** 3

Optional Electives beyond degree requirements

- HADM 6739 - Internship in Healthcare Administration **Credit Hours:** 3

Master of Healthcare Administration

Healthcare Administration, MHA

This plan leads to the Master of Healthcare Administration degree. 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, and a statement of career goals. All materials must be received by the application deadline so that the applicant can be considered for admission. Only completed applications will be considered. The résumé, three letters of recommendation, and statement of career goals should be sent to the Office of Admissions, University of Houston-Clear Lake, 2700 Bay Area Blvd., Houston, TX 77058-1098.

Degree Requirements

Major Requirements (36 hours)

Plan requirements consist of these courses (36 hours):

- HADM 5033 - Leadership of Organizations in Healthcare Administration **Credit Hours:** 3
- HADM 5131 - Healthcare Human Resources Management **Credit Hours:** 3
- HADM 5232 - Financial Management of Healthcare Organizations I **Credit Hours:** 3

- HADM 5233 - Financial Management of Healthcare Organizations II **Credit Hours:** 3
- HADM 5333 - Healthcare Economics **Credit Hours:** 3
- HADM 5335 - Planning and Marketing Healthcare Services **Credit Hours:** 3
- HADM 5432 - Healthcare Predictive Analytics **Credit Hours:** 3
- HADM 5731 - Healthcare Quality **Credit Hours:** 3
- HADM 6132 - Legal Aspects of Healthcare Systems **Credit Hours:** 3
- HADM 6235 - Integrated Delivery Systems **Credit Hours:** 3
- HADM 6738 - Seminar in Healthcare Policy and Leadership **Credit Hours:** 3

HADM Elective Options

Select one elective (3 hours) from the following list:

- HADM 5531 - Group Practice Management **Credit Hours:** 3
- HADM 6236 - Healthcare Facilities Operations **Credit Hours:** 3
- HADM 6539 - Graduate Residency in Healthcare Administration **Credit Hours:** 3

Additional Information

HADM 6539 with permission from of the Dept. Chair (2 semesters)

Optional electives beyond degree requirements

- HADM 6739 - Internship in Healthcare Administration **Credit Hours:** 3

Department of Management

In today's ultra-competitive job market, students deserve the best possible education as they aim for a successful career in management. Students begin by pursuing a degree in the Department of Management at University of Clear Lake. There they will acquire the necessary leadership, analytical and problem-solving skills by completing coursework that focuses on entrepreneurship, small business management and administration, as well as electives including dispute resolution, organizational communication, human resources and employee training. Students will graduate with the expertise and training required to face a complex collection of challenges, whether financial, legal, environmental, human or material.

Certificate

Environmental Management Certificate

The Certificate in Environmental Management is designed for professionals in the environmental management field who wish to update their skills without pursuing another master's degree.

Students earning certificates without being enrolled in a master's degree program may request permission to apply certificate courses to a degree program at a later date.

All graduate grading standards apply to students enrolled in a certificate program.

Certificate Requirements (12 hours)

Required Courses (3 hours)

- ENVR 5332 - Environmental Law **Credit Hours:** 3

Additional Courses (9 hours)

- Select three additional courses (9 hours) from graduate level ENVR courses.

Human Resource Management Certificate

The Human Resource Management Graduate Certificate is designed for professionals who seek to enhance their human resource management credentials but without completing a full master's degree program. This certificate is offered completely online.

Students earning certificates without being enrolled in a master's degree program may request permission to apply certificate courses to a degree program at a later date.

All graduate grading standards apply to students enrolled in a certificate program.

Certificate Requirements (12 hours)

Required Courses (9 hours)

- HMRS 5131 - Human Resource Management Processes **Credit Hours:** 3
- HMRS 5231 - Legal Environment of Human Resource Management I **Credit Hours:** 3
- HMRS 5435 - Employee Planning, Staffing and Selection **Credit Hours:** 3

Additional Course (3 hours)

Choose 1 course from the following list:

- HMRS 5433 - Compensation and Benefits **Credit Hours:** 3
- HMRS 5531 - Training and Development **Credit Hours:** 3
- MGMT 5332 - Labor Relations **Credit Hours:** 3

Management of Technology Certificate Program

The Management of Technology Graduate Certificate is designed for professionals who seek to enhance their technology management credentials but cannot commit to a full master's degree program.

Students earning certificates without being enrolled in a master's degree program may request permission to apply certificate courses to a degree program at a later date.

All graduate grading standards apply to students enrolled in a certificate program.

Certificate Requirements (12 hours)

Required Courses (6 hours)

- MGMT 5636 - Management of Technology **Credit Hours:** 3
- MGMT 5638 - Leading Technology **Credit Hours:** 3

Additional Courses

Choose two courses (6 hours) from the following list:

- MGMT 5233 - Entrepreneurship and Corporate Venturing **Credit Hours:** 3
- MGMT 5032 - Human Behavior in Organizations **Credit Hours:** 3
- MGMT 5133 - Teamwork and Leadership Skills: Theory in Practice **Credit Hours:** 3
- HMRS 5131 - Human Resource Management Processes **Credit Hours:** 3

Additional Information

Credit will be given for MGMT 5032 or HRMS 5133.

Master of Arts

Human Resource Management, M.A.

This degree prepares students 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. The degree

requirements consist of a minimum of 36 hours, plus a maximum of one course (3 foundation hours).

Degree Requirements

Foundation Requirements

- MGMT 5031 - Survey of Business Principles **Credit Hours:** 3

Major Requirements (30 hours)

Major Requirements

- HMRS 5131 - Human Resource Management Processes **Credit Hours:** 3
- HMRS 5231 - Legal Environment of Human Resource Management I **Credit Hours:** 3
- HMRS 5433 - Compensation and Benefits **Credit Hours:** 3
- HMRS 5435 - Employee Planning, Staffing and Selection **Credit Hours:** 3
- HMRS 5437 - Human Resource Information Systems **Credit Hours:** 3
- HMRS 5531 - Training and Development **Credit Hours:** 3
- HMRS 5533 - HR Metrics and Performance Management **Credit Hours:** 3
- HMRS 6735 - Seminar in Human Resource Management **Credit Hours:** 3
- MGMT 5032 - Human Behavior in Organizations **Credit Hours:** 3
- MGMT 6331 - Organizational Development **Credit Hours:** 3

Additional Information

MGMT 5133 may be substituted for MGMT 5032.

Elective Courses (6 hours)

Choose two courses from the list:

- ACCT 5131 - Accounting for Administrative Control **Credit Hours:** 3
- ACCT 5531 - International Accounting **Credit Hours:** 3
- MGMT 5131 - The Global Environment of Business **Credit Hours:** 3
- DSCI 5431 - Management Science and Operations **Credit Hours:** 3
- HMRS 5235 - Project Management for HMRS **Credit Hours:** 3
- HMRS 6739 - Internship in Human Resources **Credit Hours:** 3
- INST 5333 - Systematic Design of Technology-Based Instruction **Credit Hours:** 3
- INST 6337 - Motivational Design of Instruction **Credit Hours:** 3
- MGMT 5332 - Labor Relations **Credit Hours:** 3
- MGMT 5636 - Management of Technology **Credit Hours:** 3
- MGMT 6332 - International Management **Credit Hours:** 3

- MGMT 6334 - Global Sustainability and Strategic Advantage **Credit Hours:** 3

Master of Business Administration

Business Administration, MBA

This plan leads to the Master of Business Administration. The degree requires a minimum of 36 hours: eight required courses (24 hours) and four elective courses (12 hours). Depending on a student's academic background, an additional foundation course (3 hours) may be required.

Degree Requirements

Foundation Requirements (3 hours)

- MGMT 5031 - Survey of Business Principles **Credit Hours:** 3

Core Requirements (24 hours)

MBA Core Requirements

- ACCT 5131 - Accounting for Administrative Control **Credit Hours:** 3
- MGMT 5131 - The Global Environment of Business **Credit Hours:** 3
- DSCI 5431 - Management Science and Operations **Credit Hours:** 3
- ECON 5136 - Managerial Economics **Credit Hours:** 3
- FINC 5133 - Corporate Finance **Credit Hours:** 3
- MGMT 5032 - Human Behavior in Organizations **Credit Hours:** 3
- MGMT 6731 - Strategic Management Seminar (Capstone) **Credit Hours:** 3
- MKTG 5332 - Executive Decisions in Marketing **Credit Hours:** 3

Additional Electives

Twelve hours of additional electives are required. Electives should be selected from graduate-level courses taught in the College of Business. Students desiring to use their electives in courses taught by other colleges in the university must petition the department chair of their program for approval prior to enrolling. Course work at the 33xx or 43xx level may not be included.

MBA Concentrations

Students may use their four elective courses (12 hours) to pursue a concentration while completing their degree. Selecting a concentration provides students with an opportunity to focus on a specific area of interest by taking a select group of specialized elective courses. The MBA program offers a broad array of concentrations

to prepare students to meet the demands of a complex and constantly changing marketplace. The requirements of the MBA degree with a concentration contain a minimum of 36 hours.

Concentration Requirements (12 hours)

MBA Customized Concentration

The customized concentration is available to MBA students whose career ambitions go beyond a defined concentration. Students must submit a proposal and get the proposal approved by the MBA program director and program adviser. At least 9 credit hours must be selected from College of Business graduate courses. The concentration is subject to course availability.

Most elective courses are taught on a rotating basis and not available every semester. The remaining 3 credit hours may be selected from the courses listed in the MBA concentrations list.

MBA Concentration in Business Analytics

This concentration is designed to allow students the opportunity to develop the skills necessary to organize, describe, and analyze big data repositories to uncover new business insights.

For the Concentration in Business Analytics, students will be required to complete the following three courses (9 hours):

- DSCI 5131 - Business Analytics I **Credit Hours:** 3
- DSCI 5231 - Business Analytics II **Credit Hours:** 3
- ISAM 5330 - Management Information Systems **Credit Hours:** 3

Plus, one course (3 hours) selected from the following list:

- ISAM 5431 - ERP System Concepts and Practices **Credit Hours:** 3
- MGMT 6135 - Data Visualization and Communication **Credit Hours:** 3

MBA Concentration in Environmental Management

For the concentration in Environmental Management, students will be required to complete the following two courses (6 hours):

- ENVR 5332 - Environmental Law **Credit Hours:** 3
- ENVR 6133 - Environmental Risk Management **Credit Hours:** 3

Additional Information

The other two courses (6 hours) can be selected from any graduate-level Environmental Management course listed in the university catalog.

MBA Concentration in Finance

This concentration features courses designed to develop competencies in financial concepts, analytical tools and skills. Through a variety of elective courses, the concentration helps students learn about different aspects of finance including corporate financial management, financial statement analysis, investments, portfolio management, derivatives, international finance and banking.

For the concentration in Finance, students will be required to complete four courses (12 hours) selected from the following list:

- FINC 5131 - The Financial System **Credit Hours:** 3
- FINC 5231 - Quantitative Methods in Finance **Credit Hours:** 3
- FINC 5331 - Treasury Management Practices **Credit Hours:** 3
- FINC 5332 - Financial Statement Analysis **Credit Hours:** 3
- FINC 5333 - Personal Wealth Management **Credit Hours:** 3
- FINC 5931 - Research Topics in Finance **Credit Hours:** 3
- FINC 6131 - Commercial Banking **Credit Hours:** 3
- FINC 6231 - Investment Management **Credit Hours:** 3
- FINC 6233 - Options and Futures **Credit Hours:** 3
- FINC 6234 - Portfolio Management **Credit Hours:** 3
- FINC 6531 - International Finance **Credit Hours:** 3
- FINC 6731 - Seminar in Finance (Capstone) **Credit Hours:** 3

MBA Concentration in Human Resource Management

This concentration is designed for students interested in a career relating to the Human Resources function but who still want the broad scope of business knowledge provided by the MBA. Students will take three required courses that will survey the field of HR plus an additional elective corresponding to their specialty area.

For the concentration in Human Resource Management, students will be required to complete the following three courses (9 hours):

- HMRS 5131 - Human Resource Management Processes **Credit Hours:** 3
- HMRS 5231 - Legal Environment of Human Resource Management I **Credit Hours:** 3
- HMRS 5435 - Employee Planning, Staffing and Selection **Credit Hours:** 3

Plus, complete one course (3 hours) selected from the following list:

- HMRS 5433 - Compensation and Benefits **Credit Hours:** 3
- HMRS 5531 - Training and Development **Credit Hours:** 3
- MGMT 5332 - Labor Relations **Credit Hours:** 3

MBA Concentration in International Business

This concentration is designed to equip students with the knowledge and skills to conduct business and gain a competitive edge in a global economy. The courses provide a solid background in financial, accounting, cultural and strategic aspects of international business management.

For the concentration in International Business, students will be required to complete the following three courses (9 hours):

- ACCT 5531 - International Accounting **Credit Hours:** 3
- FINC 6531 - International Finance **Credit Hours:** 3
- MGMT 6334 - Global Sustainability and Strategic Advantage **Credit Hours:** 3

Plus, complete one course (3 hours) selected from the following list:

- MGMT 6333 - Seminar in International Management **Credit Hours:** 3
- MKTG 5533 - Seminar in International Marketing **Credit Hours:** 3
- FINC 6533 - Seminar in International Finance **Credit Hours:** 3
- MGMT 5434 - Negotiation Skills and Strategies **Credit Hours:** 3

- EMGT 5631 - Supply Chain Management **Credit Hours:** 3
- DSCI 5531 - Introduction to Supply Chain Management **Credit Hours:** 3

Additional Information

The seminar courses (MGMT 6333, MKTG 5533, OR FINC 6533) may be substituted for each other. Credit for only one course is allowed.

The project management courses (EMGT 5631 or DSCI 5531) can be substituted for each other Credit for only one course is allowed.

MBA Concentration in Leadership

This concentration allows students the opportunity to develop the skills necessary to lead teams and organizations (public or private) within the context of ever-changing environmental demands.

For the concentration in Leadership, students will be required to complete the following two courses (6 hours):

- MGMT 5439 - Positive Leadership and Ethical Action **Credit Hours:** 3
- MGMT 6237 - Comparative Leadership **Credit Hours:** 3

Plus, complete two courses (6 hours) selected from following lists:

List A

- MGMT 5133 - Teamwork and Leadership Skills: Theory in Practice **Credit Hours:** 3
- MGMT 5135 - Organizational Transformation, Learning, and Design **Credit Hours:** 3
- MGMT 6331 - Organizational Development **Credit Hours:** 3
- PSYC 5334 - Change and Organizational Development **Credit Hours:** 3
- SOCI 5337 - Complex Organizations **Credit Hours:** 3

Additional Information

Courses with the rubric PSYC and SOCI are only allowed when the student completes the Leadership Concentration. PSYC and SOCI courses will not count as electives for general MBA.

SOCI 5430 may be substituted for PSYC 5334. Credit for only one course is allowed.

List B

- HMRS 5131 - Human Resource Management Processes **Credit Hours:** 3
- MGMT 5234 - Leading Non-Profit Institutions **Credit Hours:** 3
- MGMT 5434 - Negotiation Skills and Strategies **Credit Hours:** 3
- SOCI 5337 - Complex Organizations **Credit Hours:** 3
- SOCI 5433 - Social Conflict and Mediation **Credit Hours:** 3
- PSYC 5333 - Leadership in Organizations **Credit Hours:** 3
- EMGT 5430 - Professional Project Management **Credit Hours:** 3

Additional Information

Students must pick at least one course from List A.

Courses with the rubric PSYC and SOCI are only allowed when the student completes the Leadership Concentration. PSYC and SOCI courses will not count as elective for general MBA.

SOCI 5339 may be substituted for PSYC 5333. Credit for only one course is allowed.

MBA Concentration in Management Information Systems

This concentration allows students to gain knowledge in fundamental concepts of a rapidly growing field of information technology (IT) and its use in business. Students learn concepts such as data warehousing, business analytics, database systems, business programming, and enterprise resource planning systems. They understand how IT is revolutionizing the current business environment.

For the Concentration in Management Information Systems, students will be required to complete the following two courses (6 hours):

- ISAM 5030 - Fundamentals of Business Programming Applications **Credit Hours:** 3
- ISAM 5330 - Management Information Systems **Credit Hours:** 3
- ISAM 5331 - Fundamentals of Databases and Business Intelligence **Credit Hours:** 3

Plus, select two courses (6 hours) from any graduate-level ISAM course listed in the university catalog.

Additional Information

- Any graduate ISAM courses for which the prerequisites are met.
- *The one course not taken from List A may be included in these 6 hours.
- ISAM 5030- required of students without 6 hours of college-level programming with a grade of at least a C on a transcript.

MBA Concentration in Management of Technology

This concentration allows students to gain knowledge of how to develop technological innovations, forecast adoption, bring them to market, protect intellectual property and how to manage and motivate the subject matter experts that create them.

For the concentration in Management of Technology, students will be required to complete the following two courses (6 hours):

- MGMT 5636 - Management of Technology **Credit Hours:** 3
- MGMT 5638 - Leading Technology **Credit Hours:** 3

Plus, complete two courses (6 hours) selected from the following list:

- MGMT 5233 - Entrepreneurship and Corporate Venturing **Credit Hours:** 3
- MGMT 5133 - Teamwork and Leadership Skills: Theory in Practice **Credit Hours:** 3
- HMRS 5131 - Human Resource Management Processes **Credit Hours:** 3
- EMGT 5430 - Professional Project Management **Credit Hours:** 3

MBA Concentration in Sustainability

This concentration aims to educate students on the opportunities and challenges faced by organizations who seek economic, social and environmental achievements, which constitute the foundation of a sustainable economy. The program seeks to integrate the perspectives of multiple stakeholders impacted by the pursuit for sustainable economies. The coursework deals with aspects of environmental economics, protection, regulation, resilience, and strategy to prepare students to play leading roles in the green economy.

For the concentration in Sustainability, students will be required to complete the following three courses (9 hours):

- ENVR 5131 - Foundations in Sustainability **Credit Hours:** 3
- MGMT 6334 - Global Sustainability and Strategic Advantage **Credit Hours:** 3
- ENVR 5331 - Environmental Economics **Credit Hours:** 3

Additional Information

- ENVR 5131 may be substituted for MGMT 6131. Credit for only one course is allowed.
- MGMT 6334 may be substituted for ENVR 5132. Credit for only one course is allowed.
- ENVR 5331 may be substituted for ECON 5137. Credit for only one course is allowed.

Plus, complete one course (3 hours) selected from the following list:

- ENVR 5332 - Environmental Law **Credit Hours:** 3
- MGMT 5439 - Positive Leadership and Ethical Action **Credit Hours:** 3
- MGMT 5234 - Leading Non-Profit Institutions **Credit Hours:** 3
- MGMT 5434 - Negotiation Skills and Strategies **Credit Hours:** 3
- EMGT 5430 - Professional Project Management **Credit Hours:** 3
- ENVR 6333 - Coastal Resilience **Credit Hours:** 3
- MGMT 5931 - Research Topics in Management **Credit Hours:** 3

Additional Information

MGMT 5931 Special topics course should include sustainability in the title.

Master of Science

Environmental Management, M.S.

This plan leads to the Master of Science in Environmental Management degree. The graduate degree in environmental management requires a minimum of 36 hours including the master's degree option. Depending on the student's academic background, foundation courses (up to 6 hours) may be required in chemistry and other sciences. Students may not have 50% or more of their credits come from traditional business credits.

Degree Requirements

Foundation Requirements (6 hours)

Science Foundation Requirements (6 hours)

- CHEM 1311 - General Chemistry I **Credit Hours:** 3

Select one from the following list:

- BIOL 1306 - Biology for Science Majors I **Credit Hours:** 3
- CHEM 1312 - General Chemistry II **Credit Hours:** 3
- ENSC 1301 - Environmental Science I **Credit Hours:** 3
- GEOL 1303 - Physical Geology **Credit Hours:** 3
- PHYS 1302 - College Physics II **Credit Hours:** 3

Major Requirements (12 hours)

- MGMT 5031 - Survey of Business Principles **Credit Hours:** 3
- ENVR 5332 - Environmental Law **Credit Hours:** 3
- ENVR 5533 - Pollution Control Technology **Credit Hours:** 3
- ENVR 6132 - Environmental Impact Assessment **Credit Hours:** 3

Additional Information

MGMT 5031 may be substituted for an approved MGMT Course

MGMT Elective Requirements (6 hours)

Choose two from the following list:

- MGMT 5131 - The Global Environment of Business **Credit Hours:** 3
- MGMT 5032 - Human Behavior in Organizations **Credit Hours:** 3
- MGMT 5133 - Teamwork and Leadership Skills: Theory in Practice **Credit Hours:** 3
- MGMT 5234 - Leading Non-Profit Institutions **Credit Hours:** 3
- MGMT 5434 - Negotiation Skills and Strategies **Credit Hours:** 3
- MGMT 5636 - Management of Technology **Credit Hours:** 3
- MGMT 5638 - Leading Technology **Credit Hours:** 3
- MGMT 6237 - Comparative Leadership **Credit Hours:** 3
- MGMT 6331 - Organizational Development **Credit Hours:** 3
- MGMT 6332 - International Management **Credit Hours:** 3

Remaining 18 Hours

The remaining 18 hours of the degree requirements will be chosen in consultation with a faculty adviser to fit the career interests of the students. All graduate-level ENVR courses are approved electives. No more than two courses or 6 hours at the

33XX- or 43XX level may be included and any undergraduate elective must be approved by the faculty program coordinator. Courses from other disciplines must also be approved.

Department of Management Information Systems

As the reliance upon technology increases, so does the demand for qualified management information systems specialists who can maintain and enhance the infrastructure for that technology. In the Department of Management Information Systems for the College of Business at University of Houston-Clear Lake, students will acquire the education that will equip them for an array of highly coveted tech positions across all industries. Coursework in this degree program focuses on the hands-on applications of both hardware and software.

Certificate

Management Information Systems Certificates

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 pursuing another master's degree.

Students earning certificates without being enrolled in a master's degree program may request permission to apply certificate courses to a degree program at a later date.

All graduate grading standards apply to students enrolled in a certificate program.

Certificate Requirements (12 hours)

Business Applications Development (12 hours)

Select four (12 hours) of the six courses from the following list:

- ISAM 5030 - Fundamentals of Business Programming Applications **Credit Hours:** 3
- ISAM 5338 - Internet Applications Development **Credit Hours:** 3
- ISAM 5430 - Advanced Applications Development with C# **Credit Hours:** 3
- ISAM 5638 - Advanced Applications Programming With Java **Credit Hours:** 3
- ISAM 5931 - Research Topics in Management Information Systems **Credit Hours:** 3

Additional Information

ISAM 5030 required of students without 6 hours of college-level programming with a grade of at least a C on their transcript.

Business Computer Networking and Security (12 hours)

Select four (12 hours) of the six courses from the following list:

- ISAM 5030 - Fundamentals of Business Programming Applications **Credit Hours:** 3
- ISAM 5339 - Fundamentals of Computer Networking **Credit Hours:** 3
- ISAM 5437 - Wireless Networks **Credit Hours:** 3
- ISAM 5439 - Computer Network Security **Credit Hours:** 3
- ISAM 5636 - Advanced Computer Networking **Credit Hours:** 3
- ISAM 5731 - Information Systems Audit and Security **Credit Hours:** 3

Additional Information

ISAM 5030 required of students without 6 hours of college-level programming with a grade of at least a C on their transcript.

Business Database Development and Administration (12 hours)

Select four (12 hours) of the seven courses from the following list:

- ISAM 5030 - Fundamentals of Business Programming Applications **Credit Hours:** 3
- ISAM 5331 - Fundamentals of Databases and Business Intelligence **Credit Hours:** 3
- ISAM 5332 - Data Warehousing and Data Mining **Credit Hours:** 3
- ISAM 5632 - Advanced Database Applications Development **Credit Hours:** 3
- ISAM 5633 - Oracle Database Administration **Credit Hours:** 3
- ISAM 5639 - SQL Server Database Administration **Credit Hours:** 3
- ISAM 5931 - Research Topics in Management Information Systems **Credit Hours:** 3

Additional Information

ISAM 5030 required of students without 6 hours of college-level programming with a grade of at least a C on their transcript.

Information Systems Management (12 hours)

Select four (12 hours) of the seven courses from the following list:

- ISAM 5030 - Fundamentals of Business Programming Applications **Credit Hours:** 3
- ISAM 5330 - Management Information Systems **Credit Hours:** 3
- ISAM 5331 - Fundamentals of Databases and Business Intelligence **Credit Hours:** 3
- ISAM 5635 - Systems Analysis and Design **Credit Hours:** 3
- ISAM 5637 - Information Systems Project Management **Credit Hours:** 3
- ISAM 5931 - Research Topics in Management Information Systems **Credit Hours:** 3

Additional Information

ISAM 5030 required of students without 6 hours of college-level programming with a grade of at least a C on their transcript.

Information Technology (12 hours)

Select any four (12 hours) elective courses as long as their prerequisites are satisfied. required or elective courses as long as their prerequisites are satisfied.

- ISAM 5030 - Fundamentals of Business Programming Applications **Credit Hours:** 3

Additional Information

Students without 6 hours of college-level programming, with a grade of at least a C on their transcript, must select ISAM 5030 as one of their four elective courses.

Master of Science

Management Information Systems, M.S.

The Master of Science in Management Information Systems degree curriculum is designed to prepare students for careers in the information systems field such as system analyst, business applications developer, computer networks designer and administrator, database applications developer and administrator, business analytics applications development, systems administrator, and web applications developer. The coursework includes courses in areas that include web applications design and development; database design, development and administration; business analytics applications development; computer networks design and administration; computer networks security; wireless networking; Windows administration; data warehousing and mining; project management; and business applications programming. The students also complete a number of IT industry-recognized certifications as part of the coursework. Master of Science in Management Information Systems applicants

meeting all of the following criteria will qualify for the waiver of the six hours of elective requirements, resulting in a 30-hour program:

1. Bachelor's degree in Management Information Systems, Computer Information Systems or Computer Science from an accredited U.S. institution.
2. This bachelor's degree must have been earned within the last 5 years.
3. A cumulative GPA of 3.0.

Degree Requirements

Foundation Requirements (3 hours)

- ISAM 5030 - Fundamentals of Business Programming Applications **Credit Hours:** 3

Additional Information

ISAM 5030 - Fundamentals of Business Programming Applications is waived for students with six hours of college-level programming with grades of C or better.

Major Requirements (30 hours)

- ISAM 5330 - Management Information Systems **Credit Hours:** 3
- ISAM 5331 - Fundamentals of Databases and Business Intelligence **Credit Hours:** 3
- ISAM 5338 - Internet Applications Development **Credit Hours:** 3
- ISAM 5339 - Fundamentals of Computer Networking **Credit Hours:** 3
- ISAM 5430 - Advanced Applications Development with C# **Credit Hours:** 3
- ISAM 5632 - Advanced Database Applications Development **Credit Hours:** 3
- ISAM 5635 - Systems Analysis and Design **Credit Hours:** 3
- ISAM 5636 - Advanced Computer Networking **Credit Hours:** 3
- ISAM 5638 - Advanced Applications Programming With Java **Credit Hours:** 3
- ISAM 5735 - Data Analytics Application Development **Credit Hours:** 3

Elective Requirements (6 hours)

Any two ISAM graduate elective courses (6 hours), excluding ISAM 5030.

- ISAM 5734 - Advanced Data Analytics in ERP System **Credit Hours:** 3

Additional Information

Internship may satisfy 3 hours of an ISAM Elective. Only one internship opportunity is allowed to satisfy the ISAM elective hours.

College of Education

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

The COE offers an extensive choice of certification plans in graduate 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 COE are fully approved by the State Board for Educator Certification (SBEC)/Texas Education Agency (TEA).

The COE believes that teaching, learning and educational leadership should be learner centered. Whether referring to university pre-service teachers, 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. This conceptual framework guides the way in which the COE structures its courses and degree plans. This is reflected in the COE mission statement and is also the central theme reinforced in classes. The vision of the COE is of a learner-centered community in which success for all students is paramount.

Mission

The mission of the COE is to prepare outstanding educators and leaders in education through achievement of the highest standards of knowledge, skills and dispositions to assist all students in learning. 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 central to the goals and directions of the COE at UHCL, the first, promoting excellence and innovation in learner-centered teaching and learning for all, is the most succinct statement of what the faculty within the COE value.

Contact Us

Office of the Dean
Phone: 281-283-3501
Web: www.uhcl.edu/education
Bayou Building 1231

Office of the Associate Dean
Phone: 281-283-3620
Bayou Building 1231

Office of Academic Advising
Phone: 281-283-3600
Email: education@uhcl.edu
Web: www.uhcl.edu/education/advising
Bayou Building 1231

Center for Professional Development of Teachers
(CPDT)
Phone: 281-283-3612
Bayou Building 1231

Center for Educational Programs
(CEP)
Phone: 281-283-3529
Arbor Building 1300

Office of Educator Certification
Phone: 281-283-3618
Bayou Building 1231

Office of State Assessments
Phone: 281-283-3623
Bayou Building 1231

Research Center for Language and Culture
Phone: 281-283-3580
Bayou Building 1325

Learning Resources Review Center
Phone: 281-283-3900
Bayou Building 3402

New Teachers Online
(NTOL)

Accreditation and Accountability

University of Houston-Clear Lake is accredited by the Southern Association of Colleges and Schools. Unique to education itself are other accrediting and accountability bodies with strict guidelines and standards that must be met in order for the College of Education to recommend educators for Texas educator certification.

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.

For additional data about UHCL in relation to other EPPs in the nation, see the US Department of Education Title II, Institution Progress Report Card web page at Title II.

SBEC/TEA Accreditation

University of Houston-Clear Lake is one of 129 Educator Preparation Programs in the State of Texas that are accredited to recommend educators for certificates. The State Board for Educator Certification (SBEC)/Texas Education Agency (TEA) implements stringent guidelines and standards for initial and advanced levels of educator certification. TEA did not rate/accredit EPPs during 2020 due to Declared State of Disaster.

Read more information on State accreditation ratings on the TEA website.

Policy on Professional Dispositions

Students who are seeking teacher certification or who are enrolled in the College of Education (COE) are required to read "The Statement on Professional Dispositions, Disposition Expectations Checklist, and Disposition Resolution Process" which defines the behavioral standards the COE expects of its students. Just as students may be withdrawn from their program for not meeting the academic requirements, they may also be withdrawn for not meeting the professional disposition standards. The statement on Professional Dispositions is found at www.uhcl.edu/education/student-resources.

Field-Based Experience Courses

There are many COE courses that require field-based experiences. 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-based experience. It is the student's responsibility to meet this requirement, as field-based experience is key to those designated courses.

Criminal Background Checks

As required by Texas Senate Bill 9, a school district will conduct a criminal background check on each student before the student is allowed in the school for a field-based experience. For the criminal background check to be conducted, each student must complete the 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 substituted. The criminal background check is conducted for each field-based experience course each semester and for each district in which the student is completing a field-based

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-based experience course until the situation has been corrected. For information on the Code of Ethics for Texas educators, refer to the Texas Administrative Code web site.

The State of Texas (by House Bill 1508 in 2017), The Higher Education Coordinating Board (THECB), the Texas Education Agency (TEA) and the State Board for Educator Certification (SBEC) require that an educator preparation program inform all certification program applicants and candidates about the State's rules on criminal background checks from the Texas Occupation Code Chapter 53, the Texas Education Code Chapter 22.0831 and the Texas Administrative Code, part VII, Chapter 227, Subchapter B.

Annually, the UHCL Registrar sends out an email to all UHCL students enrolled in a certificate/license program at UHCL informing them of the state's rules and requirements.

In addition, the College of Education (COE) requires all students entering a UHCL educator certificate program to confirm in writing that the candidate read and was informed by COE of the following:

1. An individual who has been **convicted of an offense or received deferred adjudication** may be ineligible for the issuance of an educator certificate upon completion of an educational program.
2. TEA will conduct a **national criminal history check** on the candidate when the candidate applies for an educator certificate and throughout the candidate's educator career.
3. The candidate has read TEA's National Criminal History Checks-FAQs at: https://tea.texas.gov/Texas_Educators/Investigations/National_Criminal_History_Checks-FAQs/
4. The candidate understands that the candidate may request a **Preliminary Criminal History Evaluation** from TEA if the candidate has any reason to believe that the candidate may be ineligible for educator certification due to a conviction or deferred adjudication for a felony or misdemeanor offense, per Texas Occupation Code Section 53.102, http://www.statutes.legis.state.tx.us/Docs/OC/htm/OC.53.htm. The candidate has read TEA's Preliminary Criminal History Evaluation-FAQs at https://tea.texas.gov/Texas_Educators/Investigations/Preliminary_Criminal_History_Evaluation-FAQs/
5. The candidate has read the current guidelines issued by SBEC on the following:
    a. Disciplinary Policy Guidelines - https://tea.texas.gov/Texas_Educators/Investigations/Disciplinary_Policy_and_Mission_Statement_-_State_Board_for_Educator_Certification/

b. Educator Discipline- FAQs - https://tea.texas.gov/Texas_Educators/Investigations/Educator_Discipline_-_FAQs/

Centers and Offices

Center for Professional Development of Teachers (CPDT)

The College of Education (COE) has been designated as 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 or student teaching, field-based experience courses and close cooperation with a number of schools that have been designated as Professional Development School (PDS) 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-based experiences and collaborates 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 for all Internship I and II/Clinical Teaching candidates.

Field-based experiences and graduate internships and practicums take place in a variety of settings in 35 local area school districts. Fifty-five schools have the designation of PDS and provide pre-service internships and professional mentoring. In addition, the COE has an additional 133 affiliation agreements with other businesses and other school districts to provide both graduate internship/practicum placement and field-based experiences. All placement sites must have an approved UHCL Agreement of Affiliation on record with the CPDT office prior to beginning the practicum.

Center for Educational Programs (CEP)

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 College of Education's (COE'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 COE.

Office of Academic Advising

This office provides information about the College of Education (COE) degree requirements, advises all graduate and post-degree teacher certification students seeking initial teaching certificates, analyzes transcripts, performs student audits prior to admission and prepares students' degree and certification plans. The office

also advises prospective graduate students in the various COE 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 College of Education (COE). This office also approves applications for admission to the Teacher Education Program (TEP); audits for the master's comprehensive examination and graduation; recommends students for educator certificates, and tracks data for Title II and the Accountability Standards for Educator Preparation (TEA Accreditation).

Office of State Assessments

The Office of State Assessments advises and disseminates information to students about the state educator certification exams, which are called Texas Examinations of Educator Standards (TExES). Candidates must pass their required TExES to become public school educators in the state of Texas. The Office of State Assessments gives test approval to eligible students and keeps a record of student's exam scores. It communicates information pertaining to state assessments, such as study resources, practice test information and registration instructions, and notification of any changes or updates from the Texas Education Agency (TEA) regarding the TExES. The COE State Assessments Coordinator networks with UHCL faculty and staff, as well as with the state testing coordinator association, Pearson and TEA, in order to maintain accurate testing procedures and requirements.

Research Center for Language and Culture

This center supports initiatives in the 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 College of Education (CoE) 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 (ACP)

The University of Houston-Clear Lake College 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 bachelor's degrees to be employed as full-time teachers while they complete their certifications. The length of the program may be from one to three years depending on students' qualifications. According to the USDE and NCLB, each

school district must ensure that all teachers who teach core academic subjects funded by Title I funds are "highly qualified." Uncertified educators are able to meet this highly qualified definition by:

- Holding a bachelor's degree or higher from an approved institution.
- Being admitted to a State Board for Educator Certification (SBEC) approved ACP.
- Passing the state assessments required for the certification area being sought.

Admission Requirements for Alternative Certification Program (ACP)

Students must meet the following requirements:

- Admission to UHCL as a post-baccalaureate teacher certification or graduate teacher certification student.
- Thirty documented clock hours of K-12 experience observation.
- A bachelor's degree or higher from a regionally accredited institution.
- Must apply and be admitted to the UHCL Teacher Education Program (TEP) prior to being permitted to enroll in the first semester.
    - Basic skills in reading, mathematics and writing requirement
    - Public speaking requirement
    - 2.750 GPA overall or over the 60 semester credit hours
    - Must take and pass the Pre-Admissions Content Test (PACT) that corresponds to the teacher certification being pursued.
    - $37 TEP Application Fee
- Apply to the UHCL Alternative Certification Program (ACP) ($60 application fee)
- Must pass the following state assessments before the end of the first summer semester enrolled in the program.
- Must pass the following state assessment by the end of the second spring semester enrolled in the program.
    - Pedagogy and Professional Responsibilities EC-12 TExES #160

The teaching position must be with one of the UHCL CPDT Teacher Center Executive Board member districts listed below:

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

Qualified Alternative Certification Program (ACP) Students

Upon acceptance, qualified students will complete the following steps:

1. Apply for probationary or intern certificate at http://tea.texas.gov.
2. Pay a non-refundable fee of $1,500 or invoiced through CPDT. Students will pay additional fees if a second and/or third year is necessary.
3. Complete all requirements listed on the certification plan.

General Certification Information

In accordance with the rules of the State Board of Education, students applying for a standard 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 74 of the Texas Administrative Code.

Students seeking a teacher certification recommendation must have at least a 3.000 overall grade point average (GPA) in Pedagogy coursework and at least a 2.500 overall GPA in the content area for which their commendation is sought. Grades of C- or better are necessary for all University of Houston-Clear Lake (UHCL) course requirements. Pre-Service Internship I requires a grade of B- or better.

Advanced certificate students seeking certification recommendation must maintain a 3.000 overall grade point average (GPA). Some courses may have additional grade requirements.

A State Board for Educator Certification (SBEC) rule (Title 19, Part 7, Chapter 249) gives the board the authority to suspend or revoke an educator certificate or refuse to issue an educator certificate to a person who has been convicted of a felony or misdemeanor which directly relates to the duties and responsibilities of the education profession. For additional actions that may be taken by the board, see Rule 249.

SBEC and TEA require all educator preparation students, faculty, staff, field supervisors and advisory committee (TCC) members to be trained in and adhere to the Texas Educators' Code of Ethics. See Texas Administrative Code, Title 19, Part 7, Chapter 228.50. Training may be provided online or in a classroom setting. Candidates will receive training prior to student teaching, internship or practicum.

State Assessments Information

Graduate students seeking Principal, Superintendent, Reading Specialist, School Librarian, and School Counselor certifications must pass their respective state exams (TExES) in order to be recommended for certification. Their degree or certification plan must match the state assessments for which they are registering.

Registration for the TExES is done online at www.tx.nesinc.com, unless the test taker has no way of paying the test fee electronically, in which case registration may be done by telephone at1-800-205-2626. After setting up a personal account with the Texas Educator Certification Program, students should follow the directions for registering for an exam.

Graduate certification candidates must pass their respective TExES to be eligible for practica/internships.

The Texas Educator Certification Program provides preparation materials for every certification at www.tx.nesinc.com. Students must pass a representative practice exam prior to TExES registration approval. Representative practice exams are completed online via programs accessed by the student candidate. More information about the representative practice exams can be found at https://www.uhcl.edu/education/certification/state-assessments/.

Texas Education Agency (TEA)

For additional information on State certification, contact the Texas Education Agency (TEA) through its web site at http://tea.texas.gov, or its Information and Support Center number at 1-512-936-8400. Any changes made by the State and University of Houston-Clear Lake (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 "Educator Certification Online System" by logging into their TEAL login accounts. Verification of certification will automatically be issued to an educator electronically by the Texas Education Agency (TEA) as soon as all requirements have been completed.

Per TEA, a certification candidate cannot be recommended for certification by an Educator Preparation Program unless both the field-supervisor and cooperating teacher (site supervisor for advanced certificates) agree that the candidate should be recommended for certification. The clinical teaching experience, internship or practicum may have to be repeated to ensure this success.

Complaint Resolution Procedures

For issues or complaints, contact the College of Education Office of Academic Advising by email, education@uhcl.edu, or phone, 281-283-3600. If the issue is not resolved, contact the College of Education, Office of the Associate Dean.

For further issues or complaints about this educator preparation program, see the UHCL COE "Complaint Procedures."

For steps to follow in contacting the Texas Education Agency with a complaint about this EPP, see /About_TEA/Contact_Us/complaints/complaints/.

Post-Degree Teacher Certification Plans

Students seeking initial teacher certification who hold at least a bachelor's degree from an accredited university may choose from two sets of programs. Students wishing to combine their pursuits 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 (see UHCL undergraduate catalog). Students pursuing a second bachelor's degree are also considered to be post-baccalaureate teacher certification program students and should consult the university undergraduate catalog.

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 be pursuing a master's degree (other than the Master of Arts in Teaching). Students must meet the graduate admissions requirements for both the university and the College of Education (COE).

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.

At UHCL, graduate students may pursue the following graduate teacher certificates:

- Core Subjects EC-6
- Core Subjects EC-6 with Bilingual Education Supplemental
- Core Subjects EC-6 with ESL Supplemental
- Core Subjects EC-6 with Special Education EC-12
- English Language Arts and Reading 4-8
- English Language Arts and Reading/Social Studies 4-8
- Core Subjects 4-8
- Mathematics 4-8
- Science 4-8
- Social Studies 4-8
- English Language Arts and Reading 7-12
- History 7-12
- Life Science 7-12
- Social Studies 7-12
- Mathematics 7-12

Admission to Clinical Teaching I and II for Graduate Teacher Certification Students

TCED 4378, Clinical Teaching I, and TCED 4978, Clinical Teaching II are the capstone experiences for the University of Houston-Clear Lake (UHCL)-approved Teacher Education Program (TEP), and students must enroll in consecutive long semesters (fall/spring or spring/fall) to complete these two experiences. Clinical Teaching I is every Wednesday of the public school semester. Clinical Teaching I is every day of the public school semester. Enrollment in Clinical Teaching I should not be considered until almost all courses have been successfully completed, since the

number of semester hours in the Clinical Teaching II semester is restricted to 12 hours. Specific requirements for Clinical Teaching I and II are listed below.

Students must apply for Clinical Teaching I through the COE Advising office. Applications must be received by March 1 for fall internship and by October 1 for spring internship.

Clinical Teaching I and II are not offered during the summer. Students complete the application found here https://www.uhcl.edu/education/student-resources/.

Current Clinical Teaching I candidates do not need to apply for Clinical Teaching II. The COE advising staff will automatically conduct an audit of all Clinical Teaching I candidates' academic records at the end of each semester to determine candidates' eligibility for Internship II. If a Clinical Teaching I candidate elects to sit out the semester following internship I, it will be necessary for the candidate to contact his or her adviser and the CPDT office at least one month prior to the semester in which he or she intends to return as a Clinical Teaching II candidate.

Pedagogy courses must be taken prior to or concurrently with Clinical Teaching I. The Office of Academic Advising will perform audits to establish student's 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.

Clinical Teaching I (TCED 4378)

All students must meet the following requirements for admission to Clinical Teaching I:

- Formal admission to the Teacher Education Program. (See above.)
- Field-based experience courses must be satisfactorily completed prior to or taken concurrently with Clinical Teaching I. Students may not take more than two courses that include field-based experience concurrently with Clinical Teaching I.
- Any Wednesday courses taken concurrently with Clinical Teaching I cannot be scheduled earlier than 7 p.m.
- For those certifications requiring TCED 4323/TCED 5233 or TCED 4333/TCED 5333, successful completion of MATH 1351 is a prerequisite. See catalog prerequisites for all pedagogy courses.
- TCED 4100/TCED 4102 must be taken prior to consideration for TCED 4378 unless all required state assessments have been passed.
- Applications for Clinical Teaching I must be received in the COE advising office before the close of business on March 1 for fall internship and by October 1 for spring internship. 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.
- Upon acceptance into TCED 4378, students will 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. 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 Clinical Teaching I is contingent upon eligibility for entering Clinical Teaching II the following consecutive long semester. If the student has not passed the required state certification exams prior to the following consecutive long semester, the student will enter Clinical Teaching II the following semester after the required state certification exams have been passed. Students will be informed of their public school internship assignments before Clinical Teaching I begins.

Clinical Teaching I participants must pass all Texas Examinations of Educator Standards (TExES) to be eligible for Clinical Teaching II.

Clinical Teaching II (TCED 4978)

Students must meet the following requirements for admission to Clinical Teaching II:

1. All Texas Examinations of Educator Standards (TExES) exams must be passed to be eligible for Clinical Teaching II. Scores must be submitted and students registered for Clinical Teaching II prior to the close of late registration in fall and/or spring semesters.
2. Successful completion of Clinical Teaching I with a grade of B- or better.
3. Successful completion of all field-based experience courses.
4. It is strongly recommended that Clinical Teaching II be taken alone in the final semester. No more than three additional semester hours may be taken during Clinical Teaching II (TCED 4978). Any additional courses must meet no earlier than 7 p.m., as they may interfere with Clinical Teaching II course requirements. See adviser for acceptable coursework.

Students denied admission to Clinical Teaching I or II may reapply but must do so by stated deadlines for subsequent semesters.

Admission to the Teacher Education Program (TEP) for Post-Degree Teacher Certification Students

Students must be formally admitted to the Teacher Education Program (TEP) to enroll in pedagogy coursework. Enrollment in the College of Education (COE) TEP is contingent on the following:

1. Meeting basic skills in reading, mathematics and writing by holding a baccalaureate degree or higher awarded by a regionally accredited U.S. institution of higher education.
2. Submitting the TEP application with all required documents to the Office of Educator Certification in B-1231. The application is available online at the College of Education - Student Resources page. See "Teacher Education Program Application."

3. Achieving grades of C- or better in prerequisite courses EDUC 4310, SILC 6030/SILC 4315, and TCED 6031/INST 3313. EDUC 4310 is waived for Master of Arts in Teaching degree students.
4. Completing a college-level public speaking course with a grade of C- or better or submitting a Speech Competency form signed by a University of Houston-Clear Lake (UHCL) instructor who has observed the English public speaking skills of the student.
5. Achieving a grade point average (GPA) of > 2.750 overall or in the last 60 semester credit hours. The GPA will be calculated by the COE after the application is submitted.
6. Achieving a passing score on the Texas Education Agency (TEA)-approved content exam (graduate/post-baccalaureate only). Register for the content exam(s) as a "Pre-Admission Content Test" (PACT). Those pursuing math or science certificates must have 15 semester credit hours completed in the content area; others must have 12 semester credit hours completed in the content area.
7. Being evaluated for certificate appropriateness by completing a written instrument of why the student wants to teach in this area of certification and what makes the student a good candidate.
8. Educator candidates who were educated in countries where English is not the native language must demonstrate English proficiency by passing the TOEFL-iBT test with scores of 24 on the speaking portion, 22 on listening, 22 on reading, and 21 on writing. No other English proficiency tests are accepted by TEA. Transcripts must be evaluated course by course by a TEA approved foreign credential service.
9. Verify that you have read and understand the handout, "7 Things to Know Before Becoming an Educator."
10. Pay the $37 TEA Admission Fee (per certificate pursuing).
11. Receiving formal approval of the application for admission to the TEP. Candidate must "accept" admission to the program.
12. Confirming in writing that the student is aware that a person who has been convicted of an offense or received deferred adjudication may be ineligible for certification; that the student will be subject to a national criminal history check at the time of certification application; that the student may request a Preliminary Criminal History Evaluation from TEA; and, that the student has read the state's disciplinary policy guidelines for educators. Complete the Educator's Code of Ethics training and turn in a copy of the certificate of completion.

Upon acceptance to the TEP, the COE will establish an initial profile for each student with the TEA. All educator candidates in Texas are required to open a TEA account upon entering a program. Students will receive an e-mail message from the TEA prompting them to activate their accounts and complete their profiles.

Certification-seeking candidates who withdraw from the UHCL certification program or are discontinued by the university as certification-seeking and wish to re-enter must reapply to the university and to the COE certification program. Teacher

certification candidates who were formerly admitted to TEP and want to re-enter it must reapply per TEA and meet all and any new admission requirements and pay the TEA admission fee again. Advanced certificate candidates who were formerly admitted to the certification program must reapply to COE, meet all and any new certification admission requirements and pay the TEA Admission fee again per TEA.

The final authority for admission and retention in the TEP resides with the dean of the COE.

Admission to the Teacher Education Program (TEP) for Master of Arts in Teaching Students

Students must be formally admitted to the Teacher Education Program (TEP) to enroll in pedagogy coursework. Enrollment in the College of Education (COE) TEP is contingent on the following:

1. Meeting basic skills in reading, mathematics and writing by holding a baccalaureate degree or higher awarded by a regionally accredited U.S. institution of higher education.
2. Submitting the TEP application with all required documents to the Office of Educator Certification in B-1231. The application is available online at the College of Education - Student Resources page. See "Teacher Education Program Application."
3. Achieving grades of C- or better in prerequisite courses SILC 6030 and TCED 6031.
4. Completing a college-level public speaking course with a grade of C- or better or submitting a Speech Competency form signed by a University of Houston-Clear Lake (UHCL) instructor who has observed the English public speaking skills of the student.
5. Achieving a grade point average (GPA) of > 2.750 overall or in the last 60 semester credit hours. The GPA will be calculated by the COE after the application is submitted.
6. Achieving a passing score on the Texas Education Agency (TEA)-approved content exam (graduate/post-baccalaureate only). Register for the content exam(s) as a "Pre-Admission Content Test" (PACT). Those pursuing math or science certificates must have 15 semester credit hours completed in the content area; others must have 12 semester credit hours completed in the content area.
7. Being evaluated for certificate appropriateness by completing a written instrument of why the student wants to teach in this area of certification and what makes the student a good candidate.
8. Educator candidates who were educated in countries where English is not the native language must demonstrate English proficiency by passing the TOEFL-iBT test with scores of 24 on the speaking portion, 22 on Listening, 22 on reading, and 21 on writing. No other English proficiency tests are accepted by

TEA. Transcripts must be evaluated course by course by a TEA-approved foreign credential service.
9. Verifying that you have read and understand the handout, "7 Things to Know Before Becoming an Educator."
10. Paying the $37 TEA Admission Fee (per certificate pursuing).
11. Receiving formal approval of the application for admission to the TEP. Candidate must "accept "admission to the program.
12. Confirming in writing that the student is aware that a person who has been convicted of an offense or received deferred adjudication may be ineligible for certification; that the student will be subject to a national criminal history check at the time of certification application; that the student may request a Preliminary Criminal History Evaluation from TEA; and that the student has read the state's disciplinary policy guidelines for educators. Complete the Educator's Code of Ethics training and turn in a copy of the certificate of completion.

Upon acceptance to the TEP, the COE will establish an initial profile for each student with the TEA. All educator candidates in Texas are required to open a TEA account upon entering a program. Students will receive an e-mail message from the TEA prompting them to activate their accounts and complete their profiles.

Certification-seeking candidates who withdraw from the UHCL certification program or are discontinued by the university as certification-seeking and wish to re-enter must reapply to the university and to the COE certification program. Teacher certification candidates who were formerly admitted to TEP and want to re-enter it must reapply to TEP, meet all and any new admission requirements and pay the TEA Admission fee again per TEA. Advanced certificate candidates who were formerly admitted to the certification program must reapply to COE, meet all and any new certification admission requirements and pay the TEA Admission fee again per TEA.

The final authority for admission and retention in the TEP resides with the dean of the COE.

Content Courses Waived for Post-Degree Teacher Certificates

Post-degree teacher certification students who pass the required academic specialization state assessment (TExES) on the first attempt while approved by University of Houston-Clear Lake (UHCL) may have all their respective academic specialization coursework waived by UHCL if they are pursuing one of the following certificates:

- English Language Arts and Reading 4-8
- English Language Arts and Reading/Social Studies 4-8
- Mathematics 4-8
- Science 4-8
- Social Studies 4-8

- English Language Arts and Reading 7-12
- History 7-12
- Life Sciences 7-12
- Mathematics 7-12
- Social Studies 7-12

Important Points to Know:

If a student does 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: Core Subjects EC-6, Core Subjects EC-6 with Bilingual Education Supplemental, Core Subjects EC-6 with ESL Supplemental, and Core Subjects EC-6 with Special Education EC-12.
- For the Core Subjects 4-8 program only: For each subject area test passed by the students on the first attempt of the Core Subjects 4-8 state assessment, the respective content courses (English, Mathematics, Science, and Social Studies) will be waived.

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 Arts in Teaching:

- Core Subjects EC-6
- Core Subjects 4-8
- Mathematics 4-8
- Science 4-8
- Life Science 7-12
- Mathematics 7-12

Master of Science:

- Counseling
- Curriculum and Instruction
- Early Childhood Education
- Educational Management
- Instructional Design and Technology
- Multicultural Studies in Education
- Reading
- School Library and Information Science

General Requirements for Graduate Studies in Education

Graduate Admissions Requirements

All students planning to pursue a master's degree must hold a bachelor's degree from an accredited university and have either an overall grade point average (GPA) of 3.000 or greater or a GPA of 3.000 or greater in their last 60 hours. The last 60 hours, listed chronologically including the full semester in which the 60th hour appears, will be used to calculate the GPA for the last 60 hours.

Students who wish to be admitted to the Counseling program must complete a special admission process described under Master of Science in Counseling.

Students who wish to be admitted to the Curriculum and Instruction program must meet additional requirements described under Master of Science in Curriculum and Instruction.

Students with an overall GPA of 2.500 or above but less than 3.000 in the last 60 hours, including those who already hold a master's or doctoral degree, may pursue a master's degree or certification plan requiring a master's degree by obtaining one of the following:

- A combined score of 294 or greater on the quantitative and verbal portions of the Graduate Record Examination (GRE) and a 3.5 or greater on the analytical writing portion of the GRE.
- A score of 390 or greater on the Miller Analogies Test (MAT).

Students with less than an overall 2.500 GPA in the last 60 hours or a 2.500 to 3.000 GPA but not meeting the GRE or MAT requirements listed above cannot pursue a master's degree or a certification plan requiring a master's degree, except by sponsored admissions. A full-time College of Education (COE) faculty member may sponsor four students per year for admission to a master's degree or a certification plan requiring a master's degree. To be considered for sponsored admission, non-certification students must have submitted a GRE or MAT score but no minimum score requirements are specified. Sponsored certification-seeking students must submit a GRE score and meet the minimums set by the Texas Education Agency--Verbal Reasoning 143; Quantitative Reasoning 140; Analytical Writing 3.0. The faculty member's recommendation for sponsorship will be based on consideration of the student's 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 COE Office of the Associate Dean. The sponsoring faculty member must complete and sign the form. In sponsoring students, faculty members agree to provide advisement support to enhance the likelihood of success in the student's academic plans. All requests for sponsored admission must be approved by the associate dean.

Students pursing a certification which requires a master's degree will be held to the same admissions requirements as those seeking a master's degree with the exception that all students must hold a master's degree from and accredited university.

Educator certificate candidates who were educated in countries where English is not the native language must demonstrate English proficiency by taking all four parts of the TOEFL-iBT test with scores of 24 on the speaking portion, 22 on listening, 22 on reading, and 21 on writing. No other English proficiency tests are accepted by TEA. Transcripts must be evaluated by a TEA-approved foreign credential evaluation service.

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.

Admission to the Advanced Certification Program

After being admitted to UHCL, students seeking an advanced educator certification offered by the Texas Education Agency (TEA) must be admitted into the Advanced Certification Program. Advanced Certifications include:

- Principal as Instructional Leader
- Reading Specialist
- School Counselor
- School Librarian
- Superintendent

Students admitted into a UHCL program that includes one of the above advanced certifications must apply and be admitted to the Advanced Certification Program before enrolling in the next semester.

Admission to the Advanced Certification Program is contingent on the following:

- Submission of the Advanced Certification Program Application.
- Submission of a Teacher Service Record.
- Completion of TEA Ethics Training.
- Completion of Mental Health/Substance Abuse/Youth Suicide Prevention Training.
- Pay the $37 TEA Admission Fee (per certificate pursuing).
- Receiving formal approval of the application for admission to the Advanced Certification Program. Student must "accept" admission to the program.

Certification-seeking candidates who withdraw from the UHCL advanced certification program or are discontinued by the university as certification-seeking and wish to re-enter must reapply to the university and to the COE advanced certification program. Advanced certificate candidates who were formerly admitted to the certification program must reapply to COE, meet all and any new certification admission requirements and pay the TEA Admission fee again per TEA.

The final authority for admission and retention in the Advanced Certification Program resides with the dean of the COE.

TEA Admission Fee

The Texas Education Agency (TEA) requires all educator preparation programs to collect a $37 fee from each new candidate entering a teacher or advanced certification program in Texas. UHCL forwards the fee to TEA and TEA uses it to create and monitor your TEAL (TEA Login) account at the TEA website. Graduate students entering any program that includes any of the following certifications will be charged this fee (per certificate pursued):

- Principal
- School Counselor
- School Librarian
- Superintendent
- Reading Specialist

Graduate Candidate Plan of Study (CPS)

Graduate degree-seeking students in the COE must have on file in the Office of Educator Certification an approved CPS, which will include a minimum of 30 hours of coursework. The CPS will be developed jointly by the students and their advisers and approved by the associate dean. These documents specify the coursework that must be completed to fulfill the requirements for the graduate degree or the certification plan requiring a master's degree.

Age of Coursework for Graduate Degrees

Coursework, 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 coursework 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 COE 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 coursework 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 in the thesis research course, EDUC 6939, during each fall and spring semester until completion. 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 in the project course, EDUC 6839, during each fall and spring semester until completion. Students must register for a minimum of six hours of project credit, and no more than six hours of the 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 an application for admission by June 8 for the fall semester, October 1 for the spring semester and March 1 for the summer session. Candidates seeking professional certification as a superintendent, principal, school counselor, school librarian or reading specialist participate in a practicum for a minimum of 160 clock-hours. All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teacher's office prior to beginning the practicum.
- **Option 4, Extended Course option** requires an additional six hours of coursework 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 is available on the COE website.

Age of Standard Certification Coursework for Students Who Hold a Master's Degree

All coursework, 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 Certificate 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 coursework 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 coursework 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 COE.

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, Oct. 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.

Department of Counseling, Special Education and Diversity

Our focus in the Department of Counseling, Special Education, and Diversity is preparing teachers, school and professional counselors who can address the needs of those they serve. Graduates of University of Houston-Clear Lake's Department of Counseling, Special Education and Diversity are uniquely trained to become transformative leaders who work with students or clients with diverse needs to attain their full potential. To this end, we offer the following master's degrees.

Master of Science

Clinical Mental Health Counseling, M.S.

The graduate plan in Clinical Mental Health Counseling leads to the Master of Science degree. Students seeking this degree are seeking preparation for licensure as a Licensed Professional Counselor (LPC) in the state of Texas.

The Clinical Mental Health Counseling plan requires a minimum of 60 hours.

The opportunity to complete the academic requirements for the CMHC is restricted to students admitted to the counseling program. Students who are not degree seeking, but seeking licensure, may enroll in counseling courses with prior approval of the program 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 College of Education (COE) (see Graduate Admissions Requirements) must meet additional requirements prior to applying for candidacy to the CMHC program. Counseling applications are available on the COE Web site at https://www.uhcl.edu/admissions/apply/graduate/how-to-apply. Each application for candidacy must include the following:

1. Completed application form.
2. Brief essay (500 words maximum) stating the student's career goals and reasons for application.
3. Documentation of completion of the Graduate Record Examination (GRE) or MAT if last 60 undergraduate hours GPA is less than 3.0.
4. 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 grade point average (GPA).
5. Three professional recommendation forms.
6. Applicant self-rating sheet.
7. Current resume.

Applicants who submit properly completed applications may be invited to participate in a structured interview. The admissions process is conducted during the fall and spring semesters of each year. Application forms and instructions may be obtained in the COE Office of Academic Advising. Questions about the content of the application packet and process should be directed to the COE Office of Academic Advising. Applicants are solely responsible for ensuring that their packets containing the completed application forms, essays, supporting transcripts, documented GRE or MAT scores (if necessary), recommendation forms and self-rating sheet are received by the COE Office of Academic Advising on or before the deadline: September 1 for spring entry and March 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 workday. Faxes and late applications will not be accepted.

Selected applicants will be contacted the via e-mail address provided on their application to schedule an interview with the admissions committee. If admitted to the CMHC program, students must attend a mandatory orientation.

Incomplete applications will not be considered for admission.

Check prerequisites before enrolling in any course.

Grades for all courses must be B- or higher.

Requirements

Required Courses (45 hours):

- COUN 5131 - Counseling for Lifespan Development **Credit Hours:** 3
- COUN 5231 - Professional Orientation to Counseling **Credit Hours:** 3
- COUN 5234 - Career Development and Counseling **Credit Hours:** 3
- COUN 5432 - Theories of Counseling **Credit Hours:** 3
- COUN 5433 - Counseling Ethics and Consultation **Credit Hours:** 3
- COUN 5535 - Systems Counseling **Credit Hours:** 3
- COUN 5536 - Addictions Counseling **Credit Hours:** 3
- COUN 5630 - Abnormal Human Behavior **Credit Hours:** 3
- COUN 6030 - Multicultural Foundations for Counselors **Credit Hours:** 3
- COUN 6033 - Research Design and Analysis for Counselors **Credit Hours:** 3
- COUN 6232 - Assessment Issues for Counselors **Credit Hours:** 3
- COUN 6435 - Pre-Practicum in Counseling **Credit Hours:** 3
- COUN 6531 - Mental Health and Psychopathology **Credit Hours:** 3
- COUN 6532 - Group Counseling **Credit Hours:** 3
- COUN 6533 - Crisis Intervention **Credit Hours:** 3

Electives (6 hours):

See Faculty Adviser to select electives.

Capstone experience (9 hours):

- COUN 6639 - SC Counseling Practicum I **Credit Hours:** 3
- COUN 6738 - CMHC Practicum II **Credit Hours:** 3
- COUN 6838 - CMHC Practicum III **Credit Hours:** 3

Additional Information

All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.

Counseling M.S. with School Counselor Certificate

Requirements

The graduate plan in Counseling with School Counselor Certificate leads to the Master of Science degree. Students seeking this degree must meet the academic requirements for the School Counselor Standard Certificate (EC-12).

The School Counselor standard certificate plan requires a minimum of 48 hours. To be eligible at the time of certification recommendation, students must have a master's degree, a valid Texas Standard Teaching Certificate, a passing score on the state assessment and two years of successful full-time approved classroom teaching experience.

The opportunity to complete the academic requirements for the School Counselor standard certificate through the counseling plan is restricted to students admitted to the counseling program. Students who are not degree seeking, but seeking certification, may enroll in counseling courses with prior approval of the program coordinator. In each case, students must meet the stated course prerequisites and space must be available in the course.

This program in offered in both face-to-face and hybrid formats.

Admission Requirements

Students who meet the graduate admissions requirements to the College of Education (COE) (see Graduate Admissions Requirements) must meet additional requirements prior to applying for candidacy to the Counseling program. Counseling applications are available on the COE Web site at https://www.uhcl.edu/admissions/apply/graduate/how-to-apply. Each application for candidacy must include the following:

1. Completed application form.
2. Brief essay (500 words maximum) stating the student's career goals and reasons for the application.
3. Documentation of completion of the Graduate Record Examination (GRE) or MAT if last 60 undergraduate hours GPA is less than 3.0;
4. 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 grade point average (GPA).
5. Students seeking School Counselor Certification must have a GPA of 2.750 over the last 60 hours.
6. Three professional recommendation forms.
7. Applicant self-rating sheet.
8. Current resume.
9. TEA required documents:
    - Valid Standard Texas Teaching certificate
    - Texas Teacher Service Record
    - TEA Ethics training certificate
    - TEA admission fee receipt
    - Background Check Notification form
    - Documented training of Youth Mental Health/Substance Abuse/Youth Suicide Prevention
    - FERPA form

Applicants who submit properly completed applications by the published deadlines may be invited to participate in a structured interview. The admissions process is

conducted during the fall and spring semesters of each year. Application forms and instructions may be obtained in the COE Office of Academic Advising. Questions about the content of the application packet and process should be directed to the COE Office of Academic Advising. Applicants are solely responsible for ensuring that their packets containing the completed application forms, essays, supporting transcripts, documented GRE or MAT scores (if necessary), recommendation forms, self-rating sheet, and TEA documents are received by the COE Office of Academic Advising on or before the deadline: September 1 for spring entry and March 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 workday. Faxes and late applications will not be accepted.

Selected applicants will be contacted via the email address provided on their application to schedule an interview with the admissions committee. If admitted to the counseling program, students must attend a mandatory orientation.

Incomplete applications will not be considered for admission.

Check prerequisites before enrolling in any course.

Grades for all courses must be B-or higher.

Required Courses (41 hours):

- COUN 5131 - Counseling for Lifespan Development **Credit Hours:** 3
- COUN 5231 - Professional Orientation to Counseling **Credit Hours:** 3
- COUN 5234 - Career Development and Counseling **Credit Hours:** 3
- COUN 5432 - Theories of Counseling **Credit Hours:** 3
- COUN 5433 - Counseling Ethics and Consultation **Credit Hours:** 3
- COUN 5534 - Child and Adolescent Counseling **Credit Hours:** 3
- COUN 5535 - Systems Counseling **Credit Hours:** 3
- COUN 6030 - Multicultural Foundations for Counselors **Credit Hours:** 3
- COUN 6033 - Research Design and Analysis for Counselors **Credit Hours:** 3
- COUN 6232 - Assessment Issues for Counselors **Credit Hours:** 3
- COUN 6435 - Pre-Practicum in Counseling **Credit Hours:** 3
- COUN 6532 - Group Counseling **Credit Hours:** 3
- COUN 6533 - Crisis Intervention **Credit Hours:** 3
- COUN 6534 - Developmental School Counseling Programs **Credit Hours:** 3

Additional Required Course (1 hour)

- COUN 5010 - Professional Preparation Seminar **Credit Hours:** 1

Additional Information

Candidates not passing the School Counselor State Assessment by their final semesters must enroll in and successfully complete this course. Candidates passing the School Counselor State Assessment prior to the final semester of this plan will have this course waived.

Capstone experience (6 hours):

- COUN 6639 - SC Counseling Practicum I **Credit Hours:** 3
- COUN 6739 - School Counseling Practicum II **Credit Hours:** 3

Additional Information

All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.

Multicultural Studies in Education, M.S.

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.

Check prerequisites before enrolling in any courses.

Degree Requirements

Professional Education Core (12 hours)

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Track A - Bilingual Education

Bilingual Education (12 hours)

- SILC 5031 - Curriculum Issues in Educating the Bilingual Student **Credit Hours:** 3
- SILC 5032 - Applied Linguistics for Bilingual Education/ESL **Credit Hours:** 3
- SILC 5134 - Second Language Teaching **Credit Hours:** 3
- SILC 5531 - Literacy for Spanish-Speaking Students **Credit Hours:** 3

Support Area (6 hours)

- SILC 5130 - Theory and Research in Bilingual and ESL Education **Credit Hours:** 3

Choose one course from:

Advised elective

- SILC 5034 - Community Collaboration **Credit Hours:** 3
- SILC 5035 - Interpersonal Interactions in Diverse Settings **Credit Hours:** 3
- SILC 5036 - Multicultural Curriculum Development **Credit Hours:** 3

Master's Degree Options (6 hours)

Option 1

- EDUC 6939 - Master's Thesis Research **Credit Hours:** 3

Additional Information

Minimum of two semesters required for a maximum of six hours; with continuous registration until completion.

Option 2

- EDUC 6839 - Master's Project Research **Credit Hours:** 3

Additional Information

Minimum of two semesters required for a maximum of six hours; with continuous registration until completion.

Option 3

Six hours from SILC elective courses

- EDUC 6909 - Master's Comprehensive Examination **Credit Hours:** 0

Additional Information

If candidates are not enrolled in coursework during the semester in which they apply to take the master's comprehensive examination, they must consult with their adviser to be enrolled in EDUC 6909.

Track B - English as a Second Language

English as a Second Language (12 hours)

- SILC 5032 - Applied Linguistics for Bilingual Education/ESL **Credit Hours:** 3
- SILC 5033 - Cross-Curricular Literacy for Second-Language Learners **Credit Hours:** 3
- SILC 5134 - Second Language Teaching **Credit Hours:** 3
- SILC 6032 - Models of Language **Credit Hours:** 3

Support Area (6 hours)

- SILC 5130 - Theory and Research in Bilingual and ESL Education **Credit Hours:** 3

Choose one course from:

Advised elective

- SILC 5034 - Community Collaboration **Credit Hours:** 3
- SILC 5035 - Interpersonal Interactions in Diverse Settings **Credit Hours:** 3
- SILC 5036 - Multicultural Curriculum Development **Credit Hours:** 3

Master's Degree Options (6 hours)

Option 1

- EDUC 6939 - Master's Thesis Research **Credit Hours:** 3

Additional Information

Minimum of two semesters required for a maximum of six hours; with continuous registration until completion.

Option 2

In consultation with adviser

- EDUC 6839 - Master's Project Research **Credit Hours:** 3

Additional Information

Minimum of two semesters required for a maximum of six hours; with continuous registration until completion.

Option 3

Six hours from elective courses

- EDUC 6909 - Master's Comprehensive Examination **Credit Hours:** 0

Additional Information

If candidates are not enrolled in coursework during the semester in which they apply to take the master's comprehensive examination, they must consult with their adviser to be enrolled in EDUC 6909.

Track C - Multicultural Education

Multicultural Education (12 hours)

Advised elective

- SILC 5034 - Community Collaboration **Credit Hours:** 3
- SILC 5035 - Interpersonal Interactions in Diverse Settings **Credit Hours:** 3
- SILC 5036 - Multicultural Curriculum Development **Credit Hours:** 3

Support Area (6 hours)

Advised elective

Master's Degree Options (6 hours)

Option 1

- EDUC 6939 - Master's Thesis Research **Credit Hours:** 3

Additional Information

Minimum of two semesters required for a maximum of six hours; with continuous registration until completion.

Option 2

- EDUC 6839 - Master's Project Research **Credit Hours:** 3

Additional Information

Minimum of two semesters required for a maximum of six hours; with continuous registration until completion.

Option 3

Six hours from SILC elective courses

- EDUC 6909 - Master's Comprehensive Examination **Credit Hours:** 0

Additional Information

If candidates are not enrolled in coursework during the semester in which they apply to take the master's comprehensive examination, they must consult with their adviser to be enrolled in EDUC 6909.

Track D - Social Justice in Education

Social Justice in Education (12 hours)

- SILC 5034 - Community Collaboration **Credit Hours:** 3
- SILC 5035 - Interpersonal Interactions in Diverse Settings **Credit Hours:** 3
- SILC 6035 - Social Foundations of Education **Credit Hours:** 3
- SILC 6036 - Equity Pedagogy **Credit Hours:** 3

Support Area (6 hours)

- SILC 6031 - Social Justice Leadership, Policy and Advocacy **Credit Hours:** 3
- SILC 6033 - Reflection in Social Justice Education **Credit Hours:** 3

Master's Degree Options (6 hours)

Option 1

- EDUC 6939 - Master's Thesis Research **Credit Hours:** 3

Additional Information

Minimum of two semesters required for a maximum of six hours; with continuous registration until completion.

Option 2

- EDUC 6839 - Master's Project Research **Credit Hours:** 3

Additional Information

Minimum of two semesters required for a maximum of six hours; with continuous registration until completion.

Option 3

Three additional hours from SILC elective courses

- EDUC 6909 - Master's Comprehensive Examination **Credit Hours:** 0

- SILC 6034 - Current Issues in Diverse Communities **Credit Hours:** 3

Additional Information

If candidates are not enrolled in coursework during the semester in which they apply to take the master's comprehensive examination, they must consult with their adviser to be enrolled in EDUC 6909.

Track E - Special Education

Bilingual/ESL Education (12 hours)

- SILC 5032 - Applied Linguistics for Bilingual Education/ESL **Credit Hours:** 3
- SILC 5033 - Cross-Curricular Literacy for Second-Language Learners **Credit Hours:** 3
- SILC 5130 - Theory and Research in Bilingual and ESL Education **Credit Hours:** 3
- SILC 5931 - Research Topics in the Studies of Language and Culture **Credit Hours:** 3

Special Education (12 hours)

- SPED 5233 - Providing Positive Behavioral Support **Credit Hours:** 3
- SPED 5332 - Evaluation, Assessment and Program Planning for Young Children with Special Needs **Credit Hours:** 3
- SPED 5131 - Educational Assessment of Exceptionalities **Credit Hours:** 3
- SPED 5132 - Curricular Approaches to Learning Difficulties **Credit Hours:** 3

Master's Degree Option (3 hours)

- SPED 5133 - Practicum in Inclusive Education **Credit Hours:** 3

Track F - Dual Language and Reading Specialist

Professional Core (6 hours)

- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Biliteracy Development (12 hours)

- SILC 5032 - Applied Linguistics for Bilingual Education/ESL **Credit Hours:** 3
- SILC 5033 - Cross-Curricular Literacy for Second-Language Learners **Credit Hours:** 3

- SILC 5134 - Second Language Teaching **Credit Hours:** 3
- SILC 5931 - Research Topics in the Studies of Language and Culture **Credit Hours:** 3

Reading Specialist (19 hours)

- LLLS 5010 - Professional Preparation Seminar for Reading Specialists **Credit Hours:** 1
- LLLS 6331 - Sociolinguistic Applications to Reading **Credit Hours:** 3
- LLLS 6332 - Foundations of Early and Secondary Literacy **Credit Hours:** 3
- LLLS 6333 - Genre Studies in Children's and Young Adult Literature **Credit Hours:** 3
- LLLS 6639 - Leadership in Clinical Practices in Assessment of Literacy Tasks **Credit Hours:** 3
- LLLS 6732 - Assessment and Remediation of Reading and Language Arts Literacy **Credit Hours:** 3
- LLLS 6839 - Practicum in School Literacy Practices **Credit Hours:** 3

Additional Information

Certification recommendation requirements: Hold a valid standard Texas Teaching certificate, proof of two years successful, full-time, approved teaching experience, hold a master's degree, passing score on corresponding state assessment (TExES), completion of all required UHCL coursework.

Department of Curriculum and Instruction

Follow your dream to become the best teacher possible by choosing a degree program in University of Houston-Clear Lake's Department of Curriculum and Instruction. We offer undergraduate, graduate and doctoral degrees that focus on the preparation and development of dedicated teachers and teacher leaders who will work with children from birth through elementary, middle and secondary school and beyond. Our focus is on preparing classroom teachers and other professionals who will serve children and youth to understand and utilize the most effective and current teaching tools available to assist students in achieving academic success.

Certificate

Early Childhood Leadership Certificate

Gain the knowledge and skills necessary to become an effective director or administrator of a high-quality early childhood program by getting an Early Childhood Leadership Certificate from University of Houston-Clear Lake. Completing this program will earn you a National Director Credential from the McCormick Center for Early Childhood Leadership.

The certificate is available fully online and may be taken as part of the Master of Science in Early Childhood Education at UHCL or as a stand-alone certificate.

By completing this certification, you will:

- Be recognized by the National Association for the Education of Young Children (NAEYC) as having met the director qualification for NAEYC program accreditation.
- Meet the education requirement to become a licensed director in the state of Texas and can apply for your Texas Child-Care Centers Director's certificate.
- Meet the 4-star Director Qualifications for the Texas Rising Star quality rating and improvement system for Texas Early Childhood programs.
- Demonstrate to employers that you possess a strong commitment and expertise in early childhood leadership.

Certificate Requirements

Required Courses (9 hours)

- ECED 5336 - Administration and Management of Programs for Young Children I **Credit Hours:** 3
- ECED 5337 - Administration and Management of Programs for Young Children II **Credit Hours:** 3
- MGMT 5032 - Human Behavior in Organizations **Credit Hours:** 3

UHCL Content Specialization Graduate Certificate

Non-degree seeking students can craft specialization certificates of graduate-level courses that support their career goals. Each unique certificate requires six graduate-level courses with a minimum of two TCED courses. Courses are selected in consultation with a faculty adviser. The remaining four courses can be selected from across programs in the College of Education. The certificate is offered through University of Houston-Clear Lake (UHCL). It is not a state certificate.

Check prerequisites before enrolling in any courses.

Certificate Requirements

Required Courses (6 hours)

- Select 1 TCED course in consultation with faculty adviser.
- TCED 5132 - Teacher Leadership and Mentoring **Credit Hours:** 3

Additional Courses (9 hours)

- Select 3 content specialization courses in consultation with faculty adviser.

UHCL Instructional Coach Graduate Certificate

Non-degree seeking candidates can craft graduate-level content courses that support their career goals. Each unique certificate requires six graduate-level courses, with a minimum of two TCED courses (i.e., TCED 5132 is required, and any other TCED core courses elected with the candidate's adviser). The remaining four courses can be from across UHCL Colleges and Programs.

Check prerequisites before enrolling in any courses.

Certificate Requirements

Required Courses (6 hours)

Select 2 TCED courses in consultation with faculty adviser.

- TCED 5132 - Teacher Leadership and Mentoring **Credit Hours:** 3

Additional Courses (12 hours)

Select 4 courses in consultation with faculty adviser.

Doctor of Education

Curriculum and Instruction, Ed.D.

The Doctor of Education (Ed.D.) in Curriculum and Instruction with a focus on science, technology, engineering, and mathematics (STEM) is a program for educational leaders who wish to advance their careers. The doctoral degree will address the needs of professionals in the K-14 education sector who seek to improve their practice, positively impact their institutions, and advance their professional careers. The program will also address the needs of professionals employed in the informal education sector such as those who work at zoos, museums, educational outreach and community centers as well as other educational-related STEM industries.

Prior to admission to the Ed.D. program, the student is expected to have the following:

1. A completed UHCL admissions application.
2. Official transcripts from each accredited institution attended sent to the Office of Admissions.
3. A combined score of 297 on the Verbal and Quantitative portions of the Graduate Record Examination (GRE) and a minimum score of 4.0 on the

Analytical Writing portion of the GRE. The GRE must have been taken within the last five years. Applicants do have the option of providing a writing sample, where the writing activity is proctored at UHCL, in lieu of the GRE, that can be accepted and considered in the application process for the Doctoral Program in Curriculum and Instruction with a STEM emphasis.

4. Evidence of work and leadership experience in STEM education.
5. A letter of intent, not to exceed 1000 words, explaining the reason for pursuing doctoral-level work in STEM education. The letter should include a brief discussion of career goals, research interests as they relate to STEM education, and how this program will help meet career goals and pursue research interests. The letter should also discuss scholarly and professional accomplishments and prior work experiences that relate to the applicant's interest in, and aptitude for, the doctorate program.
6. Three references from persons who can address the student's performance in graduate studies and potential for educational leadership. If possible, at least one of the reference forms should be from a professor involved in the applicant's master's program.
7. If applicable, provide a letter from an employer confirming support of the applicant's pursuit of the Ed.D. and willingness to allow fieldwork within the organization. The Admission Requirements section of the UHCL Doctoral Web site has a form letter for the employer to sign.

Other information may be required; contact COE's 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 his/her strong leadership qualities, provisional admission may be granted.

Once a student is admitted, any course in which the student makes a grade of C- or below cannot be counted toward the doctoral program. Doctoral students may count one course on their program with a grade of either C+ or C. All other grades must be B- or greater. An overall grade point average (GPA) of 3.000 must be maintained.

The time frame for completion of the doctoral program is seven years from the start of the program. At the end of the seventh year, a doctoral candidate is allowed to petition the Associate Dean for a one-year extension if the candidate's dissertation proposal has been approved. The candidate can petition the COE associate dean for a second and final one-year extension to complete the dissertation.

Check prerequisites before enrolling in any courses.

Degree Requirements

The structure of the Ed.D. program is as follows:

Curriculum and Instruction Core (9 hours):

Required

- EDCI 7035 - Intercultural Communications **Credit Hours:** 3
- EDCI 7139 - Professional Development Principles and Practices **Credit Hours:** 3
- LLLS 7034 - Professional Writing and Communications **Credit Hours:** 3

Research Core (15 hours):

- EDCI 7031 - Quantitative Research I **Credit Hours:** 3
- EDCI 7032 - Quantitative Research II **Credit Hours:** 3
- EDCI 7033 - Qualitative Research **Credit Hours:** 3
- EDCI 7331 - Advanced Qualitative Methods **Credit Hours:** 3
- EDCI 8530 - Research Seminar **Credit Hours:** 3

STEM Core (12 hours):

- EDCI 7137 - Advanced Models of Teaching STEM Education **Credit Hours:** 3
- EDCI 7138 - Curriculum Design: Development, Implementation, Evaluation in STEM Education **Credit Hours:** 3
- EDCI 7430 - Current Issues and Trends in STEM Education **Credit Hours:** 3
- EDCI 7431 - Learning and Cognition in STEM Education **Credit Hours:** 3

Additional Information

Specialization:

With the assistance of your faculty adviser, choose 12 hours from a STEM specialization area. Approved STEM specialization areas are science, technology, engineering, and mathematics. Suggested courses are listed below; other courses may be used with approval from your faculty adviser.

Science:

- BIOL 5234 - Population and Community Dynamics **Credit Hours:** 3
- BIOL 5534 - Conservation Biology **Credit Hours:** 3
- BIOL 5535 - Neotropical Rainforest Ecology **Credit Hours:** 3
- BIOL 5736 - Bioethics **Credit Hours:** 3
- GEOL 5233 - Environmental Geochemistry **Credit Hours:** 3
- GEOL 5730 - Planetary Geology **Credit Hours:** 3
- PHYS 5531 - Mathematical Methods I **Credit Hours:** 3
- CHEM 5130 - Mathematical Methods and Physical Concepts in Chemistry **Credit Hours:** 3

Mathematics:

- MATH 5031 - Problem-Solving Strategies **Credit Hours:** 3
- MATH 5033 - Instructional Applications of Algebra **Credit Hours:** 3
- MATH 5034 - Geometry Seminar **Credit Hours:** 3
- MATH 5035 - Precalculus Courses for Mathematics Teachers of Grades 10-14 **Credit Hours:** 3
- MATH 5036 - Calculus for Mathematics Teachers of Grades 10-14 **Credit Hours:** 3
- MATH 5037 - Technology for Mathematics Curriculum **Credit Hours:** 3
- MATH 5330 - Mathematical Software and Modeling Simulation **Credit Hours:** 3

Technology:

- DMST 5034 - Global Issues in a Digital Society **Credit Hours:** 3
- INST 5035 - Creating Digital Resources **Credit Hours:** 3
- INST 5130 - Learning Theory and Instruction **Credit Hours:** 3
- INST 5135 - Multimedia Design Applications **Credit Hours:** 3
- INST 5333 - Systematic Design of Technology-Based Instruction **Credit Hours:** 3
- INST 5635 - Instructional Web Design and Development **Credit Hours:** 3
- INST 5835 - Digital Video Production for Educators and Trainers **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- INST 6037 - Advanced Technology Applications **Credit Hours:** 3
- INST 6137 - Technology and e-Learning **Credit Hours:** 3
- INST 6437 - Interactive Distance Education **Credit Hours:** 3
- PSYC 6431 - User-Centered Design **Credit Hours:** 3

Dissertation (6 hours):

- EDCI 8939 - Dissertation **Credit Hours:** 3

Additional Information

Students must register for dissertation hours each long semester until completion. Only six hours of dissertation may count in the program. Before being permitted to register for dissertation hours, a doctoral student must have advanced to candidacy.

Those interested in applying should contact COE's Office of Academic Advising in Bayou 1231 (by phone at 281-283-3600 or by e-mail at education@uhcl.edu). The deadline for application is August 15; however, early admission is available. Contact COE's Office of Academic Advising for details.

Master of Science

Curriculum and Instruction, M.S.

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. There are two tracks for this degree. The first track supports educators seeking to enhance their pedagogy as generalists and the second track supports educators seeking to enhance a content specialization area.

Potential candidates who meet the graduate admissions requirements to the College of Education (COE) (see Graduate Admissions Requirements) must meet additional requirements prior to being admitted to the Curriculum and Instruction program. Each applicant must provide:

- Proof of a valid Texas teaching certificate
- Proof of a minimum of one year of successful full-time classroom teaching experience in an accredited school.

Potential candidates with teaching certificates from other states or with non-public school teaching experiences may apply for conditional acceptance to the program by submitting:

- Proof of a valid teaching certificate from another state (if applicable)
- a letter requesting conditional acceptance, providing a thorough explanation of any related teaching experience, including the scope of experience and/or how a Master of Science in Curriculum and Instruction degree supports career goals

Upon review of these documents, faculty may request an interview with the potential candidate to further explore his/her eligibility for conditional acceptance into the program.

University of Houston-Clear Lake (UHCL) students who seek teaching certification dually with a graduate degree may be considered for conditional acceptance to the program through the following:

- 3.200 grade point average (GPA) of UHCL certification coursework
- Completion of methods courses
- Recommendation from two UHCL faculty
- Interview with program faculty.

Check prerequisites before enrolling in any courses.

Requirements

Track A - Curriculum and Instruction M.S.

Professional Education Core (12 hours)

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Curriculum and Instruction Core (9 hours)

- TCED 5030 - Models of Teaching **Credit Hours:** 3
- TCED 5031 - Curriculum Planning **Credit Hours:** 3
- TCED 5330 - Fostering Critical Inquiry: Introduction to Action Research **Credit Hours:** 3

Electives (9 hours)

Courses should be chosen in consultation with faculty adviser.

Master's Degree Options (6 hours)

Select one option

Option 1

- EDUC 6939 - Master's Thesis Research **Credit Hours:** 3

Additional Information

Two semester minimum registration.

Option 2

- EDUC 6839 - Master's Project Research **Credit Hours:** 3

Additional Information

Two semester minimum registration.

Option 3

- TCED 6739 - Curriculum and Instruction Practicum **Credit Hours:** 3
- TCED 5038 - Professional Development for Enhancing Teacher Leadership **Credit Hours:** 3

Additional Information

All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.

Track B - Curriculum and Instruction M.S.-Content Specialist

Professional Education Core (6 hours)

Select 2 after adviser meeting.

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Content Specialization (15 hours)

Fifteen hours from an area of specialization courses chosen in consultation with faculty adviser.

Curriculum and Instruction Core (9 hours)

- TCED 5030 - Models of Teaching **Credit Hours:** 3
- TCED 5031 - Curriculum Planning **Credit Hours:** 3
- TCED 5330 - Fostering Critical Inquiry: Introduction to Action Research **Credit Hours:** 3

Master's Degree Options (6 hours)

Select one option

Option 1

- EDUC 6939 - Master's Thesis Research **Credit Hours:** 3

Additional Information

Two semester minimum registration.

Option 2

- EDUC 6839 - Master's Project Research **Credit Hours:** 3

Additional Information

Two semester minimum registration.

Option 3

Three hours from area of specialization courses chosen in consultation with faculty adviser.

- TCED 6739 - Curriculum and Instruction Practicum **Credit Hours:** 3

Additional Information

All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.

Curriculum and Instruction, Reading Specialist, M.S.

This 36-hour master's degree plan provides expertise in Curriculum and Instruction with a Specialization in Reading and Reading Specialist Certification, with 12 hours of TCED courses, 15 hours of LLLS courses and a LLLS practicum. Upon completion, candidates are eligible to teach reading courses at the college level or serve as a curriculum specialist in local school districts.

Professional Education Core (6 hours)

Select two after advisor meeting

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Curriculum and Instruction Core (12 hours)

- TCED 5030 - Models of Teaching **Credit Hours:** 3
- TCED 5031 - Curriculum Planning **Credit Hours:** 3
- TCED 5038 - Professional Development for Enhancing Teacher Leadership **Credit Hours:** 3
- TCED 5330 - Fostering Critical Inquiry: Introduction to Action Research **Credit Hours:** 3

Content Specialization (15 hours)

- LLLS 6331 - Sociolinguistic Applications to Reading **Credit Hours:** 3
- LLLS 6332 - Foundations of Early and Secondary Literacy **Credit Hours:** 3

- LLLS 6333 - Genre Studies in Children's and Young Adult Literature **Credit Hours:** 3
- LLLS 6639 - Leadership in Clinical Practices in Assessment of Literacy Tasks **Credit Hours:** 3
- LLLS 6732 - Assessment and Remediation of Reading and Language Arts Literacy **Credit Hours:** 3

Master's Degree Option (3 hours)

Option 3

- LLLS 6839 - Practicum in School Literacy Practices **Credit Hours:** 3

Other Required Course (1 hour)

- LLLS 5010 - Professional Preparation Seminar for Reading Specialists **Credit Hours:** 1

Additional Information

Candidates must pass the Reading Specialist State Assessment by their final semester or enroll in and successfully complete this course.

Curriculum and Instruction, Specialization in Instructional Technology, M.S.

This 36-hour degree plan provides expertise in Curriculum and Instruction with a Specialization in Instructional Design and Technology with 18 hours of INST courses, nine hours of TCED courses and a TCED practicum. Upon completion, candidates are eligible to teach technology courses at the college level or serve as a technology specialist in local school districts.

Professional Education Core (6 hours)

With advisor's approval, select two from the courses below

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Curriculum and Instruction Core (9 hours)

- TCED 5030 - Models of Teaching **Credit Hours:** 3
- TCED 5031 - Curriculum Planning **Credit Hours:** 3

With advisor's approval, select one of the two courses listed below

- TCED 5038 - Professional Development for Enhancing Teacher Leadership **Credit Hours:** 3
- TCED 5330 - Fostering Critical Inquiry: Introduction to Action Research **Credit Hours:** 3

Content Specialization (18 hours)

- INST 5130 - Learning Theory and Instruction **Credit Hours:** 3
- INST 5131 - Trends and Issues in Instructional Design and Technology **Credit Hours:** 3
- INST 5233 - Performance Technology **Credit Hours:** 3
- INST 5333 - Systematic Design of Technology-Based Instruction **Credit Hours:** 3
- INST 5433 - Project Management for Instructional Projects **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
  Or
- INST 6037 - Advanced Technology Applications **Credit Hours:** 3

Master's Degree Option (3 hours)

- TCED 6739 - Curriculum and Instruction Practicum **Credit Hours:** 3

Early Childhood Education, M.S.

The graduate plan in Early Childhood Education leads to the Master of Science degree. Students may 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 four tracks from which a candidate can choose. Early Childhood Education: the master's degree only, the master's degree with a focus on young children with disabilities, the master's degree with Early Childhood Leadership Certificate, and the master's degree with PK-3 certification.

Early Childhood Education M.S. Online Option

The online graduate plan in Early Childhood Education leads to the Master of Science degree. Students may 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 two tracks from which a candidate can choose. Early Childhood Education: the master's degree only and the master's degree with the Early Childhood Leadership Certificate.

Check prerequisites before enrolling in any courses.

Degree Requirements

Track A - MS Early Childhood Education (36 Hours)

Professional Education Core (12 hours)

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Early Childhood Education Core (12 hours)

- ECED 5031 - Teaching Young Children **Credit Hours:** 3
- ECED 5131 - Curriculum Development for Young Children **Credit Hours:** 3
- ECED 5132 - Literacy Development in Early Childhood **Credit Hours:** 3
- ECED 5133 - Mathematics and Science Teaching and Learning in Early Childhood **Credit Hours:** 3

Electives (6 Hours)

Select 6 hours from the list below in consultation with Faculty Advisor

- ECED 5231 - Play and the Developing Child **Credit Hours:** 3
- ECED 5331 - Evaluation of Development of Young Children **Credit Hours:** 3
- ECED 5335 - Children, Family, and Society **Credit Hours:** 3
- ECED 5032 - Community Programs for Young Children **Credit Hours:** 3
- ECED 5033 - Guidance and Management for PK-3 **Credit Hours:** 3
- ECED 5038 - Creative Arts in Early Childhood **Credit Hours:** 3
- ECED 5039 - Early Childhood Advocacy: Teachers, Parents, Schools and Community **Credit Hours:** 3

Master's Degree Option (6 Hours)

Option 1: Master's Thesis

(Must register for 2 semesters)

- EDUC 6939 - Master's Thesis Research **Credit Hours:** 3

Option 3: Master's Internship/Practicum

Additional elective course approved by Faculty Advisor

- ECED 6739 - Early Childhood Education Practicum **Credit Hours:** 3

Track B - MS Early Childhood Education: Young Children with Disabilities (36 Hours)

(Must earn a "C" or better in all coursework.)

Professional Education Core (12 hours)

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Early Childhood Education Core (12 Hours)

- ECED 5031 - Teaching Young Children **Credit Hours:** 3
- ECED 5131 - Curriculum Development for Young Children **Credit Hours:** 3
- ECED 5132 - Literacy Development in Early Childhood **Credit Hours:** 3
- ECED 5133 - Mathematics and Science Teaching and Learning in Early Childhood **Credit Hours:** 3

Electives (6 Hours)

- ECED 5332 - Infants and Young Children With Exceptionalities **Credit Hours:** 3
- ECED 5333 - Advanced Studies of Infants and Young Children With Special Needs **Credit Hours:** 3

Master's Degree Option (6 Hours)

Option 3: Master's Internship/Practicum

- ECED 5737 - Practicum: Infants and Young Children With Disabilities **Credit Hours:** 3
- SPED 5931 - Research Topics in Special Education **Credit Hours:** 3

Track D - MS Early Childhood Education: Early Childhood Leadership (36-39 Hours)

(Must earn a "C" or better in all coursework.)

Professional Education Core (12 Hours)

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Early Childhood Education Core (12 Hours)

- ECED 5031 - Teaching Young Children **Credit Hours:** 3
- ECED 5131 - Curriculum Development for Young Children **Credit Hours:** 3
- ECED 5132 - Literacy Development in Early Childhood **Credit Hours:** 3
- ECED 5133 - Mathematics and Science Teaching and Learning in Early Childhood **Credit Hours:** 3

Electives (6 Hours)

- ECED 5336 - Administration and Management of Programs for Young Children I **Credit Hours:** 3
- ECED 5337 - Administration and Management of Programs for Young Children II **Credit Hours:** 3

Master's Degree Option (6 Hours)

Option 1: Master's Thesis

(Must register for 2 semesters)

- EDUC 6939 - Master's Thesis Research **Credit Hours:** 3

Option 3: Master's Internship/Practicum

- ECED 6739 - Early Childhood Education Practicum **Credit Hours:** 3
- MGMT 5032 - Human Behavior in Organizations **Credit Hours:** 3

Additional Information

- MGMT 5032 can only be taken after consultation with Faculty Advisor.
- Three hours of an approved elective (Internship requires prior completion of a minimum of nine hours of the Professional Education Core and a minimum of 15 ECED hours completed from the 21 ECED hours on the plan).
- All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.
- Option 1 can only be taken after consultation with faculty advisor.

Track E - MS Early Childhood Education: PK-3 Certification (37-40 Hours)

(This option is for those with a valid Texas teaching certificate in a category found in the Texas Administrative Code)

(Must earn a "C" or better in all coursework)

Professional Education Core (12 Hours)

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Early Childhood Education Core (12 Hours)

- ECED 5031 - Teaching Young Children **Credit Hours:** 3
- ECED 5131 - Curriculum Development for Young Children **Credit Hours:** 3
- ECED 5132 - Literacy Development in Early Childhood **Credit Hours:** 3
- ECED 5133 - Mathematics and Science Teaching and Learning in Early Childhood **Credit Hours:** 3

PK-3 Courses (7 hours)

- ECED 5033 - Guidance and Management for PK-3 **Credit Hours:** 3
- ECED 5010 - Teacher Seminar **Credit Hours:** 1
- ECED 5331 - Evaluation of Development of Young Children **Credit Hours:** 3

Master's Degree Option (6-9 Hours)

Option 1

(Must register for 2 semesters)

- EDUC 6939 - Master's Thesis Research **Credit Hours:** 3
- ECED 5431 - The Science of Teaching Reading for PK-3 **Credit Hours:** 3

Additional Information

ECED 5431 (if **not** passed STR Exam)

- Can only be taken after consultation with Faculty Advisor

- Consult Faculty Advisor for approved certifications

Option 3

- ECED 6739 - Early Childhood Education Practicum **Credit Hours:** 3
- ECED 5231 - Play and the Developing Child **Credit Hours:** 3
- ECED 5431 - The Science of Teaching Reading for PK-3 **Credit Hours:** 3

Additional Information

ECED 5231 (if passed STR Exam) or ECED 5431 (if **not** passed STR Exam)

Admission Requirements

- Bachelor's degree (or higher) and a 3.000 GPA in the last 60 hours.
    - If GPA in last 60 hours is 3.000 or higher, the Graduate Record Examination (GRE) or Miller Analogies Test (MAT) is **NOT** required.
- If GPA is below 3.000, scores from the GRE/MAT must be submitted.
    - If GPA is below 2.500 - 3.000, minimum required test scores:
        - GRE - 294 combined on the Quantitative & Verbal, 3.5 Analytical Writing;
        - MAT - 390

TEA Certification

Graduate Teacher Certification Plan Core Subjects 4-8

This plan has a content waiver option based on passing the content state assessments on the first attempt. See a College of Education (COE) adviser for details.

Check prerequisites before enrolling in any courses.

Certification Plan Requirements

Required Courses:

- MATH 1351 - Mathematics for Teachers II **Credit Hours:** 3

One of the following:

- LLLS 5531 - Critical Reading and Thinking **Credit Hours:** 3
- LLLS 4351 - Content Area Literacy **Credit Hours:** 3

One of the following:

- SLIS 5533 - Selecting Literature and Materials for Children **Credit Hours:** 3
- LLLS 4345 - Survey of Children's Literature **Credit Hours:** 3

Choose one course from:

- LITR 3302 - Principles of Composition **Credit Hours:** 3
- WRIT 3304 - Advanced Writing for Education **Credit Hours:** 3
- WRIT 3307 - Advanced Writing **Credit Hours:** 3

Choose one course from:

- GEOG 1303 - World Regional Geography **Credit Hours:** 3
- GEOG 4314 - Teaching Geography **Credit Hours:** 3

Choose one course from:

Choose one course from:

Choose one biology, geology, physics, chemistry, or astronomy course.

- LITR 3371 - Creative Writing **Credit Hours:** 3
- LITR 4320 - The Romantic Movement in British Literature **Credit Hours:** 3
- LITR 4336 - Contemporary American Literature **Credit Hours:** 3
- LITR 4340 - American Immigrant Literature **Credit Hours:** 3
- LITR 4356 - Modern American and British Poetry **Credit Hours:** 3
- LITR 4368 - Science Fiction **Credit Hours:** 3

Other Required Courses:

- TCED 4100 - Core Subjects Teacher Seminar **Credit Hours:** 1
- TCED 4304 - Creating Positive Learning Environments in 4-8 **Credit Hours:** 3

One of the following:

- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- SPED 4300 - Survey of Exceptionalities **Credit Hours:** 3

Prerequisite Courses for Admission to Teacher Education Program (TEP):

- EDUC 4310 - Theories of Educational Psychology **Credit Hours:** 3

One of the following:

- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SILC 4315 - Theories of American Pluralism **Credit Hours:** 3

One of the following:

- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3
- INST 3313 - Survey of Instructional Technologies **Credit Hours:** 3

Pedagogy Courses:

- TCED 4331 - Social Studies Methods for Grades 4-8 **Credit Hours:** 3

One of the following options:

Option 1:

- TCED 4378 - Clinical Teaching I **Credit Hours:** 3
- TCED 4978 - Clinical Teaching II **Credit Hours:** 9

Option 2:

- TCED 4678 - Post-Degree Clinical Teaching I **Credit Hours:** 6
- TCED 4679 - Post-Degree Clinical Teaching II **Credit Hours:** 6

Graduate Teacher Certification Plan Core Subjects EC-6

This certification may also be combined with a master's degree in Early Childhood Education. Please refer to master's degree plans.

Check prerequisites before enrolling in any courses.

Certification Plan Requirements

Required Courses:

- ECED 5031 - Teaching Young Children **Credit Hours:** 3
- ECED 5133 - Mathematics and Science Teaching and Learning in Early Childhood **Credit Hours:** 3

One of the following:

- ECED 5132 - Literacy Development in Early Childhood **Credit Hours:** 3
- ECED 4311 - Reading Development in Young Children **Credit Hours:** 3

One of the following:

- ECED 5033 - Guidance and Management for PK-3 **Credit Hours:** 3
- TCED 4303 - Creating Positive Learning Environments in EC-6 **Credit Hours:** 3

One of the following:

- ECED 5331 - Evaluation of Development of Young Children **Credit Hours:** 3
- ECED 4314 - Observational/Developmental Assessment of Young Children **Credit Hours:** 3

One of the following:

- ECED 5131 - Curriculum Development for Young Children **Credit Hours:** 3
- ECED 4302 - Developing Competence in Young Children **Credit Hours:** 3

One of the following:

- ECED 5335 - Children, Family, and Society **Credit Hours:** 3
- ECED 1303 - Children and Families **Credit Hours:** 3

Other required courses:

- TCED 4100 - Core Subjects Teacher Seminar **Credit Hours:** 1
- ARTS 2379 - Arts and the Child **Credit Hours:** 3
- HLTH 3302 - Health and Physical Education EC-6 Survey **Credit Hours:** 3

One of the following:

- LLLS 5131 - Integrating the Language Arts **Credit Hours:** 3
- LLLS 4344 - Literacy Methods for EC-6 **Credit Hours:** 3

One of the following:

- SLIS 5533 - Selecting Literature and Materials for Children **Credit Hours:** 3
- LLLS 4345 - Survey of Children's Literature **Credit Hours:** 3

One of the following:

- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3

- SPED 4300 - Survey of Exceptionalities **Credit Hours:** 3

Prerequisite Courses for Admission to Teacher Education Program (TEP):

Prerequisite Courses:

- EDUC 4310 - Theories of Educational Psychology **Credit Hours:** 3

One of the following:

- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SILC 4315 - Theories of American Pluralism **Credit Hours:** 3

One of the following:

- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3
- INST 3313 - Survey of Instructional Technologies **Credit Hours:** 3

Pedagogy Courses:

One of the following:

- TCED 5231 - Teaching Social Studies in the Elementary School **Credit Hours:** 3

One of the following:

- TCED 5232 - Teaching Science in the EC-6 Classroom **Credit Hours:** 3
- TCED 4322 - Science Methods for EC-6 **Credit Hours:** 3

One of the following:

- TCED 5233 - Teaching Mathematics in the EC-6 Classroom **Credit Hours:** 3
- TCED 4323 - Mathematics Methods for EC-6 **Credit Hours:** 3

One of the following options:

Option 1:

- TCED 4378 - Clinical Teaching I **Credit Hours:** 3
- TCED 4978 - Clinical Teaching II **Credit Hours:** 9

Option 2:

- TCED 4678 - Post-Degree Clinical Teaching I **Credit Hours:** 6
- TCED 4679 - Post-Degree Clinical Teaching II **Credit Hours:** 6

Graduate Teacher Certification Plan Core Subjects EC-6 with Bilingual Education Supplemental Certification

Check prerequisites before enrolling in any courses.

Certification Plan Requirements

Required Courses:

- SILC 4301 - Spanish for Bilingual Teachers **Credit Hours:** 3

One of the following:

- SILC 5032 - Applied Linguistics for Bilingual Education/ESL **Credit Hours:** 3
- SILC 4313 - Language Learning **Credit Hours:** 3

One of the following:

- SILC 5130 - Theory and Research in Bilingual and ESL Education **Credit Hours:** 3
- SILC 4310 - Foundations of Bilingual and ESL Education **Credit Hours:** 3

One of the following:

- SILC 5031 - Curriculum Issues in Educating the Bilingual Student **Credit Hours:** 3
- SILC 4316 - Bilingual Curriculum in the Content Areas **Credit Hours:** 3

One of the following:

- SILC 5531 - Literacy for Spanish-Speaking Students **Credit Hours:** 3
- SILC 4351 - Development of Biliteracy **Credit Hours:** 3

Other required courses:

One of the following:

- TCED 4303 - Creating Positive Learning Environments in EC-6 **Credit Hours:** 3
- TCED 4100 - Core Subjects Teacher Seminar **Credit Hours:** 1
- ARTS 2379 - Arts and the Child **Credit Hours:** 3
- HLTH 3302 - Health and Physical Education EC-6 Survey **Credit Hours:** 3

One of the following:

- LLLS 5131 - Integrating the Language Arts **Credit Hours:** 3
- LLLS 4344 - Literacy Methods for EC-6 **Credit Hours:** 3

One of the following:

- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- SPED 4300 - Survey of Exceptionalities **Credit Hours:** 3

Prerequisite Courses for Admission to Teacher Education Program (TEP):

- EDUC 4310 - Theories of Educational Psychology **Credit Hours:** 3

One of the following:

- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SILC 4315 - Theories of American Pluralism **Credit Hours:** 3

One of the following:

- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3
- INST 3313 - Survey of Instructional Technologies **Credit Hours:** 3

Pedagogy Courses:

One of the following:

- TCED 5231 - Teaching Social Studies in the Elementary School **Credit Hours:** 3
- TCED 4321 - Social Studies Methods for EC-6 **Credit Hours:** 3

One of the following:

- TCED 5232 - Teaching Science in the EC-6 Classroom **Credit Hours:** 3
- TCED 4322 - Science Methods for EC-6 **Credit Hours:** 3

One of the following:

- TCED 5233 - Teaching Mathematics in the EC-6 Classroom **Credit Hours:** 3
- TCED 4323 - Mathematics Methods for EC-6 **Credit Hours:** 3

One of the following options:

Option 1:

- TCED 4378 - Clinical Teaching I **Credit Hours:** 3
- TCED 4978 - Clinical Teaching II **Credit Hours:** 9

Option 2:

- TCED 4678 - Post-Degree Clinical Teaching I **Credit Hours:** 6
- TCED 4679 - Post-Degree Clinical Teaching II **Credit Hours:** 6

Graduate Teacher Certification Plan Core Subjects EC-6 with EC-12 Special Education

Check prerequisites before enrolling in any courses.

Certification Plan Requirements

One of the following:

- SPED 5133 - Practicum in Inclusive Education **Credit Hours:** 3
- SPED 4313 - Individualizing Instruction for Students With Disabilities **Credit Hours:** 3

One of the following:

- SPED 5233 - Providing Positive Behavioral Support **Credit Hours:** 3
- SPED 4321 - Implementing Positive Behavior Supports **Credit Hours:** 3

One of the following:

- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- SPED 4300 - Survey of Exceptionalities **Credit Hours:** 3

One of the following:

- SPED 5332 - Evaluation, Assessment and Program Planning for Young Children with Special Needs **Credit Hours:** 3
- SPED 4332 - Early Childhood Special Education **Credit Hours:** 3

One of the following:

- SPED 5131 - Educational Assessment of Exceptionalities **Credit Hours:** 3
- SPED 4311 - Assessment in Special Education **Credit Hours:** 3

One of the following:

- SPED 5132 - Curricular Approaches to Learning Difficulties **Credit Hours:** 3
- SPED 4312 - Diagnostic Instruction for Learners With Special Needs **Credit Hours:** 3

Other required courses:

One of the following:

- TCED 4303 - Creating Positive Learning Environments in EC-6 **Credit Hours:** 3
- TCED 4100 - Core Subjects Teacher Seminar **Credit Hours:** 1
- ARTS 2379 - Arts and the Child **Credit Hours:** 3
- HLTH 3302 - Health and Physical Education EC-6 Survey **Credit Hours:** 3

One of the following:

- SLIS 5533 - Selecting Literature and Materials for Children **Credit Hours:** 3
- LLLS 4345 - Survey of Children's Literature **Credit Hours:** 3

One of the following:

- LLLS 5131 - Integrating the Language Arts **Credit Hours:** 3
- LLLS 4344 - Literacy Methods for EC-6 **Credit Hours:** 3

Prerequisite Courses for Admission to Teacher Education Program (TEP):

- EDUC 4310 - Theories of Educational Psychology **Credit Hours:** 3

One of the following:

- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SILC 4315 - Theories of American Pluralism **Credit Hours:** 3

One of the following:

- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3
- INST 3313 - Survey of Instructional Technologies **Credit Hours:** 3

Pedagogy Courses:

One of the following:

- TCED 5231 - Teaching Social Studies in the Elementary School **Credit Hours:** 3
- TCED 4321 - Social Studies Methods for EC-6 **Credit Hours:** 3

One of the following:

- TCED 5232 - Teaching Science in the EC-6 Classroom **Credit Hours:** 3
- TCED 4322 - Science Methods for EC-6 **Credit Hours:** 3

One of the following:

- TCED 5233 - Teaching Mathematics in the EC-6 Classroom **Credit Hours:** 3
- TCED 4323 - Mathematics Methods for EC-6 **Credit Hours:** 3

One of the following options:

Option 1:

- TCED 4378 - Clinical Teaching I **Credit Hours:** 3
- TCED 4978 - Clinical Teaching II **Credit Hours:** 9

Option 2:

- TCED 4678 - Post-Degree Clinical Teaching I **Credit Hours:** 6
- TCED 4679 - Post-Degree Clinical Teaching II **Credit Hours:** 6

Graduate Teacher Certification Plan Core Subjects EC-6 with ESL Supplemental Certification

Check prerequisites before enrolling in any courses.

Certification Plan Requirements

One of the following:

- SILC 5032 - Applied Linguistics for Bilingual Education/ESL **Credit Hours:** 3
- SILC 4313 - Language Learning **Credit Hours:** 3

One of the following:

- SILC 5033 - Cross-Curricular Literacy for Second-Language Learners **Credit Hours:** 3
- SILC 4312 - Content-Based ESL **Credit Hours:** 3

One of the following:

- SILC 5130 - Theory and Research in Bilingual and ESL Education **Credit Hours:** 3
- SILC 4310 - Foundations of Bilingual and ESL Education **Credit Hours:** 3

One of the following:

- SILC 5134 - Second Language Teaching **Credit Hours:** 3
- SILC 4311 - ESL Methods **Credit Hours:** 3

One of the following:

- SILC 6032 - Models of Language **Credit Hours:** 3
- SILC 4302 - Introduction to the Study of Languages **Credit Hours:** 3

Other required courses:

One of the following:

- TCED 4303 - Creating Positive Learning Environments in EC-6 **Credit Hours:** 3
- TCED 4100 - Core Subjects Teacher Seminar **Credit Hours:** 1
- ARTS 2379 - Arts and the Child **Credit Hours:** 3
- HLTH 3302 - Health and Physical Education EC-6 Survey **Credit Hours:** 3

One of the following:

- LLLS 5131 - Integrating the Language Arts **Credit Hours:** 3
- LLLS 4344 - Literacy Methods for EC-6 **Credit Hours:** 3

One of the following:

- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- SPED 4300 - Survey of Exceptionalities **Credit Hours:** 3

Prerequisite Courses for Admission to Teacher Education Program (TEP):

- EDUC 4310 - Theories of Educational Psychology **Credit Hours:** 3

One of the following:

- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

- SILC 4315 - Theories of American Pluralism **Credit Hours:** 3

One of the following:

- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3
- INST 3313 - Survey of Instructional Technologies **Credit Hours:** 3

Pedagogy Courses:

One of the following:

- TCED 5231 - Teaching Social Studies in the Elementary School **Credit Hours:** 3
- TCED 4321 - Social Studies Methods for EC-6 **Credit Hours:** 3

One of the following:

- TCED 5232 - Teaching Science in the EC-6 Classroom **Credit Hours:** 3
- TCED 4322 - Science Methods for EC-6 **Credit Hours:** 3

One of the following:

- TCED 5233 - Teaching Mathematics in the EC-6 Classroom **Credit Hours:** 3
- TCED 4323 - Mathematics Methods for EC-6 **Credit Hours:** 3

One of the following options:

Option 1:

- TCED 4378 - Clinical Teaching I **Credit Hours:** 3
- TCED 4978 - Clinical Teaching II **Credit Hours:** 9

Option 2:

- TCED 4678 - Post-Degree Clinical Teaching I **Credit Hours:** 6
- TCED 4679 - Post-Degree Clinical Teaching II **Credit Hours:** 6

Graduate Teacher Certification Plan English Language Arts and Reading 4-8

Check prerequisites before enrolling in any courses.

This plan has a content waiver option based on passing the content state assessment on the first attempt. See a College of Education (COE) adviser for details.

Certification Plan Requirements

Required Courses:

- LITR 3361 - Shakespeare **Credit Hours:** 3
- LITR 3302 - Principles of Composition **Credit Hours:** 3
- LLLS 4346 - Literacy Methods for 4-8 **Credit Hours:** 3

One of the following:

- LLLS 5135 - Developmental Reading Programs for Secondary Schools **Credit Hours:** 3
- LLLS 4311 - Foundational Literacy Skills **Credit Hours:** 3

One of the following:

- LLLS 5531 - Critical Reading and Thinking **Credit Hours:** 3
- LLLS 4351 - Content Area Literacy **Credit Hours:** 3

One of the following:

- SLIS 5533 - Selecting Literature and Materials for Children **Credit Hours:** 3
- LLLS 4345 - Survey of Children's Literature **Credit Hours:** 3

Choose two courses from:

- LITR 3371 - Creative Writing **Credit Hours:** 3
- LITR 4320 - The Romantic Movement in British Literature **Credit Hours:** 3
- LITR 4336 - Contemporary American Literature **Credit Hours:** 3
- LITR 4340 - American Immigrant Literature **Credit Hours:** 3
- LITR 4356 - Modern American and British Poetry **Credit Hours:** 3
- LITR 4368 - Science Fiction **Credit Hours:** 3

Other Required Courses:

- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1
- TCED 4304 - Creating Positive Learning Environments in 4-8 **Credit Hours:** 3

One of the following:

- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- SPED 4300 - Survey of Exceptionalities **Credit Hours:** 3

Prerequisite Courses for Admission to Teacher Education Program (TEP):

- EDUC 4310 - Theories of Educational Psychology **Credit Hours:** 3

One of the following:

- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SILC 4315 - Theories of American Pluralism **Credit Hours:** 3

One of the following:

- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3
- INST 3313 - Survey of Instructional Technologies **Credit Hours:** 3

Pedagogy Courses

One of the following options:

Option 1:

- TCED 4378 - Clinical Teaching I **Credit Hours:** 3
- TCED 4978 - Clinical Teaching II **Credit Hours:** 9

Option 2:

- TCED 4678 - Post-Degree Clinical Teaching I **Credit Hours:** 6
- TCED 4679 - Post-Degree Clinical Teaching II **Credit Hours:** 6

Graduate Teacher Certification Plan English Language Arts and Reading 7-12

Check prerequisites before enrolling in any courses.

This plan has a content waiver option based on passing the content state assessment on the first attempt. See a College of Education (COE) adviser for details.

Certification Plan Requirements

Required Courses:

- LITR 3302 - Principles of Composition **Credit Hours:** 3
- LITR 3361 - Shakespeare **Credit Hours:** 3

One of the following:

- LLLS 5531 - Critical Reading and Thinking **Credit Hours:** 3
- LLLS 4351 - Content Area Literacy **Credit Hours:** 3

One of the following:

- LLLS 5135 - Developmental Reading Programs for Secondary Schools **Credit Hours:** 3
- LLLS 4311 - Foundational Literacy Skills **Credit Hours:** 3

One of the following:

- SLIS 5532 - Selecting Literature and Materials for Young Adults **Credit Hours:** 3
- LLLS 4352 - Middle Grade, Young Adult Literature, and Reading **Credit Hours:** 3

Choose two courses from:

- LITR 3334 - Mythology **Credit Hours:** 3
- LITR 3371 - Creative Writing **Credit Hours:** 3
- LITR 4301 - Literary Theory **Credit Hours:** 3
- LITR 4304 - Workshop in Poetics **Credit Hours:** 3
- LITR 4324 - Rise and Development of the British Novel **Credit Hours:** 3
- LITR 4342 - Studies in Drama **Credit Hours:** 3
- LITR 4344 - Studies in the Novel **Credit Hours:** 3
- LITR 4356 - Modern American and British Poetry **Credit Hours:** 3
- LITR 4358 - Contemporary Poetry **Credit Hours:** 3
- LITR 4360 - Film as Literature **Credit Hours:** 3
- LITR 4362 - The Literature of Adolescence **Credit Hours:** 3
- LITR 4364 - Literature and Gender **Credit Hours:** 3
- LITR 4368 - Science Fiction **Credit Hours:** 3
- LITR 4370 - Tragedy **Credit Hours:** 3
- LITR 4371 - Comedy **Credit Hours:** 3

Other Required Courses

- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1
- TCED 4306 - Creating Positive Learning Environments in 7-12 **Credit Hours:** 3

One of the following

- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- SPED 4300 - Survey of Exceptionalities **Credit Hours:** 3

Prerequisite Courses for Admission to Teacher Education Program (TEP)

- EDUC 4310 - Theories of Educational Psychology **Credit Hours:** 3

One of the following:

- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SILC 4315 - Theories of American Pluralism **Credit Hours:** 3

One of the following:

- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3
- INST 3313 - Survey of Instructional Technologies **Credit Hours:** 3

Pedagogy Courses

One of the following:

- LLLS 5634 - Teaching Methods for English/ Reading Language Arts Grades 7-12 **Credit Hours:** 3
- LLLS 4364 - Methods in Secondary English/ Language Arts **Credit Hours:** 3

One of the following options:

Option 1:

- TCED 4378 - Clinical Teaching I **Credit Hours:** 3
- TCED 4978 - Clinical Teaching II **Credit Hours:** 9

Option 2:

- TCED 4678 - Post-Degree Clinical Teaching I **Credit Hours:** 6
- TCED 4679 - Post-Degree Clinical Teaching II **Credit Hours:** 6

Graduate Teacher Certification Plan English Language Arts, Reading and Social Studies 4-8

Check prerequisites before enrolling in any courses.

This plan has a content waiver option based on passing the content state assessment on the first attempt. See a College of Education (COE) adviser for details.

Certification Plan Requirements

Required Courses:

- GEOG 1303 - World Regional Geography **Credit Hours:** 3
- GEOG 4314 - Teaching Geography **Credit Hours:** 3
- LITR 3302 - Principles of Composition **Credit Hours:** 3
- LITR 3361 - Shakespeare **Credit Hours:** 3
- LLLS 4346 - Literacy Methods for 4-8 **Credit Hours:** 3

One of the following:

- LLLS 5135 - Developmental Reading Programs for Secondary Schools **Credit Hours:** 3
- LLLS 4311 - Foundational Literacy Skills **Credit Hours:** 3

One of the following:

- LLLS 5531 - Critical Reading and Thinking **Credit Hours:** 3
- LLLS 4351 - Content Area Literacy **Credit Hours:** 3

Choose two courses from:

- LITR 3371 - Creative Writing **Credit Hours:** 3
- LITR 4320 - The Romantic Movement in British Literature **Credit Hours:** 3
- LITR 4336 - Contemporary American Literature **Credit Hours:** 3
- LITR 4340 - American Immigrant Literature **Credit Hours:** 3
- LITR 4356 - Modern American and British Poetry **Credit Hours:** 3
- LITR 4368 - Science Fiction **Credit Hours:** 3

Choose one course from:

Other Required Courses:

- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1
- TCED 4304 - Creating Positive Learning Environments in 4-8 **Credit Hours:** 3

One of the following:

- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- SPED 4300 - Survey of Exceptionalities **Credit Hours:** 3

Prerequisite Courses for Admission to Teacher Education Program (TEP):

- EDUC 4310 - Theories of Educational Psychology **Credit Hours:** 3

One of the following:

- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SILC 4315 - Theories of American Pluralism **Credit Hours:** 3

One of the following:

- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3
- INST 3313 - Survey of Instructional Technologies **Credit Hours:** 3

Pedagogy Courses:

- TCED 4331 - Social Studies Methods for Grades 4-8 **Credit Hours:** 3

One of the following options:

Option 1:

- TCED 4378 - Clinical Teaching I **Credit Hours:** 3
- TCED 4978 - Clinical Teaching II **Credit Hours:** 9

Option 2:

- TCED 4678 - Post-Degree Clinical Teaching I **Credit Hours:** 6
- TCED 4679 - Post-Degree Clinical Teaching II **Credit Hours:** 6

Graduate Teacher Certification Plan History 7-12

This plan has a content waiver option based on passing the content state assessment on the first attempt. See a College of Education (COE) adviser for details.

Check prerequisites before enrolling in any courses.

Certification Plan Requirements

Required Courses

Choose two courses from History electives Please see COE academic adviser.

- GEOG 1303 - World Regional Geography **Credit Hours:** 3
- HIST 4325 - Studies in Middle Eastern History **Credit Hours:** 3

Other required courses

- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1
- TCED 4306 - Creating Positive Learning Environments in 7-12 **Credit Hours:** 3

One of the following

- LLLS 5135 - Developmental Reading Programs for Secondary Schools **Credit Hours:** 3

One of the following

Prerequisite Courses for Admission to Teacher Education Program (TEP):

- EDUC 4310 - Theories of Educational Psychology **Credit Hours:** 3

One of the following:

- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SILC 4315 - Theories of American Pluralism **Credit Hours:** 3

One of the following:

- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3
- INST 3313 - Survey of Instructional Technologies **Credit Hours:** 3

Pedagogy Courses

One of the following:

- TCED 5234 - Social Studies Methods for the Secondary Grades **Credit Hours:** 3
- TCED 4361 - Methods in Secondary Social Studies **Credit Hours:** 3

One of the following options:

Option 1:

- TCED 4378 - Clinical Teaching I **Credit Hours:** 3
- TCED 4978 - Clinical Teaching II **Credit Hours:** 9

Option 2:

- TCED 4678 - Post-Degree Clinical Teaching I **Credit Hours:** 6
- TCED 4679 - Post-Degree Clinical Teaching II **Credit Hours:** 6

Graduate Teacher Certification Plan Life Sciences 7-12

This plan has a content waiver option based on passing the content state assessment on the first attempt. See a College of Education (COE) adviser for details.

Check prerequisites before enrolling in any courses.

Certification Plan Requirements

Required Courses:

- BIOL 1106 - Laboratory for Biology for Science Majors I **Credit Hours:** 1
- BIOL 1107 - Laboratory for Biology for Science Majors II **Credit Hours:** 1
- BIOL 1306 - Biology for Science Majors I **Credit Hours:** 3
- BIOL 1307 - Biology for Science Majors II **Credit Hours:** 3
- BIOL 3341 - Molecular Genetics **Credit Hours:** 3
- CHEM 1111 - Laboratory for General Chemistry I **Credit Hours:** 1
- CHEM 1112 - Laboratory for General Chemistry II **Credit Hours:** 1
- CHEM 1311 - General Chemistry I **Credit Hours:** 3
- CHEM 1312 - General Chemistry II **Credit Hours:** 3

Choose one course from:

- BIOL 4343 - Plant Physiology **Credit Hours:** 3
- BIOL 4344 - Comparative Animal Physiology **Credit Hours:** 3
- BIOL 4345 - Human Physiology **Credit Hours:** 3

Choose one course from:

- BIOL 3311 - Marine Biology **Credit Hours:** 3
- BIOL 3333 - Environmental Biology **Credit Hours:** 3
- BIOL 4305 - Ecology of the Amazon **Credit Hours:** 3

Other required courses:

- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1
- TCED 4306 - Creating Positive Learning Environments in 7-12 **Credit Hours:** 3

One of the following:

- LLLS 5135 - Developmental Reading Programs for Secondary Schools **Credit Hours:** 3
- LLLS 4311 - Foundational Literacy Skills **Credit Hours:** 3

One of the following:

- LLLS 5531 - Critical Reading and Thinking **Credit Hours:** 3
- LLLS 4351 - Content Area Literacy **Credit Hours:** 3

One of the following:

- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- SPED 4300 - Survey of Exceptionalities **Credit Hours:** 3

Prerequisite Courses for Admission to Teacher Education Program (TEP):

- EDUC 4310 - Theories of Educational Psychology **Credit Hours:** 3

One of the following:

- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SILC 4315 - Theories of American Pluralism **Credit Hours:** 3

One of the following:

- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3
- INST 3313 - Survey of Instructional Technologies **Credit Hours:** 3

Pedagogy Courses

One of the following:

- TCED 5235 - Science Methods for the Secondary Grades **Credit Hours:** 3

- TCED 4362 - Methods in Secondary Science **Credit Hours:** 3

One of the following options:

Option 1:

- TCED 4378 - Clinical Teaching I **Credit Hours:** 3
- TCED 4978 - Clinical Teaching II **Credit Hours:** 9

Option 2:

- TCED 4678 - Post-Degree Clinical Teaching I **Credit Hours:** 6
- TCED 4679 - Post-Degree Clinical Teaching II **Credit Hours:** 6

Graduate Teacher Certification Plan Mathematics 4-8

This plan has a content waiver option based on passing the content state assessment on the first attempt. See a College of Education (COE) adviser for details.

Check prerequisites before enrolling in any courses.

Certification Plan Requirements

Required Courses:

- MATH 2318 - Linear Algebra **Credit Hours:** 3
- MATH 2413 - Calculus I **Credit Hours:** 4
- MATH 2414 - Calculus II **Credit Hours:** 4
- MATH 3304 - Algebra Through Technology **Credit Hours:** 3
- STAT 4344 - Introduction to Probability **Credit Hours:** 3

Choose four courses from:

- MATH 4315 - Numerical Analysis and its Applications **Credit Hours:** 3
- MATH 4316 - Mathematic Software Applications **Credit Hours:** 3
- MATH 4321 - Predicate Logic **Credit Hours:** 3
- MATH 4322 - Introduction to Abstract Algebra **Credit Hours:** 3
- MATH 4325 - Theory of Models and Applications **Credit Hours:** 3
- MATH 4345 - Introduction to Statistics **Credit Hours:** 3

Additional Required Courses:

- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1

- TCED 4304 - Creating Positive Learning Environments in 4-8 **Credit Hours:** 3

One of the following:

- LLLS 5531 - Critical Reading and Thinking **Credit Hours:** 3
- LLLS 4351 - Content Area Literacy **Credit Hours:** 3

One of the following:

- SLIS 5533 - Selecting Literature and Materials for Children **Credit Hours:** 3
- LLLS 4345 - Survey of Children's Literature **Credit Hours:** 3

One of the following:

- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- SPED 4300 - Survey of Exceptionalities **Credit Hours:** 3

Prerequisite Courses for Admission to Teacher Education Program (TEP)

- EDUC 4310 - Theories of Educational Psychology **Credit Hours:** 3

One of the following:

- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SILC 4315 - Theories of American Pluralism **Credit Hours:** 3

One of the following:

- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3
- INST 3313 - Survey of Instructional Technologies **Credit Hours:** 3

Pedagogy Courses

One of the following:

- TCED 5333 - Teaching Mathematics in the 4-8 Classroom **Credit Hours:** 3
- TCED 4333 - Mathematics Methods for Grades 4-8 **Credit Hours:** 3

One of the following options:

Option 1:

- TCED 4378 - Clinical Teaching I **Credit Hours:** 3
- TCED 4978 - Clinical Teaching II **Credit Hours:** 9

Option 2:

- TCED 4678 - Post-Degree Clinical Teaching I **Credit Hours:** 6
- TCED 4679 - Post-Degree Clinical Teaching II **Credit Hours:** 6

Graduate Teacher Certification Plan Mathematics 7-12

This plan has a content waiver option based on passing the content state assessment on the first attempt. See a College of Education (COE) adviser for details.

Check prerequisites before enrolling in any courses.

Certification Requirements

Required Courses:

- MATH 2318 - Linear Algebra **Credit Hours:** 3
- MATH 2413 - Calculus I **Credit Hours:** 4
- MATH 2414 - Calculus II **Credit Hours:** 4
- MATH 3304 - Algebra Through Technology **Credit Hours:** 3
- MATH 3305 - Euclidian/Non-Euclidian Geometry **Credit Hours:** 3
- STAT 4344 - Introduction to Probability **Credit Hours:** 3

Choose five courses from:

- MATH 2315 - Calculus III **Credit Hours:** 3
- MATH 2320 - Differential Equations **Credit Hours:** 3
- MATH 3300 - Introduction to Modern Algebra and Number Theory **Credit Hours:** 3
- MATH 3301 - History of Mathematical Sciences **Credit Hours:** 3
- MATH 4315 - Numerical Analysis and its Applications **Credit Hours:** 3
- MATH 4316 - Mathematic Software Applications **Credit Hours:** 3
- MATH 4321 - Predicate Logic **Credit Hours:** 3
- MATH 4322 - Introduction to Abstract Algebra **Credit Hours:** 3
- MATH 4325 - Theory of Models and Applications **Credit Hours:** 3
- STAT 4345 - Introduction to Statistics **Credit Hours:** 3

Other required courses:

Three hours of scientific programming language (C++, C, Java, Visual BASIC, BASIC, Fortran or Pascal)

- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1
- TCED 4306 - Creating Positive Learning Environments in 7-12 **Credit Hours:** 3

One of the following:

- LLLS 5135 - Developmental Reading Programs for Secondary Schools **Credit Hours:** 3
- LLLS 4312 - Literacy Issues of Secondary Students **Credit Hours:** 3

One of the following:

- LLLS 5531 - Critical Reading and Thinking **Credit Hours:** 3
- LLLS 4351 - Content Area Literacy **Credit Hours:** 3

One of the following:

- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- SPED 4300 - Survey of Exceptionalities **Credit Hours:** 3

Prerequisite Courses for Admission to Teacher Education Program (TEP)

- EDUC 4310 - Theories of Educational Psychology **Credit Hours:** 3

One of the following:

- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SILC 4315 - Theories of American Pluralism **Credit Hours:** 3

One of the following:

- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3
- INST 3313 - Survey of Instructional Technologies **Credit Hours:** 3

Pedagogy Courses

One of the following:

- TCED 5236 - Mathematics Methods for the Secondary Grades **Credit Hours:** 3
- TCED 4363 - Methods in Secondary Mathematics **Credit Hours:** 3

One of the following options:

Option 1:

- TCED 4378 - Clinical Teaching I **Credit Hours:** 3
- TCED 4978 - Clinical Teaching II **Credit Hours:** 9

Option 2:

- TCED 4678 - Post-Degree Clinical Teaching I **Credit Hours:** 6
- TCED 4679 - Post-Degree Clinical Teaching II **Credit Hours:** 6

Graduate Teacher Certification Plan Science 4-8

Check prerequisites before enrolling in any courses.

This plan has a content waiver option based on passing the content state assessment on the first attempt. See a College of Education (COE) adviser for details.

Certification Plan Requirements

Required Courses:

- BIOL 1106 - Laboratory for Biology for Science Majors I **Credit Hours:** 1
- BIOL 1107 - Laboratory for Biology for Science Majors II **Credit Hours:** 1
- BIOL 1306 - Biology for Science Majors I **Credit Hours:** 3
- BIOL 1307 - Biology for Science Majors II **Credit Hours:** 3
- CHEM 1111 - Laboratory for General Chemistry I **Credit Hours:** 1
- CHEM 1311 - General Chemistry I **Credit Hours:** 3
- ENSC 1101 - Laboratory for Environmental Science **Credit Hours:** 1
- ENSC 1301 - Environmental Science I **Credit Hours:** 3
- GEOL 1103 - Laboratory for Physical Geology **Credit Hours:** 1
- GEOL 1303 - Physical Geology **Credit Hours:** 3
- PHYS 1101 - Laboratory for College Physics I **Credit Hours:** 1
- PHYS 1301 - College Physics I **Credit Hours:** 3

Other Required Courses:

- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1
- TCED 4304 - Creating Positive Learning Environments in 4-8 **Credit Hours:** 3

One of the following:

- LLLS 5531 - Critical Reading and Thinking **Credit Hours:** 3
- LLLS 4351 - Content Area Literacy **Credit Hours:** 3

One of the following:

- SLIS 5533 - Selecting Literature and Materials for Children **Credit Hours:** 3
- LLLS 4345 - Survey of Children's Literature **Credit Hours:** 3

One of the following:

- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- SPED 4300 - Survey of Exceptionalities **Credit Hours:** 3

Prerequisite Courses for Admission to Teacher Education Program (TEP):

- EDUC 4310 - Theories of Educational Psychology **Credit Hours:** 3

One of the following:

- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SILC 4315 - Theories of American Pluralism **Credit Hours:** 3

One of the following:

- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3
- INST 3313 - Survey of Instructional Technologies **Credit Hours:** 3

Pedagogy Courses

One of the following:

- TCED 5332 - Teaching Science in the 4-8 Classroom **Credit Hours:** 3
- TCED 4332 - Science Methods for Grades 4-8 **Credit Hours:** 3

One of the following options:

Option 1:

- TCED 4378 - Clinical Teaching I **Credit Hours:** 3
- TCED 4978 - Clinical Teaching II **Credit Hours:** 9

Option 2:

- TCED 4678 - Post-Degree Clinical Teaching I **Credit Hours:** 6
- TCED 4679 - Post-Degree Clinical Teaching II **Credit Hours:** 6

Graduate Teacher Certification Plan Social Studies 4-8

This plan has a content waiver option based on passing the content state assessment on the first attempt. See a College of Education (COE) adviser for details.

Check prerequisites before enrolling in any courses.

Certification Plan Requirements

Required Courses:

- GEOG 1303 - World Regional Geography **Credit Hours:** 3
- GEOG 4314 - Teaching Geography **Credit Hours:** 3

Choose one course from:

- GEOG 1301 - Modern Physical Geography **Credit Hours:** 3
- GEOG 1302 - Global Geography **Credit Hours:** 3

Choose one course from:

Other required courses:

- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1
- TCED 4304 - Creating Positive Learning Environments in 4-8 **Credit Hours:** 3

One of the following:

- LLLS 5531 - Critical Reading and Thinking **Credit Hours:** 3
- LLLS 4351 - Content Area Literacy **Credit Hours:** 3

One of the following:

- SLIS 5533 - Selecting Literature and Materials for Children **Credit Hours:** 3
- LLLS 4345 - Survey of Children's Literature **Credit Hours:** 3

One of the following:

- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- SPED 4300 - Survey of Exceptionalities **Credit Hours:** 3

Prerequisite Courses for Admission to Teacher Education Program (TEP)

- EDUC 4310 - Theories of Educational Psychology **Credit Hours:** 3

One of the following:

- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SILC 4315 - Theories of American Pluralism **Credit Hours:** 3

One of the following:

- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3
- INST 3313 - Survey of Instructional Technologies **Credit Hours:** 3

Pedagogy Courses

Pedagogy course:

- TCED 4331 - Social Studies Methods for Grades 4-8 **Credit Hours:** 3

One of the following options:

Option 1:

- TCED 4378 - Clinical Teaching I **Credit Hours:** 3
- TCED 4978 - Clinical Teaching II **Credit Hours:** 9

Option 2:

- TCED 4678 - Post-Degree Clinical Teaching I **Credit Hours:** 6
- TCED 4679 - Post-Degree Clinical Teaching II **Credit Hours:** 6

Graduate Teacher Certification Plan Social Studies 7-12

This plan has a content waiver option based on passing the content state assessment on the first attempt. See a College of Education (COE) adviser for details.

Check prerequisites before enrolling in any courses.

Certification Requirements

Required Courses

- GEOG 1301 - Modern Physical Geography **Credit Hours:** 3
- GEOG 1303 - World Regional Geography **Credit Hours:** 3
- GEOG 4314 - Teaching Geography **Credit Hours:** 3

Other required courses

- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1
- TCED 4306 - Creating Positive Learning Environments in 7-12 **Credit Hours:** 3

One of the following:

- LLLS 5135 - Developmental Reading Programs for Secondary Schools **Credit Hours:** 3
- LLLS 4311 - Foundational Literacy Skills **Credit Hours:** 3

One of the following:

- LLLS 5531 - Critical Reading and Thinking **Credit Hours:** 3
- LLLS 4351 - Content Area Literacy **Credit Hours:** 3

One of the following:

- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- SPED 4300 - Survey of Exceptionalities **Credit Hours:** 3

Prerequisite Courses for Admission to Teacher Education Program (TEP)

- EDUC 4310 - Theories of Educational Psychology **Credit Hours:** 3

One of the following:

- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SILC 4315 - Theories of American Pluralism **Credit Hours:** 3

One of the following:

- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3
- INST 3313 - Survey of Instructional Technologies **Credit Hours:** 3

Pedagogy Courses

One of the following:

- TCED 5234 - Social Studies Methods for the Secondary Grades **Credit Hours:** 3
- TCED 4361 - Methods in Secondary Social Studies **Credit Hours:** 3

One of the following options:

Option 1:

- TCED 4378 - Clinical Teaching I **Credit Hours:** 3
- TCED 4978 - Clinical Teaching II **Credit Hours:** 9

Option 2:

- TCED 4678 - Post-Degree Clinical Teaching I **Credit Hours:** 6
- TCED 4679 - Post-Degree Clinical Teaching II **Credit Hours:** 6

Master of Arts in Teaching

Teaching with Core Subjects 4-8 Certification, M.A.T.

The graduate plan in Teaching leads to the Master of Arts in Teaching (MAT) degree. Students completing this degree plan are eligible for Core Subjects 4-8 teacher certification. This degree consists of a minimum of 36-37 semester hours.

Students who meet the graduate admissions requirements to the College of Education (see Graduate Admissions Requirements) must meet additional requirements prior to being admitted to the MAT program. Each applicant must:

- Have a GPA of 2.750 over the last 60 hours
- Provide proof of achieving a passing score on the Core Subjects 4-8 assessment.

Degree Requirements

Required MAT Courses (31 hours)

- LLLS 5633 - Teaching Methods for English/ Reading Language Arts for Grades 4-8 **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- TCED 4100 - Core Subjects Teacher Seminar **Credit Hours:** 1
- TCED 5134 - Introduction to Models of Teaching **Credit Hours:** 3

- TCED 5332 - Teaching Science in the 4-8 Classroom **Credit Hours:** 3
- TCED 5333 - Teaching Mathematics in the 4-8 Classroom **Credit Hours:** 3
- TCED 5334 - Teaching Social Studies in the 4-8 Classroom **Credit Hours:** 3
- TCED 5431 - Nature of the Middle Level Learner **Credit Hours:** 3
- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3

Capstone Experience (6 hours)

- TCED 6769 - Graduate Clinical Teaching **Credit Hours:** 6

Teaching with Core Subjects EC-6 Certification, M.A.T.

The graduate plan in Teaching leads to the Master of Arts in Teaching (MAT) degree. Students completing this degree plan are eligible for Core Subjects EC-6 teacher certification. This degree consists of a minimum of 36-37 semester hours.

Students who meet the graduate admissions requirements to the College of Education (COE) (see Graduate Admissions Requirements) must meet additional requirements prior to being admitted to the MAT program. Each applicant must:

- Have a GPA of 2.750 over the last 60 hours
- Provide proof of achieving a passing score on the Core Subjects EC-6 state assessment.

Degree Requirements

Required MAT Courses (31 hours)

- ECED 5031 - Teaching Young Children **Credit Hours:** 3
- LLLS 5131 - Integrating the Language Arts **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- TCED 4100 - Core Subjects Teacher Seminar **Credit Hours:** 1
- TCED 5033 - Management Strategies for Creating a Positive Learning Environment in EC-6 **Credit Hours:** 3
- TCED 5134 - Introduction to Models of Teaching **Credit Hours:** 3
- TCED 5231 - Teaching Social Studies in the Elementary School **Credit Hours:** 3
- TCED 5232 - Teaching Science in the EC-6 Classroom **Credit Hours:** 3
- TCED 5233 - Teaching Mathematics in the EC-6 Classroom **Credit Hours:** 3
- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3

Capstone Experience (6 hours)

- TCED 6769 - Graduate Clinical Teaching **Credit Hours:** 6

Teaching with Early Childhood PreK-3 Certification, M.A.T

The MAT allows those holding a bachelor's degree to pursue Early Childhood: PreKindergarten - Grade 3 teacher certification and a master's degree in just 37 semester credit hours. After completing the required coursework, aspiring teachers will have a firm grasp of early childhood pedagogy and content as well as effective classroom management, general instruction, and approaches to cultural differences and exceptionalities among students in today's classrooms. Graduates will be prepared to enter the education field as leaders who can play an instrumental role in students' lives.

Master of Arts in Teaching with Early Childhood: PreKindergarten - Grade 3 Certification (37 hours)

(Must earn a "C" or better in all coursework.)

Required MAT Courses (31 Hours)

- ECED 5431 - The Science of Teaching Reading for PK-3 **Credit Hours:** 3
- ECED 5432 - Social Studies Methods for PK-3 **Credit Hours:** 3
- ECED 5433 - Science Methods for PK-3 **Credit Hours:** 3
- ECED 5434 - Mathematics Methods for PK-3 **Credit Hours:** 3
- ECED 5132 - Literacy Development in Early Childhood **Credit Hours:** 3
- ECED 5133 - Mathematics and Science Teaching and Learning in Early Childhood **Credit Hours:** 3
- ECED 5031 - Teaching Young Children **Credit Hours:** 3
- ECED 5033 - Guidance and Management for PK-3 **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3

State Assessment Preparation (1 Hour)

- ECED 5010 - Teacher Seminar **Credit Hours:** 1

Capstone Experience (6 Hours)

- TCED 6769 - Graduate Clinical Teaching **Credit Hours:** 6

Teaching with Life Science 7-12 Certification, M.A.T.

The graduate plan in Teaching leads to the Master of Arts in Teaching (MAT) degree. Students completing this degree plan are eligible for Life Science 7-12 teacher certification. This degree consists of a minimum of 36-37 hours.

Students who meet the graduate admissions requirements to the College of Education (COE) (see Graduate Admissions Requirements) must meet additional requirements prior to being admitted to the MAT program. Each applicant must:

- Have a GPA of 2.750 over the last 60 hours
- Provide proof of achieving a passing score on the Life Science 7-12 state assessment.

Check prerequisites before enrolling in any course.

Degree Requirements

Required MAT Courses (25 hours)

- LLLS 5131 - Integrating the Language Arts **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1
- TCED 5134 - Introduction to Models of Teaching **Credit Hours:** 3
- TCED 5235 - Science Methods for the Secondary Grades **Credit Hours:** 3
- TCED 5530 - Adolescent Development and Curriculum **Credit Hours:** 3
- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3

Electives (6 hours)

Select 6 hours of electives in consultation with academic adviser.

- BIOL 4311 - Ecology **Credit Hours:** 3
- BIOL 4343 - Plant Physiology **Credit Hours:** 3
- BIOL 4344 - Comparative Animal Physiology **Credit Hours:** 3
- BIOL 4345 - Human Physiology **Credit Hours:** 3
- BIOL 5532 - Coastal and Estuarine Ecology **Credit Hours:** 3
- BIOL 5534 - Conservation Biology **Credit Hours:** 3
- BIOL 5535 - Neotropical Rainforest Ecology **Credit Hours:** 3
- GEOL 5331 - Advanced Environmental Geology **Credit Hours:** 3
- CHEM 4363 - Forensic Chemistry **Credit Hours:** 3

Capstone Experience (6 hours)

- TCED 6769 - Graduate Clinical Teaching **Credit Hours:** 6

Teaching with Mathematics 4-8 Certification, M.A.T.

The graduate plan in Teaching leads to the Master of Arts in Teaching (MAT) degree. Students completing this degree plan are eligible for Math 4-8 teacher certification. This degree consists of a minimum of 36-37 hours.

Students who meet the graduate admissions requirements to the College of Education (COE) (see Graduate Admissions Requirements) must meet additional requirements prior to being admitted to the MAT program. Each applicant must:

- Have a GPA of 2.750 over the last 60 hours
- Provide proof of achieving a passing score on the Mathematics 4-8 state assessment.

Check prerequisites before enrolling in any course.

Degree Requirements

Required MAT Courses (25 hours)

- LLLS 5531 - Critical Reading and Thinking **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1
- TCED 5134 - Introduction to Models of Teaching **Credit Hours:** 3
- TCED 5333 - Teaching Mathematics in the 4-8 Classroom **Credit Hours:** 3
- TCED 5431 - Nature of the Middle Level Learner **Credit Hours:** 3
- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3

Electives (6 hours)

Select 6 hours of electives in consultation with academic adviser.

- MATH 5031 - Problem-Solving Strategies **Credit Hours:** 3
- MATH 5033 - Instructional Applications of Algebra **Credit Hours:** 3
- MATH 5034 - Geometry Seminar **Credit Hours:** 3
- MATH 5035 - Precalculus Courses for Mathematics Teachers of Grades 10-14 **Credit Hours:** 3
- MATH 5037 - Technology for Mathematics Curriculum **Credit Hours:** 3

Capstone Experience (6 hours)

- TCED 6769 - Graduate Clinical Teaching **Credit Hours:** 6

Teaching with Mathematics 7-12 Certification, M.A.T.

The graduate plan in Teaching leads to the Master of Arts in Teaching (MAT) degree. Students completing this degree plan are eligible for Mathematics 7-12 teacher certification. This degree consists of a minimum of 36-37 hours.

Students who meet the graduate admissions requirements to the College of Education (COE) (see Graduate Admissions Requirements) must meet additional requirements prior to being admitted to the MAT program. Each applicant must:

- Have a GPA of 2.750 over the last 60 hours
- Provide proof of achieving a passing score on the Mathematics 7-12 state assessment.

Check prerequisites before enrolling in any courses.

Degree Requirements

Required MAT Courses (25 hours)

- LLLS 5531 - Critical Reading and Thinking **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1
- TCED 5134 - Introduction to Models of Teaching **Credit Hours:** 3
- TCED 5236 - Mathematics Methods for the Secondary Grades **Credit Hours:** 3
- TCED 5530 - Adolescent Development and Curriculum **Credit Hours:** 3
- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3

Electives (6 hours)

Select 6 hours of electives in consultation with academic adviser.

- MATH 5031 - Problem-Solving Strategies **Credit Hours:** 3
- MATH 5033 - Instructional Applications of Algebra **Credit Hours:** 3
- MATH 5034 - Geometry Seminar **Credit Hours:** 3
- MATH 5035 - Precalculus Courses for Mathematics Teachers of Grades 10-14 **Credit Hours:** 3
- MATH 5036 - Calculus for Mathematics Teachers of Grades 10-14 **Credit Hours:** 3
- MATH 5037 - Technology for Mathematics Curriculum **Credit Hours:** 3

Capstone Experience (6 hours)

- TCED 6769 - Graduate Clinical Teaching **Credit Hours:** 6

Teaching with Science 4-8 Certification, M.A.T.

The graduate plan in Teaching leads to the Master of Arts in Teaching (MAT) degree.

Students completing this degree plan are eligible for Science 4-8 teacher certification. This degree consists of a minimum of 36-37 hours.

Students who meet the graduate admissions requirements to the College of Education (COE) (see Graduate Admissions Requirements) must meet additional requirements prior to being admitted to the MAT program. Each applicant must:

- Have a GPA of 2.750 over the last 60 hours
- Provide proof of achieving a passing score on the Science 4-8 state assessment.

Check prerequisites before enrolling in any course.

Degree Requirements

Required MAT Courses (25 hours)

- LLLS 5531 - Critical Reading and Thinking **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1
- TCED 5134 - Introduction to Models of Teaching **Credit Hours:** 3
- TCED 5332 - Teaching Science in the 4-8 Classroom **Credit Hours:** 3
- TCED 5431 - Nature of the Middle Level Learner **Credit Hours:** 3
- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3

Electives (6 hours)

Select 6 hours of electives in consultation with academic adviser.

- BIOL 4311 - Ecology **Credit Hours:** 3
- BIOL 4344 - Comparative Animal Physiology **Credit Hours:** 3
- BIOL 5532 - Coastal and Estuarine Ecology **Credit Hours:** 3
- BIOL 5534 - Conservation Biology **Credit Hours:** 3
- BIOL 5535 - Neotropical Rainforest Ecology **Credit Hours:** 3
- GEOL 4311 - Geology of Texas **Credit Hours:** 3
- GEOL 4327 - Natural Disasters **Credit Hours:** 3
- CHEM 4363 - Forensic Chemistry **Credit Hours:** 3

Capstone Experience (6 hours)

- TCED 6769 - Graduate Clinical Teaching **Credit Hours:** 6

Teaching with Secondary Literacy Subjects 4-8 Certification, M.A.T.

The graduate plan in Teaching leads to the Master of Arts in Teaching (MAT) degree.

Students completing this degree plan are eligible for Grades 4 - 8 English Language Arts and Reading Certification. This degree consists of a minimum of 36-37 hours.

Degree Requirements

Required Courses (31 Hours)

- LLLS 5137 - Modern Trends in Literature for Children and Young Adults **Credit Hours:** 3
- LLLS 5531 - Critical Reading and Thinking **Credit Hours:** 3
- LLLS 5633 - Teaching Methods for English/ Reading Language Arts for Grades 4-8 **Credit Hours:** 3
- LLLS 5738 - Foundations of Early Literacy **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1
- TCED 5034 - Management Strategies for Creating a Positive Learning Environment in 4-12 **Credit Hours:** 3
- TCED 5134 - Introduction to Models of Teaching **Credit Hours:** 3
- TCED 5530 - Adolescent Development and Curriculum **Credit Hours:** 3
- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3

Capstone Experience (6 Hours)

- TCED 6769 - Graduate Clinical Teaching **Credit Hours:** 6

Teaching with Secondary Literacy Subjects 7-12 Certification, M.A.T.

The graduate plan in Teaching leads to the Master of Arts in Teaching (MAT) degree.

Students completing this degree plan are eligible for Grades 7 - 12 English Language Arts and Reading Certification. This degree consists of a minimum of 36-37 hours.

Degree Requirements

Required Courses (31 Hours)

- LLLS 5137 - Modern Trends in Literature for Children and Young Adults **Credit Hours:** 3
- LLLS 5531 - Critical Reading and Thinking **Credit Hours:** 3

- LLLS 5534 - Foundations in Secondary Literacy **Credit Hours:** 3
- LLLS 5634 - Teaching Methods for English/ Reading Language Arts Grades 7-12 **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SPED 5030 - Survey of Individual Differences **Credit Hours:** 3
- TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar **Credit Hours:** 1
- TCED 5034 - Management Strategies for Creating a Positive Learning Environment in 4-12 **Credit Hours:** 3
- TCED 5134 - Introduction to Models of Teaching **Credit Hours:** 3
- TCED 5530 - Adolescent Development and Curriculum **Credit Hours:** 3
- TCED 6031 - Application of Technology in the Classroom **Credit Hours:** 3

Capstone Experience (6 Hours)

- TCED 6769 - Graduate Clinical Teaching **Credit Hours:** 6

Department of Educational Leadership and Policy Analysis

Demonstrate your commitment to professional and personal development by furthering your own education. University of Houston-Clear Lake's Department of Educational Leadership and Policy Analysis is committed to preparing candidates to become inspired leaders who create and foster positive change in the educational environment of schools, associated organizations, institutions and agencies.

Advanced TEA Certification

Principal as Instructional Leader Certificate

The Principal as Instructional Leader Certificate plan consists of 24-25 hours of graduate coursework. Candidates for this certificate must complete the Administration Core (18 hours) and the Capstone Experience/Graduate Practicum (6 hours). Students will be eligible to register for the first semester of graduate practicum (ADSU 6638) after they have successfully completed at least 12 hours of the certification plan (including ADSU 6030 , ADSU 6132, ADSU 6233, and ADSU 6533) and earn a passing score on the 268 Principal TExES. During the first semester of the Graduate Practicum, students will be guided through the Performance Assessment of School Leaders (PASL/368) examination to meet the requirements for enrollment in the second semester of Graduate Practicum, ADSU 6739. Graduate Practicum is offered only in fall and spring semesters. For admission to ADSU 6638, a practicum application form must be completed and submitted by June 8 for the fall semester and October 1 for the spring semester for approval.

In order to fulfill Principal certification requirements, students must successfully complete the 24-25 hours of coursework, have a valid Texas teaching certificate, two years of successful full-time classroom teaching in an approved accredited school, and pass the Principal state assessment and PASL.

Students who meet the graduate admissions requirements to the College of Education (COE) (see Graduate Information) must meet additional requirements prior to being admitted to the Principal Certification program. Each applicant must:

- Have a GPA of 2.750 over the last 60 hours
- Provide proof of a valid Texas teaching certificate
- Provide a letter of support from a school building administrator

Check prerequisites before enrolling in any courses.

Certificate Requirements

Administration Core (18 hours)

- ADSU 6030 - Introduction to Educational Leadership **Credit Hours:** 3
- ADSU 6132 - Curriculum **Credit Hours:** 3
- ADSU 6233 - Principalship **Credit Hours:** 3
- ADSU 6436 - School Resource Management **Credit Hours:** 3
- ADSU 6437 - School Law **Credit Hours:** 3
- ADSU 6533 - Appraisal of Teaching **Credit Hours:** 3

Other Required Course (1 hour)

- ADSU 5010 - Professional Preparation Seminar **Credit Hours:** 1

Additional Information

Successful completion is required prior to enrollment in ADSU 6638 . Candidates passing the 268 Principal state assessment prior to enrolling in ADSU 5010 will have this course waived.

Capstone Experience

(6 hours over two semesters)

- ADSU 6638 - The Principal and School Community Relations **Credit Hours:** 3
- ADSU 6739 - Graduate Practicum **Credit Hours:** 3

Additional Information

Practicum 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 6638 . Students will be eligible to register for ADSU 6638 after they have completed at least 12 hours of the certificate and either earn a passing score on the 268 Principal state assessment or successfully complete ADSU 5010.

All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.

Principal as Instructional Leader Certificate Online Option

The Principal as Instructional Leader Online Certificate plan consists of 24-25 hours of graduate coursework. Candidates for this certificate must complete the Administration Core (18 hours) and the Capstone Experience/Graduate Practicum (6 hours). Students will be eligible to register for the first semester of graduate practicum (ADSU 6638) after they have successfully completed at least 12 hours of the certification plan (including ADSU 6132, ADSU 6233, ADSU 6333, and ADSU 6432) and earn a passing score on the 268 Principal TExES. During the first semester of the Graduate Practicum, students will be guided through the Performance Assessment of School Leaders (PASL/368) examination to meet the requirements for enrollment in the second semester of Graduate Practicum, ADSU 6739. Graduate Practicum is offered only in fall and spring semesters. For admission to ADSU 6638, a practicum application form must be completed and submitted by June 8 for the fall semester and October 1 for the spring semester for approval.

In order to fulfill Principal as Instructional Leader certification requirements, students must successfully complete 24-25 hours of coursework, have a valid Texas teaching certificate, two years of successful full-time classroom teaching in an approved accredited school, and pass the Principal state assessment and PASL.

Students who meet the graduate admissions requirements to the College of Education (COE) (see Graduate Information) must meet additional requirements prior to being admitted to the Principal Certification program.

Each applicant must:

- Have a GPA of 2.750 over the last 60 hours
- Provide proof of a valid Texas teaching certificate
- Provide a letter of support from a school building administrator.

Check prerequisites before enrolling in any courses.

Administration Core (18 hours)

- ADSU 6132 - Curriculum **Credit Hours:** 3
- ADSU 6233 - Principalship **Credit Hours:** 3
- ADSU 6333 - Instructional Leadership **Credit Hours:** 3

- ADSU 6432 - Management Theory **Credit Hours:** 3
- ADSU 6436 - School Resource Management **Credit Hours:** 3
- ADSU 6437 - School Law **Credit Hours:** 3

Other Required Course (1 hour)

- ADSU 5010 - Professional Preparation Seminar **Credit Hours:** 1

Additional Information

Successful completion is required prior to enrollment in ADSU 6638. Candidates passing the 268 Principal state assessment prior to enrolling in ADSU 5010 will have this course waived.

Capstone Experience

(6 hours over two semesters)

- ADSU 6638 - The Principal and School Community Relations **Credit Hours:** 3
- ADSU 6739 - Graduate Practicum **Credit Hours:** 3

Additional Information

Practicum 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 6638 . Students will be eligible to register for ADSU 6638 after they have completed at least 12 hours of the certificate and either earn a passing score on the 268 Principal state assessment or successfully complete ADSU 5010 .

All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.

Probationary Principal as Instructional Leader Certification

A one-year Probationary Principal as Instructional Leader certification is available to candidates who hold principal or assistant principal positions and meet the requirements of the University of Houston-Clear Lake (UHCL) College of Education. For information concerning the requirements to obtain the Probationary Principal as Instructional Leader certification, visit with the UHCL COE Office of Educator Certification.

Superintendent Certification

The Superintendent Certification plan requires the completion of 15 hours of specified coursework (see below) after finishing the Principal Certification plan. A passing score on the Superintendent state assessment is required prior to recommendation for this certificate.

Admissions Requirements

Students who meet the graduate admissions requirements to the College of Education (see Graduate Admissions Requirements) must meet additional requirements prior to being admitted to the Superintendent program. Each applicant must:

- Have a GPA of 2.750 over the last 60 hours.
- Provide proof of a valid Texas Principal or Mid-Management Administrator's certificate or be approved by TEA to use school district managerial experience to replace the certificate.
- Provide proof of current service as a school administrator or written approval from the Program Area Chair of Educational Leadership.
- Provide a teacher service record.
- Pay the TEA Admission fee.

Check prerequisites before enrolling in any courses.

Certificate Requirements

The following courses are on the Superintendent Certification plan:

- EDLS 7636 - Politics and School Finance **Credit Hours:** 3
- EDLS 7637 - Personnel Management **Credit Hours:** 3
- EDLS 7638 - The Superintendent and School Community Relations **Credit Hours:** 3
- EDLS 7833 - Superintendent Seminar **Credit Hours:** 3
- EDLS 7837 - Superintendent Practicum **Credit Hours:** 3

Additional Information

All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.

Other Required Course (1 hour)

- EDLS 7010 - Superintendent Professional Preparation Seminar **Credit Hours:** 1

Additional Information

Candidates passing the Superintendent state assessment prior to enrolling in EDLS 7010 will have this course waived.

Certificate

UHCL Curriculum and Instruction Professional Development Certificate

Successful completion of the four-course sequence will prepare students to work with curriculum and instruction professionals and programs. The certificate is offered through University of Houston-Clear Lake (UHCL). It is not a state certificate.

Check prerequisites before enrolling in any courses.

Certificate Requirements

Required Courses (12 hours)

- EDLS 7136 - Current Pedagogical Issues **Credit Hours:** 3
- EDLS 7137 - Advanced Models of Teaching **Credit Hours:** 3
- EDLS 7138 - Curriculum Design: Development, Implementation, Evaluation **Credit Hours:** 3
- EDLS 7139 - Professional Development Principles and Practices **Credit Hours:** 3

UHCL Higher Education Professional Certificate

Successful completion of the four-course sequence will prepare students to work with higher education professionals and programs. The certificate is offered through University of Houston-Clear Lake (UHCL). It is not a state certificate.

Check prerequisites before enrolling in any courses.

Certificate Requirements

Required Courses (12 hours)

- EDLS 8630 - Administration in Higher Education **Credit Hours:** 3
- EDLS 8631 - Student Affairs in Higher Education **Credit Hours:** 3
- EDLS 8632 - Law and Policy in Higher Education **Credit Hours:** 3
- EDLS 8633 - Contemporary Issues in Higher Education **Credit Hours:** 3

UHCL Instructional Technology Professional Certificate

Successful completion of the four-course sequence will prepare students to work with instructional technology professionals and programs. The certificate is offered through University of Houston-Clear Lake (UHCL). It is not a state certificate.

Check prerequisites before enrolling in any courses.

Certificate Requirements

Required Courses (12 hours)

- EDLS 7530 - Learning Theory and Instruction **Credit Hours:** 3
- EDLS 7533 - Systematic Design of Technology-Based Instruction **Credit Hours:** 3
- EDLS 7537 - Technology and eLearning **Credit Hours:** 3
- EDLS 7538 - Interactive Distance Learning **Credit Hours:** 3

UHCL Program Evaluation Professional Development Certificate

Successful completion of the five-course sequence will prepare students to conduct external program evaluations for a school district, evaluate state and federal grants, or be employed in a district research department. The certificate is offered through University of Houston-Clear Lake (UHCL). It is not a state certificate.

Check prerequisites before enrolling in any courses.

Certificate Requirements

Required Courses (12 hours)

- EDLS 7031 - Quantitative Research I **Credit Hours:** 3
- EDLS 7032 - Quantitative Research II **Credit Hours:** 3
- EDLS 7033 - Qualitative Research **Credit Hours:** 3
- EDLS 7130 - Program Evaluation **Credit Hours:** 3

Choose one

- EDLS 7331 - Advanced Qualitative Methods **Credit Hours:** 3
- EDLS 7330 - Advanced Statistical Analysis **Credit Hours:** 3

UHCL Reading Professional Development Certificate

Successful completion of the four-course sequence will prepare students to work with literacy professionals and programs. The certificate is offered through University of Houston-Clear Lake (UHCL). It is not a state certificate.

Check prerequisites before enrolling in any courses.

Certificate Requirements

Required Courses (12 hours)

- EDLS 7131 - Society, Language and Literacy **Credit Hours:** 3
- EDLS 7132 - Integrating Literacy into the Curriculum **Credit Hours:** 3
- EDLS 7133 - Professional Writing Workshop **Credit Hours:** 3
- EDLS 7135 - Literacy Assessment for the Practitioner **Credit Hours:** 3

UHCL Research and Statistics Professional Development Certificate

Successful completion of the five-course sequence will prepare students to conduct research in various settings. The certificate is offered through University of Houston-Clear Lake (UHCL). It is not a state certificate.

Check prerequisites before enrolling in any courses. An additional 3 hours of coursework is required to prepare students to teach research and statistics at a college or university.

Certificate Requirements

Required Courses (15 hours)

- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- EDLS 7031 - Quantitative Research I **Credit Hours:** 3
- EDLS 7032 - Quantitative Research II **Credit Hours:** 3
- EDLS 7033 - Qualitative Research **Credit Hours:** 3
- EDLS 7330 - Advanced Statistical Analysis **Credit Hours:** 3

UHCL Research for Administrators Professional Development Certificate

Successful completion of the five-course sequence will prepare students to work as administrators in departments participating in data collection/analysis and/or overseeing external program evaluations in either higher education or PK-12 school districts. The certificate is offered through University of Houston-Clear Lake (UHCL). It is not a state certificate.

Check prerequisites before enrolling in any courses.

Certificate Requirements

Required Courses (15) hours)

- EDLS 7031 - Quantitative Research I **Credit Hours:** 3
- EDLS 7032 - Quantitative Research II **Credit Hours:** 3
- EDLS 7033 - Qualitative Research **Credit Hours:** 3
- EDLS 7130 - Program Evaluation **Credit Hours:** 3
- EDLS 7333 - Survey Design **Credit Hours:** 3

UHCL Special Populations Professional Certificate

Successful completion of the four-course sequence will prepare students to work with special population professionals and programs. The certificate is offered through University of Houston-Clear Lake (UHCL). It is not a state certificate.

Check prerequisites before enrolling in any courses.

Certificate Requirements

Required Courses (12 hours)

- EDLS 7036 - Special Populations-Early Childhood Education **Credit Hours:** 3
- EDLS 7037 - Special Populations-Special Education **Credit Hours:** 3
- EDLS 7038 - Special Populations-Bilingual and ESL Education **Credit Hours:** 3
- EDLS 7039 - Special Populations-Synthesis **Credit Hours:** 3

Doctor of Education

Educational Leadership, Ed.D.

The focus of the Doctor of Education (Ed.D.) is the preparation of individuals for service as educational leaders in educational organizations 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 solving the problems faced by educational leaders.

Prior to admission to the Ed.D. program, the student is expected to have the following:

1. A master's degree from an accredited institution.

2. A completed UHCL admissions application.
3. Official transcripts from each accredited institution attended sent to the Office of Admissions.
4. A combined score of 297 on the Verbal and Quantitative portions of the Graduate Record Examination (GRE) and a minimum score of 4.0 on the Analytical Writing portion of the GRE. The GRE must have been taken within the last five years. In the application process for the EdD in Educational Leadership, applicants have the option of completing the UHCL Doctoral Writing Assessment in lieu of the GRE.
5. Evidence of work and leadership experience in education Pre-K to university educational settings.
6. Letter of intent.

   Please structure your letter as follows:
   - Paragraph 1 - Why do you wish to pursue a doctoral-level degree in Education Leadership?
   - Paragraph 2 - What are your career goals and how will this degree help you accomplish your long-term goals?
   - Paragraph 3 - What are your research interests as they relate to education?
   - Paragraph 4 - What are your scholarly and professional accomplishments as they relate to your educational leadership?
   - Paragraph 5 - How does your prior work experience relate to your interest in the doctoral program focusing on educational leadership?
7. Three reference forms from persons who can address the student's performance in graduate studies and potential for educational leadership. If possible, at least one of the reference forms should be from a professor involved in the applicant's master's program.
8. If applicable, provide a letter of support from an employer.

Other information may be required; contact COE's 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 his/her strong leadership qualities, provisional admission may be granted.

Once a student is admitted, any course in which the student makes a grade of C- or below cannot be counted toward the doctoral program. Doctoral students may count one course on their program with a grade of either C+ or C. All other grades must be B- or greater. An overall grade point average (GPA) of 3.000 must be maintained.

The time frame for completion of the doctoral program is seven years from the start of the program. At the end of the seventh year, a doctoral candidate is allowed to petition the EDLS doctoral admissions committee for a one-year extension if the candidate's dissertation proposal has been approved. If necessary, to successfully complete the dissertation, the candidate can petition the doctoral admissions committee for a second and final one-year extension to complete the dissertation.

Check prerequisites before enrolling in any courses.

Degree Requirements

The structure of the Ed.D. program is as follows:

Leadership Core:

- EDLS 7238 - Marketing of Educational Services for Nonprofit Organizations **Credit Hours:** 3
- EDLS 8130 - Strategic Planning and Systems Alignment **Credit Hours:** 3
- EDLS 8132 - Transition and Change Management **Credit Hours:** 3
- EDLS 8230 - Ethics, Values and Social Responsibility **Credit Hours:** 3
- EDLS 8330 - Human Resources Administration **Credit Hours:** 3
- EDLS 8430 - Financial Resources Management **Credit Hours:** 3

Research Core:

- EDLS 7031 - Quantitative Research I **Credit Hours:** 3
- EDLS 7032 - Quantitative Research II **Credit Hours:** 3
- EDLS 7033 - Qualitative Research **Credit Hours:** 3
- EDLS 7130 - Program Evaluation **Credit Hours:** 3
- EDLS 8530 - Research Seminar **Credit Hours:** 3

Communication Core:

- EDLS 7030 - Dispute Resolution **Credit Hours:** 3
- EDLS 7034 - Professional Writing and Communications **Credit Hours:** 3
- EDLS 7035 - Race, Gender, and Ability in Education **Credit Hours:** 3

Curriculum and Instruction:

- EDLS 7136 - Current Pedagogical Issues **Credit Hours:** 3
- EDLS 7137 - Advanced Models of Teaching **Credit Hours:** 3
- EDLS 7138 - Curriculum Design: Development, Implementation, Evaluation **Credit Hours:** 3
- EDLS 7139 - Professional Development Principles and Practices **Credit Hours:** 3

Higher Education:

- EDLS 8630 - Administration in Higher Education **Credit Hours:** 3
- EDLS 8631 - Student Affairs in Higher Education **Credit Hours:** 3
- EDLS 8632 - Law and Policy in Higher Education **Credit Hours:** 3

- EDLS 8633 - Contemporary Issues in Higher Education **Credit Hours:** 3

Instructional Technology:

- EDLS 7530 - Learning Theory and Instruction **Credit Hours:** 3
- EDLS 7533 - Systematic Design of Technology-Based Instruction **Credit Hours:** 3
- EDLS 7537 - Technology and eLearning **Credit Hours:** 3
- EDLS 7538 - Interactive Distance Learning **Credit Hours:** 3

Principal:

- ADSU 6030 - Introduction to Educational Leadership **Credit Hours:** 3
- ADSU 6132 - Curriculum **Credit Hours:** 3
- ADSU 6233 - Principalship **Credit Hours:** 3
- ADSU 6533 - Appraisal of Teaching **Credit Hours:** 3

Reading:

- EDLS 7131 - Society, Language and Literacy **Credit Hours:** 3
- EDLS 7132 - Integrating Literacy into the Curriculum **Credit Hours:** 3
- EDLS 7133 - Professional Writing Workshop **Credit Hours:** 3
- EDLS 7135 - Literacy Assessment for the Practitioner **Credit Hours:** 3

Research Design, Measurement and Statistics:

- EDLS 7330 - Advanced Statistical Analysis **Credit Hours:** 3
- EDLS 7331 - Advanced Qualitative Methods **Credit Hours:** 3
- EDLS 7332 - Current Issues in Educational Measurement **Credit Hours:** 3
- EDLS 7333 - Survey Design **Credit Hours:** 3

Special Populations:

- EDLS 7036 - Special Populations-Early Childhood Education **Credit Hours:** 3
- EDLS 7037 - Special Populations-Special Education **Credit Hours:** 3
- EDLS 7038 - Special Populations-Bilingual and ESL Education **Credit Hours:** 3
- EDLS 7039 - Special Populations-Synthesis **Credit Hours:** 3

Superintendent:

- EDLS 7636 - Politics and School Finance **Credit Hours:** 3
- EDLS 7637 - Personnel Management **Credit Hours:** 3
- EDLS 7638 - The Superintendent and School Community Relations **Credit Hours:** 3

- EDLS 7833 - Superintendent Seminar **Credit Hours:** 3
- EDLS 7837 - Superintendent Practicum **Credit Hours:** 3

Dissertation:

- EDLS 8939 - Dissertation **Credit Hours:** 3
- EDLS 8969 - Dissertation **Credit Hours:** 6

Additional Information

Students must register for dissertation hours each long semester until completion. Only six hours of dissertation may count in the program. Before being permitted to register for dissertation hours, a doctoral student must have advanced to candidacy.

Those interested in applying should contact COE's Office of Academic Advising in Bayou 1231 (by phone at 281-283-3600 or by e-mail at education@uhcl.edu). The deadline for application is June 1; however, early admission is available. Contact COE's Office of Academic Advising for details.

Master of Science

Educational Management M.S. with Social Justice Specialization

There is an ongoing need for educational leaders who possess the attitudes and aptitudes to address the many challenges related to leadership that address cultural diversity, equity, and democracy. For those who seek educational leadership roles, but not necessarily Principal certification, an understanding of the issues related to social justice, leadership and diversity is key to effective reform. The specialization in Social Justice, when added to the Master's in Educational Management, provides candidates with not only an edge in the competitive job market, but also a deeper understanding to the practices inherent in addressing the structures and norms that result in inequitable education and knowledge of the importance of the advocacy role that leaders must take to influence policy. The Master of Science in Educational Management with a Social Justice Specialization is available through both hybrid and online programs of study.

Degree Requirements

Professional Education Core (9 hours)

(Select three after meeting with advisor)

- EDUC 6032 - Applied Statistics **Credit Hours:** 3

- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Administrative Core (18 hours)

- ADSU 6030 - Introduction to Educational Leadership **Credit Hours:** 3
- ADSU 6132 - Curriculum **Credit Hours:** 3
- ADSU 6233 - Principalship **Credit Hours:** 3
- ADSU 6436 - School Resource Management **Credit Hours:** 3
- ADSU 6437 - School Law **Credit Hours:** 3
- ADSU 6533 - Appraisal of Teaching **Credit Hours:** 3

Social Justice Specialization (12 hours)

- SILC 6031 - Social Justice Leadership, Policy and Advocacy **Credit Hours:** 3
- SILC 6033 - Reflection in Social Justice Education **Credit Hours:** 3
- SILC 6034 - Current Issues in Diverse Communities **Credit Hours:** 3
- SILC 6035 - Social Foundations of Education **Credit Hours:** 3

Capstone Experience

- ADSU 6735 - Leadership Research Seminar **Credit Hours:** 3

Educational Management M.S. with Social Justice Specialization Online

Degree Requirements

Professional Education Core (9 hours)

(Select three after meeting with advisor)

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Administrative Core (18 hours)

- ADSU 6132 - Curriculum **Credit Hours:** 3
- ADSU 6233 - Principalship **Credit Hours:** 3
- ADSU 6333 - Instructional Leadership **Credit Hours:** 3
- ADSU 6432 - Management Theory **Credit Hours:** 3

- ADSU 6436 - School Resource Management **Credit Hours:** 3
- ADSU 6437 - School Law **Credit Hours:** 3

Social Justice Specialization (12 hours)

- SILC 6031 - Social Justice Leadership, Policy and Advocacy **Credit Hours:** 3
- SILC 6033 - Reflection in Social Justice Education **Credit Hours:** 3
- SILC 6034 - Current Issues in Diverse Communities **Credit Hours:** 3
- SILC 6035 - Social Foundations of Education **Credit Hours:** 3

Capstone Experience (3 hours)

- ADSU 6735 - Leadership Research Seminar **Credit Hours:** 3

Educational Management with Principal as Instructional Leader Certification M.S. with Social Justice Specialization

The University of Houston-Clear Lake, with its alumni footprint throughout Texas and especially the Houston area, provides its graduates not only with a state-recognized high-quality preparation program, but also with the networking capacity to find mentors and colleagues who share and understand the expectations of great leaders. In schools from Sealy to Beaumont, from Galveston to Conroe, you will find UHCL alumni in educational leadership positions who are very willing to support your professional goals. With their support and the support of others, your efforts as a candidate will reward you with the position you seek. Imagine having the benefits of academic and fieldwork experiences that provide you with the professional understanding of the "right things" and the evidence that shows you've done them. There is an ongoing need for educational leaders who possess the attitudes and aptitudes to address the many challenges related to leadership that address cultural diversity, equity, and democracy. The specialization in Social Justice, when added to the Master of Science in Educational Management and Principal as Instructional Leader Certification, can provide candidates with not only an edge in the competitive job market, but also a deeper understanding of the practices inherent in addressing the structures and norms that result in inequitable education and knowledge of the importance of the advocacy role that leaders must take to influence policy. This program is available in hybrid and online formats.

Degree Requirements

Professional Education Core (6 hours)

(Select two after meeting with advisor)

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3

- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Social Justice Specialization (12 hours)

- SILC 6031 - Social Justice Leadership, Policy and Advocacy **Credit Hours:** 3
- SILC 6033 - Reflection in Social Justice Education **Credit Hours:** 3
- SILC 6034 - Current Issues in Diverse Communities **Credit Hours:** 3
- SILC 6035 - Social Foundations of Education **Credit Hours:** 3

Administrative Core (18 hours)

- ADSU 6030 - Introduction to Educational Leadership **Credit Hours:** 3
- ADSU 6132 - Curriculum **Credit Hours:** 3
- ADSU 6233 - Principalship **Credit Hours:** 3
- ADSU 6436 - School Resource Management **Credit Hours:** 3
- ADSU 6437 - School Law **Credit Hours:** 3
- ADSU 6533 - Appraisal of Teaching **Credit Hours:** 3

Other Required Course (1 hour)

- ADSU 5010 - Professional Preparation Seminar **Credit Hours:** 1

Additional Information

Successful completion is required prior to enrollment in ADSU 6638. Candidates passing the 268 Principal state assessment prior to enrolling in ADSU 5010 will have this course waived.

Capstone Experience/Internship (6 hours)

- ADSU 6638 - The Principal and School Community Relations **Credit Hours:** 3
- ADSU 6739 - Graduate Practicum **Credit Hours:** 3

Additional Information

The Principal and School Community Relations (Prerequisites: ADSU 6030, 6132, 6233, 6533, and passing scores on TExES #268.

Practicum Application Deadlines:

- June 8 for fall semester
- October 1 for spring semester

Deadlines to submit passing scores on the TExES #268:

- August 1 for fall enrollment
- December 1 for spring enrollment

Graduate Practicum (Prerequisites: Successful completion of ADSU 6638 and PASL (TExES #368)

Deadlines to submit the PASL:

- Candidates may be admitted into ADSU 6739 pending the results of a PASL retest. If a candidate is unsuccessful on the retest, the candidate will be removed from the practicum and must successfully enroll in appropriate ADSU coursework (including, but not limited to ADSU 6638) to address the PASL deficiency and continue the program.

Educational Management with Principal as Instructional Leader Certification M.S. with Social Justice Specialization Online

Degree Requirements

Professional Education Core (6 hours)

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Administrative Core (18 hours)

- ADSU 6132 - Curriculum **Credit Hours:** 3
- ADSU 6233 - Principalship **Credit Hours:** 3
- ADSU 6333 - Instructional Leadership **Credit Hours:** 3
- ADSU 6432 - Management Theory **Credit Hours:** 3
- ADSU 6436 - School Resource Management **Credit Hours:** 3
- ADSU 6437 - School Law **Credit Hours:** 3

Social Justice Specialization (12 hours)

- SILC 6031 - Social Justice Leadership, Policy and Advocacy **Credit Hours:** 3
- SILC 6033 - Reflection in Social Justice Education **Credit Hours:** 3
- SILC 6034 - Current Issues in Diverse Communities **Credit Hours:** 3
- SILC 6035 - Social Foundations of Education **Credit Hours:** 3

Other Required Course (1 hour)

- ADSU 5010 - Professional Preparation Seminar **Credit Hours:** 1

Additional Information

Successful completion is required prior to enrollment in ADSU 6638. Candidates passing the 268 Principal state assessment prior to enrolling in ADSU 5010 will have this course waived.

Capstone Experience/Internship (6 hours)

- ADSU 6638 - The Principal and School Community Relations **Credit Hours:** 3
- ADSU 6739 - Graduate Practicum **Credit Hours:** 3

Additional Information

The Principal and School Community Relations (Prerequisites: ADSU 6132, 6233, 6333, 6432 and passing scores on TExES #268.

Practicum Application Deadlines:

- June 8 for fall semester
- October 1 for spring semester

Deadlines to submit passing scores on the TExES #268:

- August 1 for fall enrollment
- December 1 for spring enrollment

Graduate Practicum (Prerequisites: Successful completion of ADSU 6638 and PASL (TExES #368)

Deadlines to submit the PASL:

- Candidates may be admitted into ADSU 6739 pending the results of a PASL retest. If a candidate is unsuccessful on the retest, the candidate will be removed from the practicum and must successfully enroll in appropriate ADSU coursework (including, but not limited to ADSU 6638) to address the PASL deficiency and continue the program.

Educational Management, M.S.

The graduate plan in Educational Management leads to the Master of Science degree. The master's degree in Educational Management consists of 30 hours of graduate coursework. Candidates for this master's degree must complete the Professional Education Core (9 hours), the Administration Core (18 hours) and the Capstone Experience (3 hours). Students will be eligible to register for the capstone experience, ADSU 6735, Leadership Research Seminar, after they have successfully

completed at least 18 hours of the master's degree. ADSU 6735 is offered only during fall semesters.

Check prerequisites before enrolling in any courses.

Degree Requirements

Professional Education Core (9 hours)

Select three after meeting with adviser.

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Administration Core (18 hours)

- ADSU 6030 - Introduction to Educational Leadership **Credit Hours:** 3
- ADSU 6132 - Curriculum **Credit Hours:** 3
- ADSU 6233 - Principalship **Credit Hours:** 3
- ADSU 6436 - School Resource Management **Credit Hours:** 3
- ADSU 6437 - School Law **Credit Hours:** 3
- ADSU 6533 - Appraisal of Teaching **Credit Hours:** 3

Capstone Experience (3 hours)

- ADSU 6735 - Leadership Research Seminar **Credit Hours:** 3

Educational Management M.S. Online Option

The online graduate plan in Educational Management leads to the Master of Science degree. The master's degree in Educational Management consists of 30 hours of graduate coursework. Candidates for this master's degree must complete the Professional Education Core (9 hours), the Administration Core (18 hours) and the Capstone Experience (3hours). Students will be eligible to register for the capstone experience, ADSU 6735, Leadership Research Seminar after they have successfully completed at least 18 hours of the master's degree. ADSU 6735 is offered only during fall semesters.

Check prerequisites before enrolling in any course.

Professional Education Core (9 hours)

Select three after meeting with adviser.

- EDUC 6032 - Applied Statistics **Credit Hours:** 3

- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Administration Core (18 hours)

- ADSU 6132 - Curriculum **Credit Hours:** 3
- ADSU 6233 - Principalship **Credit Hours:** 3
- ADSU 6333 - Instructional Leadership **Credit Hours:** 3
- ADSU 6432 - Management Theory **Credit Hours:** 3
- ADSU 6436 - School Resource Management **Credit Hours:** 3
- ADSU 6437 - School Law **Credit Hours:** 3

Capstone Experience (3 hours):

- ADSU 6735 - Leadership Research Seminar **Credit Hours:** 3

Educational Management, Principal as Instructional Leader Certification and Reading Specialist Certification, M.S.

The graduate plan in Educational Management leads to the Master of Science degree with Principal as Instructional Leader Certification and Reading Specialist Certification if certification requirements are met. The master's degree in Educational Management, with both Principal as Instructional Leader and Reading Specialist Certifications consists of 45 hours of graduate coursework. Candidates for this master's degree must complete the Professional Education Core (6 hours), the Administration Core (18 hours), the Reading Core (15 hours), and the Capstone Experience/Graduate Practicum (6 hours).

Students will be eligible to register for ADSU 6638, the first semester of graduate practicum experience after they have successfully completed at least 12 hours of the master's degree (Must include ADSU 6030, ADSU 6132, ADSU 6233, and ADSU 6533) and successfully attempted the TExES 268 examination.

Successful completion of the TExES 368/PASL is required for permission to enroll in ADSU 6739, Graduate Practicum. Practicum courses cannot be taken concurrently and are offered only in the fall and spring semesters.

A practicum application form for the first semester of practicum: ADSU 6638 must be completed and submitted by June 8 for the fall semester and October 1 for the spring semester to enroll in ADSU 6638. ADSU 6638 is a prerequisite course for ADSU 6739 - Graduate Practicum.

To fulfill Principal as Instructional Leader certification requirements, students must successfully complete the master's degree coursework 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 Principal state assessment (268 exam) and PASL (368 exam). Students seeking the reading specialist certification must hold a valid Texas teaching certificate and must be able to verify a minimum of two years of full-time approved successful teaching experience. A passing score on the reading specialist state assessment is required. Students who meet the graduate admissions requirements to the College of Education (COE) must meet additional requirements prior to being admitted to the Educational Management program.

Each applicant must:

- Have a GPA of 2.750 over the last 60 hours.
- Provide proof of having a valid Texas teaching certificate.
- Provide a letter of support from a school building administrator.
- Provide a teacher service record.
- Pay the TEA Admission fee.

Check prerequisites before enrolling in any courses. Graduate Practicum (6 hours).

Degree Requirements:

Professional Education Core (6 hours)

Select two after meeting with adviser.

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Administrative Core (18 hours)

- ADSU 6030 - Introduction to Educational Leadership **Credit Hours:** 3
- ADSU 6132 - Curriculum **Credit Hours:** 3
- ADSU 6233 - Principalship **Credit Hours:** 3
- ADSU 6436 - School Resource Management **Credit Hours:** 3
- ADSU 6437 - School Law **Credit Hours:** 3
- ADSU 6533 - Appraisal of Teaching **Credit Hours:** 3

Reading Core (15 hours)

- LLLS 6331 - Sociolinguistic Applications to Reading **Credit Hours:** 3
- LLLS 6332 - Foundations of Early and Secondary Literacy **Credit Hours:** 3
- LLLS 6333 - Genre Studies in Children's and Young Adult Literature **Credit Hours:** 3
- LLLS 6839 - Practicum in School Literacy Practices **Credit Hours:** 3

- LLLS 6732 - Assessment and Remediation of Reading and Language Arts Literacy **Credit Hours:** 3

Other Required Courses (1 hour)

- LLLS 5010 - Professional Preparation Seminar for Reading Specialists **Credit Hours:** 1

Additional Information

- Successful completion of TExES examination 268 is required prior to enrollment in ADSU 6638. Candidates passing the Principal state assessment prior to enrolling in ADSU 5010 will have this course waived.
- Successful completion is required prior to enrollment in LLLS 6639. Candidates passing the Reading Specialist State Assessment prior to enrolling in LLLS 5010 will have this course waived.
- Practicum 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 6638. Students will be eligible to register for ADSU 6638 after they have successfully completed at least 12 hours of the master's degree (Must include ADSU 6030, ADSU 6132, ADSU 6233, and ADSU 6533) and received a passing score on the Principal state assessment (268).
- All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.

Capstone Experience (6 hours)

- ADSU 6638 - The Principal and School Community Relations **Credit Hours:** 3
- ADSU 6739 - Graduate Practicum **Credit Hours:** 3

Educational Management, Principal as Instructional Leader Certification, M.S.

The graduate plan in Educational Management leads to the Master of Science degree with Principal as Instructional Leader Certification, if Principal as Instructional Leader requirements are met. The master's degree in Educational Management consists of 30 hours of graduate coursework. Candidates for this degree must complete the Professional Education Core (6 hours), the Administration Core (18 hours) and the Capstone Experience/Graduate Practicum (6 hours). Students will be eligible to register for the first semester of the graduate practicum (ADSU 6638) after they have successfully completed at least 12 hours of the master's degree (including ADSU 6030, ADSU 6132, ADSU 6233, and ADSU 6533) and earn a passing score on the 268 Principal TExES. During the first semester of the Graduate Practicum, students will be guided through the Performance Assessment for School Leaders

(PASL)/368 examination to meet the requirements for enrollment in the second semester of Graduate Practicum, ADSU 6739. Graduate Practicum is only offered in the fall and spring semesters.

For admission to ADSU 6638, a practicum application form must be completed and submitted by June 8 for the fall semester and October 1 for the spring semester.

To fulfill principal certification requirements, students must successfully complete the 30 hours of master's degree coursework 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 Principal state assessment and PASL. Students who meet the graduate admissions requirements to the College of Education (COE) (see Graduate Admissions Requirements) must meet additional requirements prior to being admitted to the Educational Management program. Each applicant must:

- Have a GPA of 2.750 over the last 60 hours.
- Provide proof of a valid Texas teaching certificate.
- Provide a letter of support from a school building administrator.
- Provide a Teacher Service Record.
- Pay the TEA Admission fee.

Check prerequisites before enrolling in any courses.

Degree Requirements

Professional Education Core (6 hours)

Select two after adviser meeting

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Administration Core (18 hours)

- ADSU 6030 - Introduction to Educational Leadership **Credit Hours:** 3
- ADSU 6132 - Curriculum **Credit Hours:** 3
- ADSU 6233 - Principalship **Credit Hours:** 3
- ADSU 6436 - School Resource Management **Credit Hours:** 3
- ADSU 6437 - School Law **Credit Hours:** 3
- ADSU 6533 - Appraisal of Teaching **Credit Hours:** 3

Other Required Course (1 hour)

- ADSU 5010 - Professional Preparation Seminar **Credit Hours:** 1

Additional Information

Successful completion is required prior to enrollment in ADSU 6638. Candidates passing the 268 Principal state assessment prior to enrolling in ADSU 5010 will have this course waived.

Capstone Experience (6 hours)

- ADSU 6638 - The Principal and School Community Relations **Credit Hours:** 3
- ADSU 6739 - Graduate Practicum **Credit Hours:** 3

Additional Information

- Practicum 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 6638. Students will be eligible to register for ADSU 6638 after they have successfully completed at least 12 hours of the master's degree and received a passing score on the 268 Principal state assessment.
- All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.

Educational Management, Principal as Instructional Leader Certification, M.S. Online

The online graduate plan in Educational Management leads to the Master of Science (M.S.) degree with Principal Certification, if principal certification requirements are met. The master's degree in Educational Management consists of 30 hours of graduate coursework.

Candidates for this degree must complete the Professional Education Core (6 hours), the Administration Core (18 hours) and the Capstone Experience/Graduate Practicum (6 hours). Students will be eligible to register for the first semester of the graduate practicum (ADSU 6638) after they have successfully completed at least 12 hours of the master's degree (including ADSU 6132, ADSU 6233, ADSU 6333, and ADSU 6432) and earn a passing score on the 268 Principal TExES. Graduate Practicum is only offered in the fall and spring semesters.

A practicum application form must be completed and submitted by June 8 for the fall semester and October 1 for the spring semester in order to enroll in ADSU 6638 Graduate Practicum. In order to fulfill principal certification requirements, students must successfully complete the 30 hours of M.S. degree coursework 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 Principal state assessment and PASL.

Degree Requirements

Professional Education Core (6 hours)

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6031 - Applications of Technology **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Administration Core (18 hours)

- ADSU 6132 - Curriculum **Credit Hours:** 3
- ADSU 6233 - Principalship **Credit Hours:** 3
- ADSU 6333 - Instructional Leadership **Credit Hours:** 3
- ADSU 6432 - Management Theory **Credit Hours:** 3
- ADSU 6436 - School Resource Management **Credit Hours:** 3
- ADSU 6437 - School Law **Credit Hours:** 3

Other Required Course (1 hour)

- ADSU 5010 - Professional Preparation Seminar **Credit Hours:** 1

Additional Information

Successful completion is required prior to enrollment in ADSU 6638. Candidates passing the 268 Principal state assessment prior to enrolling in ADSU 5010 will have this course waived.

Capstone Experience (6 hours)

- ADSU 6638 - The Principal and School Community Relations **Credit Hours:** 3
- ADSU 6739 - Graduate Practicum **Credit Hours:** 3

Additional Information

- Practicum 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 6638. Students will be eligible to register for ADSU 6638 after they have successfully completed at least 12 hours of the master's degree (must include ADSU 6132, ADSU 6233, ADSU 6333, and ADSU 6432) and received a passing score on the 268 Principal state assessment.
- All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development Of Teachers office prior to beginning the practicum.

Department of Literacy, Library Science and Learning Technologies

Empower Others to Read, Lead and Succeed

University of Houston-Clear Lake's Department of Literacy, Library Science and Learning Technologies recognizes the important role that technology plays in today's world. It is rapidly changing every facet of life, including how we gather information, communicate and learn - from emails to e-Books to online classes, and even via video games.

All three areas of the department offer master of science degrees and certifications to meet your specific interest. Whether your goal is to become a literacy specialist, school librarian, or instructional leader, this department will provide you with the knowledge and experience to build a solid foundation in various literacy skills while embracing and utilizing the ever-expanding communication spectrum.

Advanced TEA Certification

Reading Specialist Certification

Students seeking Reading Specialist certification must hold a master's degree and a valid Texas teaching certification and verify a minimum of two years of approved successful full-time teaching experience. A passing score on the Reading Specialist Texas Examination of Educator Standards (TExES) is required. The plan consists of a minimum of 18-19 semester hours.

Students who meet the graduate admissions requirements to the College of Education (see Graduate Admissions Requirements) must meet additional requirements prior to being admitted to the Reading Specialist program. Each applicant must:

- Have a GPA of 2.750 over the last 60 hours.
- Provide proof of a valid Texas teaching certificate.
- Provide a letter of support from a school building administrator.

Check prerequisites before enrolling in any courses.

Certificate Requirements

Required Reading courses (18 hours):

- LLLS 6331 - Sociolinguistic Applications to Reading **Credit Hours:** 3
- LLLS 6332 - Foundations of Early and Secondary Literacy **Credit Hours:** 3
- LLLS 6333 - Genre Studies in Children's and Young Adult Literature **Credit Hours:** 3

- LLLS 6639 - Leadership in Clinical Practices in Assessment of Literacy Tasks **Credit Hours:** 3
- LLLS 6732 - Assessment and Remediation of Reading and Language Arts Literacy **Credit Hours:** 3
- LLLS 6839 - Practicum in School Literacy Practices **Credit Hours:** 3

Other course (1 hour):

- LLLS 5010 - Professional Preparation Seminar for Reading Specialists **Credit Hours:** 1

Additional Information

Candidates must pass the Reading Specialist State Assessment by their final semester or enroll in and successfully complete this course.

School Librarian Standard Certification EC-12

Students seeking School Librarian certification must hold a master's degree and a valid Texas teaching certification and verify a minimum of two years approved successful full-time teaching experience. A passing score on the School Librarian Texas Examination of Educator Standards (TExES) is required. The plan consists of 27-28 semester hours.

Students who meet the graduate admissions requirements to the College of Education (see Graduate Admission Requirements) must meet additional requirements prior to being admitted to the School Librarian program. Each applicant must:

- Have a GPA of 2.750 over the last 60 hours.
- Provide proof of a valid Texas teaching certificate.
- Provide a letter of support from a school building administrator.

Check prerequisites before enrolling in any courses.

To be recommended for the School Librarian certificate, students must complete the 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.

Certificate Requirements

School Librarian Core (24 hours):

- SLIS 5532 - Selecting Literature and Materials for Young Adults **Credit Hours:** 3

- SLIS 5533 - Selecting Literature and Materials for Children **Credit Hours:** 3
- SLIS 6134 - School Library Collection Development Management **Credit Hours:** 3
- SLIS 6136 - Librarians as Instructional Partners **Credit Hours:** 3
- SLIS 6234 - Librarians Empowering Learners Through Advocacy Leadership **Credit Hours:** 3
- SLIS 6334 - Administration of School Library Services **Credit Hours:** 3
- SLIS 6336 - Media and Technology Selection and Application **Credit Hours:** 3
- SLIS 6338 - School Library Systems & Services **Credit Hours:** 3

Other courses (1 hour):

- SLIS 5012 - Professional Preparation Seminar for School Librarians **Credit Hours:** 1

Additional Information

Students not passing the School Librarian state assessment by the final semester of this plan must also enroll in and successfully complete this course.

Capstone Experience (3 hours):

- SLIS 6739 - School Library Practicum **Credit Hours:** 3

Additional Information

- Practicum application form must be completed and submitted by June 8 for fall semester and October 1 for spring semester in order to enroll in SLIS 6739. Students will be eligible to register for SLIS 6739 after they have successfully completed at least 24 hours of the SLIS core courses included in the master's degree.
- All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.

Certificate

School Library and Information Science Certificate

The School Library and Information Science Certificate is a plan of study specifically designed as a refresher program for credentialed school librarians. The plan requires students to take 4 courses to refresh/update their knowledge and skills with the latest best practices within the field.

Certificate Requirements

Required Courses (12 hours)

- SLIS 6136 - Librarians as Instructional Partners **Credit Hours:** 3
- SLIS 6234 - Librarians Empowering Learners Through Advocacy Leadership **Credit Hours:** 3
- SLIS 6334 - Administration of School Library Services **Credit Hours:** 3
- SLIS 6336 - Media and Technology Selection and Application **Credit Hours:** 3

Additional Information

Upon successful completion of these courses, students receive a UHCL Certificate of Completion which can be used toward Continuing Education Units in their districts.

UHCL Distance Education Certificate

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 University of Houston-Clear Lake (UHCL). It is not a state certificate.

Check prerequisites before enrolling in any courses.

Certificate Requirements

Required Courses (3 hours)

- INST 6437 - Interactive Distance Education **Credit Hours:** 3

Choose 6 hours from the following

- INST 5135 - Multimedia Design Applications **Credit Hours:** 3
- INST 5835 - Digital Video Production for Educators and Trainers **Credit Hours:** 3
- INST 6137 - Technology and e-Learning **Credit Hours:** 3

UHCL Performance Technology Professional Development Certificate

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 University of Houston-Clear Lake (UHCL). It is not a state certificate.

Check prerequisites before enrolling in any courses.

Certificate Requirements

Required Courses (12 hours)

- INST 5130 - Learning Theory and Instruction **Credit Hours:** 3
- INST 5233 - Performance Technology **Credit Hours:** 3
- INST 5333 - Systematic Design of Technology-Based Instruction **Credit Hours:** 3

Choose one

- INST 5433 - Project Management for Instructional Projects **Credit Hours:** 3
- INST 5131 - Trends and Issues in Instructional Design and Technology **Credit Hours:** 3

Master of Science

Instructional Design and Technology, Game Theory and Design Specialization, M.S.

The Game Theory and Design specialization track in Instructional Design and Technology will offer candidates an opportunity to gain skills and knowledge related to game design and development.

Check prerequisites before enrolling in any courses.

Degree Requirements

Professional Education Core (6 hours)

Select two after meeting with adviser.

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6037 - Advanced Technology Applications **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3
- SILC 5035 - Interpersonal Interactions in Diverse Settings **Credit Hours:** 3

Additional Information

Cannot select both SILC 6030 and SILC 5035.

Instructional Technology Core (15 hours)

- INST 5130 - Learning Theory and Instruction **Credit Hours:** 3
- INST 5131 - Trends and Issues in Instructional Design and Technology **Credit Hours:** 3
- INST 5233 - Performance Technology **Credit Hours:** 3
- INST 5333 - Systematic Design of Technology-Based Instruction **Credit Hours:** 3
- INST 5433 - Project Management for Instructional Projects **Credit Hours:** 3

Game Theory and Design Specialization (9 hours)

- DMST 5131 - Game Design and Theory **Credit Hours:** 3

Additional Courses

Two of the following

- DMST 5031 - Graphic Design **Credit Hours:** 3
- DMST 5236 - Digital Storytelling **Credit Hours:** 3
- PSYC 6431 - User-Centered Design **Credit Hours:** 3

Master's Degree Option (6 hours)

Option 2

Minimum of two semesters required for a maximum of six hours, with continuous registration until completion.

- EDUC 6839 - Master's Project Research **Credit Hours:** 3

Additional Information

- Collaborative Project with Digital Media Studies (DMST) and Software Engineering (SWEN).
- For additional information regarding these plans, please contact a faculty adviser.

Instructional Design and Technology, Human Resource Management Specialization, M.S.

The Human Resource Management specialization track in Instructional Design and Technology will offer candidates an opportunity to gain skills and knowledge related to human resource management.

Check prerequisites before enrolling in any courses.

Degree Requirements

Professional Education Core (6 hours)

Select two after meeting with adviser

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6037 - Advanced Technology Applications **Credit Hours:** 3
- SILC 5035 - Interpersonal Interactions in Diverse Settings **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Additional Information

Cannot select both SILC 6030 and SILC 5035.

Instructional Technology Core (15 hours)

- INST 5130 - Learning Theory and Instruction **Credit Hours:** 3
- INST 5131 - Trends and Issues in Instructional Design and Technology **Credit Hours:** 3
- INST 5233 - Performance Technology **Credit Hours:** 3
- INST 5333 - Systematic Design of Technology-Based Instruction **Credit Hours:** 3
- INST 5433 - Project Management for Instructional Projects **Credit Hours:** 3

Human Resource Management Specialization (9 hours)

- HMRS 5131 - Human Resource Management Processes **Credit Hours:** 3
- MGMT 5133 - Teamwork and Leadership Skills: Theory in Practice **Credit Hours:** 3

Additional Courses

Choose one

- HMRS 5531 - Training and Development **Credit Hours:** 3
- MGMT 5032 - Human Behavior in Organizations **Credit Hours:** 3

Master's Degree Option (6 hours)

Option 1

Minimum of two semesters required for a maximum of six hours, with continuous registration until completion.

- EDUC 6939 - Master's Thesis Research **Credit Hours:** 3

Option 2

Minimum of two semesters required for a maximum of six hours, with continuous registration until completion.

- EDUC 6839 - Master's Project Research **Credit Hours:** 3

Option 3

INST elective course

- INST 6739 - Instructional Technology Practicum **Credit Hours:** 3

Additional Information

- Practicum requires a minimum of 6 INST courses and the recommendation of the faculty adviser.
- All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.

Instructional Design and Technology, Industrial/Organizational Psychology Specialization, M.S.

The Industrial/Organizational Psychology (I/O PSYC) specialization track in Instructional Design and Technology will offer candidates an opportunity to gain skills and knowledge related to the field of I/O PSYC.

Check prerequisites before enrolling in any courses.

Degree Requirements

Professional Education Core (6 hours)

Select two after meeting with adviser

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6037 - Advanced Technology Applications **Credit Hours:** 3
- SILC 5035 - Interpersonal Interactions in Diverse Settings **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Additional Information

Cannot select both SILC 6030 and SILC 5035.

Instructional Technology Core (15 hours)

- INST 5130 - Learning Theory and Instruction **Credit Hours:** 3
- INST 5131 - Trends and Issues in Instructional Design and Technology **Credit Hours:** 3
- INST 5233 - Performance Technology **Credit Hours:** 3
- INST 5333 - Systematic Design of Technology-Based Instruction **Credit Hours:** 3
- INST 5433 - Project Management for Instructional Projects **Credit Hours:** 3

Industrial/Organizational Psychology Specialization (9 hours)

Three of the following:

- PSYC 5332 - Organizational Psychology **Credit Hours:** 3
- PSYC 5333 - Leadership in Organizations **Credit Hours:** 3
- PSYC 5334 - Change and Organizational Development **Credit Hours:** 3
- PSYC 5339 - Training and Development **Credit Hours:** 3
- PSYC 6538 - Performance Appraisal and Feedback **Credit Hours:** 3

Master's Degree Option (6 hours):

Option 1

Minimum of two semesters required for a maximum of six hours, with continuous registration until completion.

- EDUC 6939 - Master's Thesis Research **Credit Hours:** 3

Option 2

Minimum of two semesters required for a maximum of six hours, with continuous registration until completion.

- EDUC 6839 - Master's Project Research **Credit Hours:** 3

Option 3

INST elective course

- INST 6739 - Instructional Technology Practicum **Credit Hours:** 3

Additional Information

- Practicum requires a minimum of 6 INST courses and the recommendation of the faculty adviser.
- All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.

Instructional Design and Technology, Information Science Specialization, M.S.

The Information Science specialization track in Instructional Design and Technology will offer candidates an opportunity to gain skills and knowledge related to the fields of information and library sciences.

Degree Requirements

Professional Education Core (6 hours)

Select 2 after meeting with adviser.

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6037 - Advanced Technology Applications **Credit Hours:** 3
- SILC 5035 - Interpersonal Interactions in Diverse Settings **Credit Hours:** 3
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Additional Information

Cannot select both SILC 6030 and SILC 5035

Instructional Technology Core (15 hours)

- INST 5130 - Learning Theory and Instruction **Credit Hours:** 3
- INST 5131 - Trends and Issues in Instructional Design and Technology **Credit Hours:** 3
- INST 5233 - Performance Technology **Credit Hours:** 3
- INST 5333 - Systematic Design of Technology-Based Instruction **Credit Hours:** 3
- INST 5433 - Project Management for Instructional Projects **Credit Hours:** 3

Information Science Specialization (12 hours):

- SLIS 6234 - Librarians Empowering Learners Through Advocacy Leadership **Credit Hours:** 3
- SLIS 6334 - Administration of School Library Services **Credit Hours:** 3
- SLIS 6336 - Media and Technology Selection and Application **Credit Hours:** 3

- SLIS 6338 - School Library Systems & Services **Credit Hours:** 3

Master's Degree Option (3 hours)

- INST 6739 - Instructional Technology Practicum **Credit Hours:** 3

Instructional Design and Technology, M.S.

The graduate plan in Instructional Design and Technology (INST) leads to the Master of Science (M.S.) degree that prepares graduates to systematically design training and instruction.

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 (Practicum) for their capstone experience if the proposed practicum site is 50 or more miles from the University of Houston-Clear Lake campus. Students in this situation would most likely be advised to pursue Options 1 or 2. For additional information regarding these plans, please contact a faculty adviser.

Check prerequisites before enrolling in any courses.

Degree Requirements

Professional Education Core (6) hours)

Select 2 after meeting adviser.

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- EDUC 6033 - Research Design and Analysis **Credit Hours:** 3
- INST 6037 - Advanced Technology Applications **Credit Hours:** 3
- SILC 5035 - Interpersonal Interactions in Diverse Settings **Credit Hours:** 3
  Or
- SILC 6030 - Foundations of Multicultural Education **Credit Hours:** 3

Instructional Technology Core (15 hours)

- INST 5130 - Learning Theory and Instruction **Credit Hours:** 3
- INST 5131 - Trends and Issues in Instructional Design and Technology **Credit Hours:** 3
- INST 5233 - Performance Technology **Credit Hours:** 3
- INST 5333 - Systematic Design of Technology-Based Instruction **Credit Hours:** 3
- INST 5433 - Project Management for Instructional Projects **Credit Hours:** 3

Electives

Choose one elective course as advised.

Master's Degree Options (6 hours):

Option 1

Minimum of two semesters required for a maximum of six hours, with continuous registration until completion.

- EDUC 6939 - Master's Thesis Research **Credit Hours:** 3

Option 2

Minimum of two semesters required for a maximum of six hours, with continuous registration until completion.

- EDUC 6839 - Master's Project Research **Credit Hours:** 3

Option 3

INST Elective Course

- INST 6739 - Instructional Technology Practicum **Credit Hours:** 3

Additional Information

- Practicum requires a minimum of 6 INST courses and the recommendation of the faculty adviser.
- All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.

School Library and Information Science M.S.

The graduate plan in School Library and Information Science leads to the Master of Science (M.S.) degree. The master's degree in School Library and Information Science consists of 30 hours of graduate coursework. Candidates for this master's degree must complete all courses within the School Library Core (27 hours) and the Capstone Experience (3 hours). Students will be eligible to register for the capstone experience, SLIS 6735, Leadership Seminar, after they have successfully completed at least 24 hours of the master's degree.

School Library (27 hours)

- SLIS 5532 - Selecting Literature and Materials for Young Adults **Credit Hours:** 3
- SLIS 5533 - Selecting Literature and Materials for Children **Credit Hours:** 3

- SLIS 6134 - School Library Collection Development Management **Credit Hours:** 3
- SLIS 6136 - Librarians as Instructional Partners **Credit Hours:** 3
- SLIS 6234 - Librarians Empowering Learners Through Advocacy Leadership **Credit Hours:** 3
- SLIS 6334 - Administration of School Library Services **Credit Hours:** 3
- SLIS 6336 - Media and Technology Selection and Application **Credit Hours:** 3
- SLIS 6338 - School Library Systems & Services **Credit Hours:** 3
- SLIS 6430 - Research in Library Science **Credit Hours:** 3

Capstone Experience (3 hours)

- SLIS 6735 - Leadership Seminar **Credit Hours:** 3

School Library and Information Science, School Librarian Standard Certification (EC-12), M.S.

The graduate plan in School Library and Information Science leads to the Master of Science degree. Students completing this degree plan are 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 of 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 30-31 semester hours.

Students who meet the graduate admissions requirements to the College of Education (see Graduate Admissions Requirements) must meet additional requirements prior to being admitted to the School Librarian program. Each applicant must:

- Have a GPA of 2.750 over the last 60 hours.
- Provide proof of a valid Texas teaching certificate.
- Provide a letter of support from a school building administrator.
- Provide a teacher service record.
- Pay the TEA Admission fee.

New students must meet with assigned faculty adviser before enrolling in any courses.

Degree Requirements

School Library Core (27 hours)

- SLIS 5532 - Selecting Literature and Materials for Young Adults **Credit Hours:** 3
- SLIS 5533 - Selecting Literature and Materials for Children **Credit Hours:** 3

- SLIS 6134 - School Library Collection Development Management **Credit Hours:** 3
- SLIS 6136 - Librarians as Instructional Partners **Credit Hours:** 3
- SLIS 6234 - Librarians Empowering Learners Through Advocacy Leadership **Credit Hours:** 3
- SLIS 6334 - Administration of School Library Services **Credit Hours:** 3
- SLIS 6336 - Media and Technology Selection and Application **Credit Hours:** 3
- SLIS 6338 - School Library Systems & Services **Credit Hours:** 3
- SLIS 6430 - Research in Library Science **Credit Hours:** 3

Capstone Experience (3 hours)

- SLIS 6739 - School Library Practicum **Credit Hours:** 3

Additional Information

- Practicum application form must be completed and submitted by June 8 for fall semester and October 1 for spring semester in order to enroll in SLIS 6739. Students will be eligible to register for SLIS 6739 after they have successfully completed at least 24 hours of the SLIS core courses included in the master's degree.
- All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.

Other Courses (1 hour)

- SLIS 5012 - Professional Preparation Seminar for School Librarians **Credit Hours:** 1

Additional Information

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 Library and Information Science, School Librarian Standard Certification (EC-12), M.S. with Social Justice

The University of Houston-Clear Lake prepares school librarian candidates to be leaders within the school community - a community comprised of diverse cultures and learners. There is a continued need for school librarians, as educational leaders, to possess the attitudes and aptitudes to address the many challenges related to leadership relevant to cultural diversity, equity and democracy. The specialization in Social Justice, when added to the School Library and Information Science master's degree, can provide graduates with not only an edge in the competitive job market,

but also a deeper understanding of the practices inherent in addressing the structures and norms that result in inequitable education and the knowledge of the importance of the advocacy role the school librarians must take to be effective leaders within the school.

Students who meet the graduate admissions requirements to the College of Education (see Graduate Admissions Requirements) must meet additional requirements prior to being admitted to the School Librarian program. Each applicant must:

- Have a GPA of 2.750 over the last 60 hours.
- Provide proof of a valid Texas teaching certificate.
- Provide a letter of support from a school building administrator.
- Provide a teacher service record.
- Pay the TEA Admission fee.

New students must meet with assigned faculty adviser before enrolling in any courses.

Degree Requirements

School Library (27 hours)

- SLIS 5532 - Selecting Literature and Materials for Young Adults **Credit Hours:** 3
- SLIS 5533 - Selecting Literature and Materials for Children **Credit Hours:** 3
- SLIS 6134 - School Library Collection Development Management **Credit Hours:** 3
- SLIS 6136 - Librarians as Instructional Partners **Credit Hours:** 3
- SLIS 6234 - Librarians Empowering Learners Through Advocacy Leadership **Credit Hours:** 3
- SLIS 6334 - Administration of School Library Services **Credit Hours:** 3
- SLIS 6336 - Media and Technology Selection and Application **Credit Hours:** 3
- SLIS 6338 - School Library Systems & Services **Credit Hours:** 3
- SLIS 6430 - Research in Library Science **Credit Hours:** 3

Social Justice Specialization (12 hours)

- SILC 6031 - Social Justice Leadership, Policy and Advocacy **Credit Hours:** 3
- SILC 6033 - Reflection in Social Justice Education **Credit Hours:** 3
- SILC 6034 - Current Issues in Diverse Communities **Credit Hours:** 3
- SILC 6035 - Social Foundations of Education **Credit Hours:** 3

Additional Requirement Course (1 hour)

- SLIS 5012 - Professional Preparation Seminar for School Librarians **Credit Hours:** 1

Additional Information

Candidates not passing the School Librarian state assessment by the final semester must enroll in and successfully complete this course. Candidates passing the School Librarian state assessment by the final semester of this plan will have this course waived.

Capstone Experience (3 hours)

- SLIS 6739 - School Library Practicum **Credit Hours:** 3

Additional Information

- Practicum application form must be completed and submitted by June 8 for fall semester and October 1 for spring semester in order to enroll in SLIS 6739. Students will be eligible to register for SLIS 6739 after they have successfully completed at least 24 hours of the SLIS core courses included in the master's degree.
- All placement sites must have an approved UHCL Agreement of Affiliation on record with the Center for the Professional Development of Teachers office prior to beginning the practicum.

College of Human Sciences and Humanities

Accreditations and Approvals

The College of Human Sciences and Humanities is home to a number of accredited programs.

- The Behavior Analysis program is accredited by the Association for Behavioral Analysis International.
- Human Factors/Ergonomics Certificate and the Human Factors concentration in the master's degree Psychology program are both accredited by the Human Factors and Ergonomics Society.
- The Registered Nurse-to-Bachelor of Science in Nursing program is accredited by the Accreditation Commission for Education in Nursing.
- The Bachelor of Social Work is accredited by the Council on Social Work Education.
- The Doctor of Psychology in Health Service Psychology has been awarded accreditation on contingency by the American Psychological Association.
- The School Psychology program is approved by and has received National Recognition from the National Association of School Psychologists.
- In addition, the National Strength and Conditioning Association has recognized the Fitness and Human Performance curriculum as preparing students for successful entrance into the career field.

Departments and Programs of Study

The departments making up HSH include Clinical, Health, and Applied Sciences; Communication and Studio Arts; Liberal Arts; Psychology; and, Social and Cultural Sciences. Each is home to a variety of programs representing the areas of academic study indicated in the department-level sections below.

Certificates

In addition to study in programs leading to major degrees, HSH also offers a number of program-related certificates including the following:

- Applied Behavior Analysis
- Public Service Leadership
- Women's and Gender Studies

Contact Us

Office of the Dean
Phone: 281-283-3300
Email: hsh@uhcl.edu
Web: https://www.uhcl.edu/human-sciences-humanities
Bayou Building 1539

Office of Academic Advising
Phone: 281-283-3333
Email: hshadvising@uhcl.edu
Web: https://www.uhcl.edu/human-sciences-humanities/advising/
Bayou Building 1615

Texas Department of Corrections Transforming Lives by Degrees program
Phone: 281-283-3420
Email: hsh@uhcl.edu
Web: https://www.uhcl.edu/human-sciences-humanities
Bayou Building 1617

Admission into an HSH Program of Study

Records for degree-seeking graduate students are processed by the Office of Admissions and forwarded to the dean's office for faculty assignment and completion of the program of study.

Requirements for each HSH program of study are detailed in the following pages.

Information on HSH degree plans and advising schedules may be obtained from the HSH Office of Academic Advising.

Applicants may be accepted into a graduate program of study in the College of Human Sciences and Humanities through multiple paths:

- Applicants, who have a 3.00 cumulative GPA, meet the College's graduate admissions criterion, except for those applying to Psychology. In some HSH programs, applicants who fall below the GPA requirement will be passed to program faculty for individual review. Requirements for individual review may be found in the program sections elsewhere in this catalog or on program web pages.
    - For Psychology (not the Professional Psychology programs), the minimum criterion for automatic admissions is a 3.50 cumulative GPA. Applicants who fall below the GPA requirement will be passed to program faculty for individual review. Requirements for individual review may be found in the program sections elsewhere in this catalog or on program web pages.
- The GRE is waived for all programs, except Clinical Psychology and PsyD.

A student who has been denied admission to any HSH program of study may appeal the decision in writing to the HSH Associate Dean.

The Application for Admission, transcripts for all prior college coursework and GRE scores (if necessary) must be received by the Office of Admissions according to the following deadlines unless otherwise stated in individual program descriptions:

- Fall Enrollment: Aug. 1
- Spring Enrollment: Dec. 1
- Summer Enrollment: May 1

Some programs and concentrations in HSH require secondary admission or secondary application procedures as described in the relevant catalog sections below. Such programs and concentrations include Behavior Analysis, Digital Media Studies, Exercise and Health Sciences, Industrial/Organizational Psychology, the Human Factors concentration in Psychology, the Neuroscience and Behavior concentration in Psychology, and all of the Professional Psychology plans (Clinical Psychology, Family Therapy, Health Service Psychology and School Psychology). Applicants should review relevant catalog sections for information about the admission process, requirements and deadlines.

International Admissions

For international students, dual admission is required. Degree-granting programs review and admit or deny students to a program based on a student's academic preparation. UHCL's Office of International Admissions and Programs reviews and admits or denies students to the university based on legal aspects specific to international students. Admission must be approved by both the academic program and the Office of International Admissions and Programs for a student to enter the university.

Transferring Majors

Students who wish to transfer from one HSH graduate major to another may do so by completing an Academic Record Change form if the admission criteria for the desired program is equivalent to that of the student's original program. If the admission criteria for the program to which the student wishes to transfer are different in kind or higher in expectation, the student must complete an Academic Record Change form with the HSH Office of Academic Advising which will then be forwarded to the program director of the desired program to render an admissions decision.

GRE Requirements

Individual programs in HSH have established program-specific requirements regarding the GRE examination. All programs have waived the GRE requirement for all applicants except Clinical Psychology and PsyD.

Certificate

Women's and Gender Studies Certificate

Women's and Gender Studies is an interdisciplinary curriculum administered by the College of Human Sciences and Humanities. Women's and Gender Studies courses offer challenging new perspectives by exploring the special contributions of women and the impact of gender in a variety of academic disciplines.

For questions about the Women's and Gender Studies certificate, contact Dr. Anne Marcoline at marcoline@uhcl.edu.

Requirements

Courses (9 hours)

- Nine hours of Women's and Gender Studies courses in any combination. WGST 5732 is highly recommended.

Department of Clinical, Health, and Applied Sciences

The Department of Clinical, Health and Applied Sciences (CHAS) is committed to educating and preparing undergraduate and graduate students for careers that promote the mental, physical and psychosocial health and well-being of individuals, families and communities. Because of changing lifestyle and environmental factors that result in an increased prevalence of disease and disability, there is a growing need to discover, develop and disseminate evidence-based prevention, treatment and rehabilitation programs for physical and mental impairments. Through research, teaching and service, the faculty of CHAS programs are dedicated to meeting this growing societal need. Moreover, CHAS faculty members are committed to the academic preparation and professional mentorship of students who will become the community and family health leaders of future generations.

CHAS offers undergraduate degrees in various areas of clinical and applied health sciences. At the graduate level, CHAS offers the PsyD in Health Service Psychology (Clinical Psychology/School Psychology), Master of Science, Master of Arts, and specialty degrees.

Graduate Degrees

Behavior Analysis, M.A.

Exercise and Health Sciences, M.S.

- Dual Doctor of Chiropractic/M.S
  Professional Psychology Plans

- Clinical Psychology M.A.
- Family Therapy, M.A.
- Industrial/Organizational Psychology, M.A.
- School Psychology S.S.P.
- Health Service Psychology (Clinical Psychology/School Psychology), PsyD

As noted in the "Accreditations" section above, many of these programs are accredited by their various national councils. Students graduating from these programs may sit for their appropriate licensing exams.

Professional Psychology Plans

The graduate programs in Professional Psychology provide a breadth of background in academic theory along with specific course work and specialized training in one of four areas: (1) Clinical Psychology, (2) Family Therapy, (3) School Psychology and (4) Health Service Psychology. The specifics of each program are described in detail in the pages that follow. Clinical Psychology and Family Therapy lead to the Master of Arts degree in the respective discipline and School Psychology leads to the Specialist in School Psychology degree (SSP). Health Service Psychology culminates in a Doctor of Psychology degree (PsyD). While completing a Professional Psychology program does not automatically qualify graduates for any specific license or clinical credential, many of our graduates meet the academic requirements for licensure in Texas as Licensed Psychological Associates (LPA), Licensed Specialists in School Psychology (LSSP), Licensed Professional Counselors (LPC), Licensed Marriage and Family Therapists (LMFT) and a number of other professional credentials. Many graduates of the Health Service Psychology program will become Licensed Psychologists. For further information about certification and licensure, contact the director for the respective program.

Applying for Admission to Professional Psychology Programs

Applicants may apply to only one professional psychology program during any admissions period. Application fees for each program are described below. The program application fee is in addition to the fee for university admission.

Admission into a Professional Psychology program will be offered only to the most qualified applicants. The typical minimum standard for admission to the master's programs in Professional Psychology is an overall 3.25 grade point average, prerequisite psychology preparation and evidence of clinical aptitude. The percentage of applicants accepted into the professional programs of study generally ranges between 25% and 75%, depending on the program. The typical minimum standard for admission to Health Service Psychology is a GPA of 3.4 or higher, a score of 300

or higher on the GRE, with at least a 3.5 in Analytical Writing and evidence of research potential (publication, thesis, formal research project, participation in research).

The application process is restricted to one Master's/Specialist program. There is an application fee for the program as described below, which is a cost in addition to the application fee for university admission. Applications to the program must be submitted online through ApplyTexas. **All application materials must be submitted online, including transcripts and GRE scores. GRE scores are not required for School Psychology, Family Therapy, or I/O Psychology (optional).** Note that all programs require that letters of recommendation and recommendation forms be submitted by writers directly to a specific email address. (See specific instructions for each program). Incomplete applications may not be reviewed. In addition to completing the program application described here, 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 program.

Application deadlines for the master's and specialist programs is Jan. 25. The application deadline for the PsyD program is Dec.15. Applicants must ensure that their applications for UHCL admission, GRE scores and supporting transcripts are all received by the university Office of Admissions and the Professional Psychology program of choice.

Applicants should note that admission to graduate status at the university is not equivalent to admission to one of the Professional Psychology programs. In some cases, applicants may be contacted by the advising office; any such communication refers only to acceptance into graduate status at the university based on the application for university admission described above. This should not be confused with acceptance into one of the Professional Psychology programs. Applicants are not admitted into a Professional Psychology program until they receive formal notice from the Professional Psychology program director that they have been accepted. Applicants should direct any questions regarding the status of their applications to the program director of the respective program. Each program's admissions committee will notify applicants of admission decisions by late spring. If students are not accepted into a Professional Psychology program, they may apply for admission to a non-clinical master's program. Information regarding these programs is available through the HSH Office of Academic Advising. Applicants to a non-clinical master's program should be aware of the information in the section entitled "Restricted Courses."

Applying to Master's/Specialist's Programs in Professional Psychology

- All application materials must be submitted online through ApplyTexas. All recommendation forms and letters must be submitted by each writer to the email address for the program.
- Professional Psychology application components:

- A brief curriculum vitae (a resume including relevant coursework paid or volunteer work experiences, any honors, presentations, papers and other life experiences that should be considered).
- A brief (up to 1000-word) essay stating reasons for desiring this training and how it fits into career goals.
- Three recommendations for Applicant Admission. (Form may be found in the program brochure or on the university's web site.)
- Transcripts from all colleges and universities previously attended (These are in addition to the transcripts sent directly to the UHCL Office of Admissions.) collected by the applicant and included in the application envelope.
- Scores on the Graduate Record Examination General Test for Clinical Psychology.
- A $35 application fee is required for all professional psychology programs. The program application fee may be paid by credit card online http://apps.uhcl.edu/ECommerce/Schedule/CHAS check or money order made payable to: UHCL Professional Psychology Programs, including the name of the programs (Clinical Psychology, Family Therapy or School Psychology.)

ALL LETTERS OF RECOMMENDATION FOR CLINICAL AND SCHOOL PSYCHOLOGY MUST BE EMAILED DIRECTLY FROM THE LETTER WRITER TO:

clinicalschool@uhcl.edu

ALL LETTERS OF RECOMMENDATION FOR FAMILY THERAPY MUST BE SENT TO:

familytherapy@uhcl.edu

To Pay the Application Fee:

You can pay the $35 application fee online http://apps.uhcl.edu/ECommerce/Schedule/CHAS or send a $35 check payable to University of Houston-Clear Lake and send it to:

Clinical
Clinical Psychology Admissions Committee
University of Houston-Clear Lake
College of Human Sciences and Humanities
2700 Bay Area Blvd, Box 73
Houston, Texas 77058-1098

Family
Family Therapy Admissions Committee
College of Human Sciences and Humanities
University of Houston-Clear Lake
2700 Bay Area Blvd, Box 73
Houston, Texas 77058-1098

School
School Psychology Admissions Committee
College of Human Sciences and Humanities
University of Houston-Clear Lake
2700 Bay Area Blvd, Box 73
Houston, Texas 77058-1098

Applying for to **Doctoral Program**, (Combined Clinical and School Psychology) in Health Service Psychology
There are seven components to the PsyD application:

- The online application form
- A curriculum vitae
- A brief statement of purpose stating reasons for wanting this training and how it fits into the applicant's career goals. The statement of purpose letter (not to exceed 2 pages, single spaced) includes the following:
    - Research and clinical/school psychology experience and interests
    - Other relevant experiences (e.g., volunteerism)
    - Post-graduation professional goals
    - List of faculty within the PsyD program with whom the applicant would like to work and why
- 3 recommendations for applicant admission. Each writer needs to fill out a recommendation form (see website) and submit a separate letter via email to psyd@uhcl.edu.
- Transcripts from all colleges and universities previously attended (except University of Houston-Clear Lake transcripts, which will be generated internally).
- Scores on general test of the Graduate Record Examination. Official scores are reported to the university through the standard GRE process. The applicant also enters GRE scores onto the program application form as indicated.
- A $50 check or money order made payable to: UHCL Professional Psychology Programs: Health Service Psychology. You can pay the $50 application fee online http://apps.uhcl.edu/ECommerce/Schedule/CHAS or send $50 check payable to University of Houston-Clear-Lake and send it to:
    PsyD Admissions Committee
    College of Human Sciences and Humanities
    University of Houston-Clear Lake
    2700 Bay Area Blvd, Box 73
    Houston, Texas 77058-1098

ALL LETTERS OF RECOMMENDATION FOR HEALTH SERVICE PSYCHOLOGY MUST BE EMAILED DIRECTLY FROM THE LETTER WRITER TO: psyd@uhcl.edu

Review of Program

Continuation in a Professional Psychology program requires satisfactory academic performance and the acquisition of appropriate clinical and professional skills and

personal attributes. Students admitted to these programs 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 program. The policies and procedures for each program provide further information regarding these matters and may be obtained from the director of each program.

Grade Requirements

Only courses in which a grade of B- or better is earned may be applied toward any Professional Psychology program requirement. Grades of C+ or below are not acceptable.

Restricted Courses

Applicants should note that the following courses are restricted to students formally admitted to one of the Professional Psychology programs. Restricted courses may not be taken by graduate students in the General Psychology program or transitional students who have not yet been admitted into a Professional Psychology program. In addition to the courses below, all 7000- and 8000-level PSYC courses are restricted to students in the PsyD program.

- PSYC 5111
- PSYC 5136
- PSYC 5138
- PSYC 5231
- PSYC 5236
- PSYC 5239
- PSYC 5731
- PSYC 5734
- PSYC 5738
- PSYC 6032
- PSYC 6033
- PSYC 6034
- PSYC 6038
- PSYC 6039
- PSYC 6111
- PSYC 6121
- PSYC 6132
- PSYC 6133
- PSYC 6137
- PSYC 6139
- PSYC 6230
- PSYC 6231
- PSYC 6233
- PSYC 6234
- PSYC 6236
- PSYC 6332

- PSYC 6531
- PSYC 6534
- PSYC 6636
- PSYC 6666

Doctor of Psychology

Health Service Psychology (Clinical Psychology/School Psychology), Psy.D.

The PsyD in Health Service Psychology (Clinical Psychology/School Psychology) provides broad practitioner-scientist training with an emphasis on clinical practice. The aim of the program is to prepare students for careers as health professionals in clinical and school settings. The overarching model of the program is the provision of health services with particular emphasis on cognitive-behavioral psychology. Graduates from this program will be competent to function as licensed professional psychologists in a variety of roles across a variety of settings. The Doctor of Psychology in Health Service Psychology has been awarded accreditation on contingency by the American Psychological Association.

As a practitioner-scientist program, the PsyD program in Health Service Psychology's primary goal is to train practitioners, scholars and applied researchers in the area of health service psychology. The program develops graduates who use scientific methods in the professional practice of psychology with the aim of improving health and behavioral health outcomes. The program emphasizes the importance of the scientific method as the primary basis to advance knowledge and inform practice. Graduates will be competent in evidence-based practice (assessment, intervention and consultation). This model emphasizes the reciprocal relationship between psychological, biological and social aspects of both personal and community health.

Admission

Admission to the graduate program in Health Service Psychology is limited and is offered only to the most qualified applicants. The **typical** minimum standards for admission include:

- Earned bachelor's, master's, or specialist degree in psychology, clinical psychology, school psychology or a closely related discipline
- GPA or 3.3 or higher for those entering with an undergraduate degree only or GPA of 3.5 or higher for those entering with graduate credit or an earned graduate degree;
- Score of 300 of higher on the Graduate Record Examination (GRE) with at least 3.5 in Analytical Writing
- Statement of interest in pursuing the PsyD
- Reference letters

- Evidence of research potential (publication, thesis, formal research project, participation in research).

Applying to the Health Service Psychology PsyD Program

Applying to the program requires submitting the documents described below. Applicants must complete a university Application for Admission and submit it and all required fees and documents to the university's Admission Office. At the same time, applicants also must apply to the program. There is an application fee for university admissions, which is in addition to the program application fee. International students are advised to consult the relevant web pages and/or contact International Admissions in the Admissions Office as early as possible for information.
The PsyD program requires an application fee of $50 in addition to the university's regular application fee. This fee is payable to the "University of Houston-Clear Lake PsyD program."

The PsyD application includes the following components:

- A Curriculum Vitae
- A 2-page, single-spaced statement of purpose stating reasons for seeking this training and explaining how the training complements the applicant's career goals. The statement of purpose document may include the following:
    - Research and clinical/school psychology experience and interests
    - Practicum experience
    - Other relevant experiences (i.e., volunteering)
    - Post-graduation professional goals
    - A list of faculty in the PsyD program with whom the applicant would like to work with and why
- Three (3) recommendations for Applicant Admission (form found on the program website). Each recommender must complete the recommendation form and submit a separate letter.
- Official transcripts from all colleges and universities previously attended (except University of Houston-Clear Lake transcripts, which will be generated internally). These transcripts must be sent directly to the university's Office of Admissions.
- Scores on the general test of the GRE. Official scores are reported to the university through the standard GRE process.
- A $50.00 payment online https://apps.uhcl.edu/ECommerce/Schedule/CHAS or check or money order made payable to "UHCL PsyD program."

Note: Admission to graduate status at the university is not equivalent to admission to the PsyD program. Admission to the university should not be confused with acceptance into the PsyD program. Applicants will be notified about admission into the PsyD directly by the program director. Applicants are admitted into a professional psychology program only by way of formal notification from the program director. For international applicants, admission to the university requires admission through both the academic program and the Office of International Admissions and Programs.

Timeframe for Program Application and the Admission Process

Applications are accepted once a year. Applicants have the responsibility to ensure that their applications, GRE scores, supporting transcripts and recommendations are received by the application deadline of December 15. Review of applications will begin in January. After initial review of the application materials, the admissions committee will invite applicants under active consideration to campus. Students will be notified of interviews by the end of January. Interviews will occur in late January or early February. Once interviews have been completed, the PsyD admissions committee will begin notifying applicants of admission decisions by early March. Acceptances must be finalized on or before April 15.

Review of Progress

Continuation in the PsyD program requires satisfactory academic performance and the acquisition of appropriate clinical and professional skills and personal attributes. Students admitted to the program will be evaluated annually for academic progress and appropriate professional behavior and development. An unsatisfactory evaluation may lead to probation or termination from the program. All students are required to adhere to the policies and procedures outlined in the Doctoral Student Handbook for the Doctorate in Psychology.

Grade Requirements

Only courses with a grade of "B-" or better will be applied toward the PsyD program requirements. Further grade requirements are outlined in the Doctoral Student Handbook for the Doctorate in Psychology.

Degree Requirements

The Doctorate of Psychology in Health Service Psychology requires 108 credit hours of coursework (of which up to 27 hours may be waived based on prior coursework and competency) organized into the following sections: Foundational Knowledge, Methodology and Statistics, Assessment, Intervention, Clinical Experiences, Thesis/Dissertation, and Electives. All students will complete experiences in both research and clinical work and a qualifying exam. Most students will be required to complete the program's maximum number of hours (108), but those students with previous graduate credit may submit documentation (as outlined in the **Doctoral Student Handbook**) to request a waiver for up to 27 hours of graduate credit towards the candidate plan of study, reducing the plan to a minimum of 81 hours.

Foundational Knowledge

- PSYC 5031 - Human Growth and Development **Credit Hours:** 3
- PSYC 5235 - Learning Principles **Credit Hours:** 3
- PSYC 5532 - Advanced Social Psychology **Credit Hours:** 3
- PSYC 6130 - Psychological Measurement **Credit Hours:** 3

- PSYC 6134 - Biological Basis of Behavior **Credit Hours:** 3
- PSYC 6533 - History and Systems **Credit Hours:** 3
- PSYC 6832 - Advanced Cognitive and Affective Psychology **Credit Hours:** 3
- PSYC 7030 - Orientation to Health Service Psychology **Credit Hours:** 3
- PSYC 7136 - Multicultural and Diversity Issues **Credit Hours:** 3
- PSYC 7531 - Psychopathology **Credit Hours:** 3
- PSYC 7736 - Ethics and Professional Issues in Health Service Psychology **Credit Hours:** 3

Methodology and Statistics

- PSYC 7130 - Experimental Methodology **Credit Hours:** 3
- PSYC 7131 - Quantitative Analysis I **Credit Hours:** 3
- PSYC 7132 - Quantitative Analysis II **Credit Hours:** 3

Assessment

- PSYC 7032 - Cognitive Assessment **Credit Hours:** 3
- PSYC 7033 - Personality Assessment **Credit Hours:** 3

Intervention

- PSYC 7235 - Advanced Behavioral Therapy **Credit Hours:** 3
- PSYC 7332 - Advanced Consultation and Program Design/Evaluation **Credit Hours:** 3

Clinical Experience

- PSYC 7038 - Practicum **Credit Hours:** 3
- PSYC 7039 - External Practicum/Internship **Credit Hours:** 3
- PSYC 7936 - Evidence-Based Clinical Supervision Practices **Credit Hours:** 3
- PSYC 8931 - Doctoral Internship **Credit Hours:** 3

Additional Information

PSYC 7038 will be repeated for a total of 2 semesters.

PSYC 7039 will be repeated for at least 4 semesters.

PSYC 8931 will be repeated for a total of 3 semesters.

Students will enroll in PSYC 7936 for only one semester.

Thesis/Dissertation

- PSYC 7939 - Health Service Psychology Thesis **Credit Hours:** 3
- PSYC 8930 - Doctoral Dissertation **Credit Hours:** 3

Additional Information

Students who have not written master's theses or master's research projects prior to program admission will do so; all students will write doctoral dissertations.

PSYC 7939 will be repeated for a total of at least 6 hours.

PSYC 8930 will be repeated for a total of at least 9 hours

Electives

Choose THREE of the following courses (recognizing other courses may be developed and offered).

- PSYC 7031 - Dialectical Behavior Therapy **Credit Hours:** 3
- PSYC 7034 - Neuropsychological Assessment **Credit Hours:** 3
- PSYC 7138 - Mindfulness and Acceptance Therapy **Credit Hours:** 3
- PSYC 7139 - Intervention I: Academic and Cognitive Skills **Credit Hours:** 3
- PSYC 7232 - Advanced Child Behavioral Therapy **Credit Hours:** 3
- PSYC 7239 - Advanced Group Psychotherapy **Credit Hours:** 3
- PSYC 7331 - School Health Programs **Credit Hours:** 3
- PSYC 7333 - Pediatric Psychology **Credit Hours:** 3
- PSYC 7334 - Adult Behavioral Medicine **Credit Hours:** 3
- PSYC 7337 - Development and Treatment of Mood and Anxiety Disorders **Credit Hours:** 3
- PSYC 7630 - Behavioral Family Systems **Credit Hours:** 3
- PSYC 7835 - Acceptance and Commitment Therapy for Addictions **Credit Hours:** 3

Master of Arts

Behavior Analysis, M.A.

The goal of the Behavior Analysis master's degree program is to provide students with a well-rounded foundation in behavior analysis through an integrated sequence of coursework, practicum and research activities. Students obtain competency in the basic principles of learning and the application of these principles with particular emphasis on interventions for individuals with neurodevelopmental disabilities. Practicum and research experiences are provided in a variety of settings. All students complete a major research project prior to graduation. The program, which is accredited by the Association for Behavior Analysis-International®, (ABAI), includes a course sequence verified by ABAI®. Students completing the coursework and practicum requirements of the program will be eligible to sit for the Board Certified Behavior Analyst (BCBA®) exam and become Licensed Behavior Analysts. Furthermore, graduates will be prepared to pursue doctoral degrees in behavior analysis, psychology or education.

Admission

Students wishing to enroll in this program of study must formally apply. Additional information may be obtained by contacting the program director, Dr. Dorothea Lerman, at behavioranalysis@uhcl.edu. Consult the application packet for further information about the admissions requirements, which include a resume, statement of goals, and reference letters. The priority deadline for applying for the master's degree in Behavior Analysis is January 5.

Prerequisites: Bachelor's degree or higher, preferably in a related field such as psychology, education, or special education. In addition, applicants should identify coursework or practical experience associated with Behavior Analysis.

Degree Requirements

Courses

- PSYC 5030 - Experimental Analysis of Behavior: Special Topics **Credit Hours:** 3
- PSYC 5235 - Learning Principles **Credit Hours:** 3
- PSYC 5435 - Conceptual Issues in Behavior Analysis **Credit Hours:** 3
- PSYC 6031 - Behavioral Assessment **Credit Hours:** 3
- PSYC 6238 - Applied Behavior Analysis **Credit Hours:** 3
- PSYC 6239 - Behavioral Interventions I **Credit Hours:** 3
- PSYC 6330 - Research and Practicum in Applied Behavior Analysis **Credit Hours:** 3
- PSYC 6331 - Behavioral Interventions II **Credit Hours:** 3
- PSYC 6338 - Ethics and Professional Issues in Behavior Analysis **Credit Hours:** 3
- PSYC 6339 - Research Methods in Behavior Analysis **Credit Hours:** 3
- PSYC 6430 - Verbal Behavior **Credit Hours:** 3
- PSYC 6530 - Personnel Management and Supervision in Applied Behavior Analysis **Credit Hours:** 3

Additional Information

- PSYC 6239 - Behavioral Interventions I, PSYC 6331 - Behavioral Interventions II: These seminar courses include class meetings and up to 10 hours per week of field activities in home, school, and clinic settings.
- PSYC 6330 - Research and Practicum in Applied Behavior Analysis: 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).

Electives (3 hours)

Choose ONE of the following courses.

- PSYC 5031 - Human Growth and Development **Credit Hours:** 3
- PSYC 5131 - Psychopathology of Childhood **Credit Hours:** 3
- PSYC 5432 - Psychoactive Drugs **Credit Hours:** 3
- PSYC 5532 - Advanced Social Psychology **Credit Hours:** 3
- PSYC 5736 - Behavioral Medicine **Credit Hours:** 3
- PSYC 5931 - Research Topics in Psychology **Credit Hours:** 3
- PSYC 5939 - Independent Study in Psychology **Credit Hours:** 3
- PSYC 6134 - Biological Basis of Behavior **Credit Hours:** 3
- PSYC 6235 - Behavioral/Cognitive Therapies **Credit Hours:** 3
- PSYC 6832 - Advanced Cognitive and Affective Psychology **Credit Hours:** 3

Clinical Psychology M.A.

The Clinical Psychology program prepares students to work in the mental health field and includes theoretical training and practical experience in psychological assessment and intervention. Graduates of the plan meet the academic requirements for licensure as Professional Counselors and/or Psychological Associates (LPC or LPA). Admission requirements include the GRE examination, curriculum vita, a statement of interest, and reference letters.

Prerequisites (15 hours)

In addition to the courses listed below an additional nine hours of undergraduate psychology is required. Coursework in Personality Psychology and Developmental Psychology are recommended.

- PSYC 2301 - Introduction to Psychology **Credit Hours:** 3
- PSYC 4351 - Abnormal Psychology **Credit Hours:** 3

Degree Requirements

A number of courses below are prerequisite requirements and are restricted to students admitted into a Professional Psychology plan.

See the Course Roster for information about prerequisite requirements; see also the list of restricted courses in the overview of HSH Professional Psychology programs above.

Core Requirements (21 hours)

- PSYC 5031 - Human Growth and Development **Credit Hours:** 3
- PSYC 5235 - Learning Principles **Credit Hours:** 3
- PSYC 5734 - Ethics, Law, and Professional Consultation **Credit Hours:** 3
- PSYC 6036 - Advanced Nonexperimental Methods and Statistics **Credit Hours:** 3
- PSYC 6037 - Advanced Experimental Methods and Statistics **Credit Hours:** 3
- PSYC 6134 - Biological Basis of Behavior **Credit Hours:** 3
- PSYC 6531 - Psychopathology **Credit Hours:** 3

Sociocultural Elective (3 hours)

Sociocultrual Elective- 3 credits

- PSYC 5136 - Multicultural Counseling **Credit Hours:** 3

Assessment Requirements (6 hours)

Choose TWO of the following courses.

- PSYC 6031 - Behavioral Assessment **Credit Hours:** 3
- PSYC 6032 - Cognitive Assessment **Credit Hours:** 3
- PSYC 6033 - Personality Assessment **Credit Hours:** 3

Therapy Requirements (12 hours)

- PSYC 5231 - Psychotherapy: Theory and Research **Credit Hours:** 3
- PSYC 5731 - Psychotherapy Skills and Professional Orientation **Credit Hours:** 3
- PSYC 5239 - Group Psychotherapy **Credit Hours:** 3
- PSYC 6235 - Behavioral/Cognitive Therapies **Credit Hours:** 3

Therapy Electives (6 hours)

Choose TWO of the following courses.

- PSYC 5138 - Mindfulness and Acceptance Therapies **Credit Hours:** 3
- PSYC 5233 - Introduction to Family Therapy **Credit Hours:** 3
- PSYC 5433 - Substance Abuse: Causes and Treatments **Credit Hours:** 3
- PSYC 5630 - Behavioral Family Systems **Credit Hours:** 3
- PSYC 5735 - Anxiety and Stress Management **Credit Hours:** 3
- PSYC 5736 - Behavioral Medicine **Credit Hours:** 3
- PSYC 5835 - Acceptance and Commitment Therapy for Addictions **Credit Hours:** 3
- PSYC 6534 - Couples and Sex Therapy **Credit Hours:** 3
- PSYC 6337 - Development and Treatment of Mood and Anxiety Disorders **Credit Hours:** 3
- PSYC 7031 - Dialectical Behavior Therapy **Credit Hours:** 3
- PSYC 7333 - Pediatric Psychology **Credit Hours:** 3

Additional Information

Other courses may be substituted with the consent of the student's adviser.

Free Elective (3 hours)

PSYC 5335 is needed for LPC requirements. PSYC 6939 or a third class listed under Therapy Electives can be taken in place of this free elective.

- PSYC 5335 - Career Counseling **Credit Hours:** 3

Supervised Clinical Experience (12 hours)

For each option, complete a total of 6 hours.

- PSYC 6038 - Clinical Practicum **Credit Hours:** 3
- PSYC 6636 - Clinical Internship **Credit Hours:** 3

Family Therapy, M.A.

The Family Therapy Program provides academic coursework, clinical training and supervision to prepare students for careers as creative, caring and competent

professional therapists for couples, families, individuals and groups. The program prepares students for licensure as a Marriage and Family Therapist (LMFT) in Texas. Completion of the degree also fulfills the coursework requirements needed to take the Licensed Professional Counselor (LPC) Exam in Texas. The UHCL Family Therapy Program prepares students to provide effective systemic and/or relationally oriented therapies with couples, families, individuals and groups.

Admissions

The Family Therapy Selection Committee accepts a limited number of students into the program based on review and evaluation of the criteria required for application. These criteria include submitting a complete application (application form, vita, essay, and 3 professional letters of reference-academic references from professor are preferred) and official transcripts of all previous course work. Typical admission criteria include a GPA of 3.20 or above; GRE of 297 (1000 for older versions of GRE) or above preferred (verbal and quantitative); and 6 hours of undergraduate Behavioral Sciences coursework which must include Introduction to Psychology and Abnormal Psychology. The GRE is not required for admissions.

Degree Requirements

Foundation Courses (6 hours)

Foundation courses include 6 hours of undergraduate Behavioral Sciences coursework in Introduction to Psychology and Abnormal Psychology. Similar courses may be substituted for these classes and coursework from various classes may meet these content requirements as well. All such substitutions must be approved by the student's faculty adviser.

Required Courses (60 hours)

PSYC 5738 must be taken for 2 semesters. PSYC 6636 must be taken for 3 semesters. In addition to the courses below, students must choose an elective, preferably PSYC 5231 or PSYC 5335.

- PSYC 5233 - Introduction to Family Therapy **Credit Hours:** 3
- PSYC 5234 - Individual and Family Development Across the Lifespan **Credit Hours:** 3
- PSYC 5236 - Family Assessment **Credit Hours:** 3
- PSYC 5239 - Group Psychotherapy **Credit Hours:** 3
- PSYC 5433 - Substance Abuse: Causes and Treatments **Credit Hours:** 3
- PSYC 5535 - Cross-Cultural Perspectives on the Family **Credit Hours:** 3
- PSYC 5731 - Psychotherapy Skills and Professional Orientation **Credit Hours:** 3
- PSYC 5737 - Family Therapy Professional Ethics **Credit Hours:** 3
- PSYC 5738 - Family Therapy Practicum **Credit Hours:** 3

- PSYC 6137 - Family Research **Credit Hours:** 3
- PSYC 6233 - Advanced Family Therapy **Credit Hours:** 3
- PSYC 6234 - Systems and Symptoms **Credit Hours:** 3
- PSYC 6236 - Child and Adolescent Family Therapy **Credit Hours:** 3
- PSYC 6531 - Psychopathology **Credit Hours:** 3
- PSYC 6534 - Couples and Sex Therapy **Credit Hours:** 3
- PSYC 6636 - Clinical Internship **Credit Hours:** 3

Additional Information

- Clinical internship involves a minimum of 400 hours of direct client contact. Internships are completed at approved sites throughout the Houston area.
- Students are expected to join the American Association for Marriage And Family Therapy (AAMFT) while they are in the program.

Industrial/Organizational Psychology, M.A.

The Master of Arts plan in Industrial/Organizational Psychology is designed to offer a two-year terminal degree that prepares students to contribute to an organization's success by improving the performance and well-being of its employees. Students will learn about individual differences, their assessment and evaluation, and organizational theories and interventions. The program follows the scientist/practitioner model, providing students with knowledge of psychological theories and principles and applying those principles to understand human behavior in organizations. This program will prepare students to enter organizations in both the public and private sector in human resource management, organizational development and management consulting. The degree requires either 42 hours with a thesis, project or internship capstone, or 45 hours with the coursework option.

Admission

The I/O Psychology degree is a popular program, admitting 15-20 students per year. Applicants interested in applying to the master's degree in Industrial/Organizational Psychology should fulfill the following requirements:

1. The expectation is that the GPA over the last 60 hours will be 3.00. Submit official transcripts from all institutions attended.
2. Coursework Requirement
    - at least 12 hours of upper-level undergraduate courses consisting of 3 hours of Introduction to Statistics and
    - 9 hours of any combination of Psychology, Business, Sociology, or Anthropology
    - If some of these courses have not been taken, applicants are still eligible to apply if all other expected requirements are met, but they will be required to take these prerequisite classes while enrolled.
3. CV/Resume describing previous education, work experience, relevant coursework, relevant volunteer activities, any honors, published papers, or

other relevant life experiences. Applicants must upload an updated resume or Curriculum Vitae (CV) to E-Services. Once you are logged into E-Service, please view the "To Do" list and click on "Details/Upload Documentation" to upload this material.

4. Statement of Purpose. In no more than 1,000 total words, please answer each of the questions below. You may answer these questions by logging into your e-Services account, selecting your "To-Do List," and choosing "Details/Upload Documentation."
    - What interests you most about I/O Psychology?
    - What are you most proud of so far in your academic or professional career?

5. Letters of reference from those familiar with your ability to succeed in graduate-level study.

If you are having issues logging into E-Services, please contact UHCL Tech Support at supportcenter@uhcl.edu or (281) 283-2828.

Transcripts: All transcripts should be sent to the UHCL Admissions Office (admissions@uhcl.edu or 281-283-2500). Domestic students with international backgrounds must now make an appointment with the Office of International Admissions and Programs (OIAP) to submit their foreign transcripts and proof of degree if they do not submit them electronically. OIAP may be reached at OIAP@uhcl.edu or (281) 283-2740.

FALL APPLICATION

All accepted students will begin the program in the fall semester. Please be sure to apply to the I/O and not Psychology, in ApplyTexas These are different programs, and acceptance into Psychology does not equate to acceptance into the I/O program. We will accept applications for admission from December 10 through February 15. We will begin reviewing applications in March and will notify applicants in April. Applicants who apply after the deadline may be given consideration if the class is not yet full. Applicants assume the responsibility to ensure that their completed applications for UHCL, their completed applications for I/O psychology, and their supporting transcripts are received by the Office of Admissions by the deadline.

Degree Requirements

Core Course Requirements (24 hours)

- PSYC 5537 - Professional Issues in Industrial/ Organizational Psychology **Credit Hours:** 3
- PSYC 5331 - Personnel Psychology **Credit Hours:** 3
- PSYC 5332 - Organizational Psychology **Credit Hours:** 3
- PSYC 5334 - Change and Organizational Development **Credit Hours:** 3

- PSYC 6333 - Research Design and Statistics for I/ O Psychology **Credit Hours:** 3
- PSYC 6334 - Research Design and Statistics II for I/O Psychology **Credit Hours:** 3
- PSYC 6538 - Performance Appraisal and Feedback **Credit Hours:** 3
- PSYC 6734 - Assessment in Industry **Credit Hours:** 3

Elective courses (12 hours)

Select from 12 hours of approved electives.

Capstone Option (6-9 hours)

Students should select one of the following capstone options listed below. Students selecting PSYC 6735 must also complete 6 additional hours of electives.

- PSYC 6739 - Graduate Internship **Credit Hours:** 3
- PSYC 6839 - Master's Project Research **Credit Hours:** 3
- PSYC 6939 - Master's Thesis Research **Credit Hours:** 3
- PSYC 6735 - Seminar in Industrial/Organizational Psychology **Credit Hours:** 3

Coursework Option

Students selecting the coursework option will take all 24 hours of coursework listed under the core requirements plus PSYC 6735 plus 18 hours of approved electives for a total of 45 hours.

Sample Prescribed Elective Courses

- PSYC 5333 - Leadership in Organizations **Credit Hours:** 3
- PSYC 5335 - Career Counseling **Credit Hours:** 3
- PSYC 5339 - Training and Development **Credit Hours:** 3
- PSYC 5532 - Advanced Social Psychology **Credit Hours:** 3
- PSYC 5536 - Occupational Health Psychology **Credit Hours:** 3
- PSYC 6434 - Human Factors Engineering **Credit Hours:** 3
- PSYC 6735 - Seminar in Industrial/Organizational Psychology **Credit Hours:** 3
- INST 5130 - Learning Theory and Instruction **Credit Hours:** 3
- HMRS 5231 - Legal Environment of Human Resource Management I **Credit Hours:** 3
- MGMT 5133 - Teamwork and Leadership Skills: Theory in Practice **Credit Hours:** 3
- PSYC 5539 - Cross-cultural Issues in I/O Psychology **Credit Hours:** 3
- PSYC 5538 - Job Attitudes **Credit Hours:** 3

Additional Information

Only grades of "B-" or better will count toward the Master of Arts in I/O Psychology. Grades of "C+" or below are not acceptable.

Registering for a master's thesis, project or internship should not be seen as a right. Students wishing to complete a master's option must submit a master's option proposal. For the thesis or project, the proposal should be 3 to 6 pages in length. The proposal must be submitted by Aug 1/Dec 1/May 1 for fall/spring/summer semesters respectively. 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 the thesis or project, students must have the approval of a faculty member who agrees to supervise the work. Before registering for an internship, students must apply through the I/O internship coordinator and meet the required criteria, including a grade point average of 3.00 or better. The university reserves the right to deny a student admittance to or to remove a specific student from a specific internship.

In order to ensure timely completion and currency of knowledge, all master's degree students in Industrial/Organizational Psychology must complete the degree within 5 years from the date of initial enrollment in any UHCL course that would count toward the degree.

Any student who fails to complete the degree within the stated limitations on time and/or hours may be placed on permanent academic suspension from the program. Students placed on permanent academic suspension will not be allowed to apply for reinstatement. These students will thus not complete the Master of Arts in Industrial/Organizational Psychology at University of Houston-Clear Lake.

School Psychology (Specialist in School Psychology)

The School Psychology program 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 program is on training professionals who will work as specialists in School Psychology within public schools. The program strives to produce school psychological specialists who have high standards of ethical, professional conduct; to engage in empirically based and collaborative decision making as part of a multidisciplinary team; to develop a high level of competency in assessment, intervention and consultation; and to develop sensitivity to and respect for the uniqueness, dignity, culture and worth of each individual.

The School Psychology program at UHCL is approved by the National Association of School Psychologists (NASP) at the specialist level of training. The program requires a minimum of 70 hours of coursework, 58 of which are exclusive of internship.

The School Psychology selection committee accepts a limited number of students into the program based on review and evaluation of the criteria required for

application. These criteria include the application (application form; vitae/resume, essay, and 3 letters of reference sent to clinicalschool@uhcl.edu); official transcripts of all previous coursework; GPA of 3.25 or above for the last 60 hours of undergraduate work; statement of interest; and letters of reference from those familiar with your ability to succeed in graduate-level work. In addition, applicants must have successfully completed 12 hours of undergraduate Psychology coursework which must include a) Introductory Psychology, b) Child Psychology or Adolescent Psychology, c) Abnormal Psychology and d) an upper-level psychology course. These prerequisites may be waived for students who possess graduate degrees; in some cases, a similar course may substitute for a prerequisite.

Waivers and substitutions must be authorized by the associate dean who will consult with the student's faculty adviser.

Internship

Students will be evaluated for readiness to begin internship by the School Psychology faculty upon completion of the practicum. Evaluation includes a feedback interview, if appropriate. The School Psychology program recognizes the internship as the culminating experience in specialty training. The internship consists of a minimum of 1,200 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 in a school district on a full-time basis over a period of one academic year. Interns receive a stipend during this final year of training.

End-of-Program Evaluation

Students are required to take a graduate comprehensive examination upon successful completion of program requirements (minimum GPA of 3.00 and grades of B- or better in all coursework; 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 (Praxis II). This is a nationally standardized examination designed to assess the entry-level knowledge and skills that might be expected of a specialist-level school psychologist. This exam should be taken the semester prior to internship placement. For graduation, students must obtain the NCSP criterion (pass) score. In addition to the national examination, each student must also submit a portfolio documenting competency 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 School Psychology Program Handbook.

Degree Requirements

Required Courses

The coursework 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 associate dean who will consult with the School Psychology program faculty. All courses listed below are required for the degree.

Recommended Course Sequence

Year 1 (Summer)

Prerequisites if needed.

- PSYC 5031 - Human Growth and Development **Credit Hours:** 3
- PSYC 6134 - Biological Basis of Behavior **Credit Hours:** 3

Year 1, Semester 1 (Fall)

- PSYC 5111 - Orientation to School Psychology **Credit Hours:** 1
- PSYC 5131 - Psychopathology of Childhood **Credit Hours:** 3
- PSYC 5235 - Learning Principles **Credit Hours:** 3
- PSYC 6036 - Advanced Nonexperimental Methods and Statistics **Credit Hours:** 3

Year 1, Semester 2 (Spring)

- PSYC 6032 - Cognitive Assessment **Credit Hours:** 3
- PSYC 6037 - Advanced Experimental Methods and Statistics **Credit Hours:** 3
- PSYC 6111 - Student Diversity in Learning **Credit Hours:** 1
- PSYC 6121 - Ethics and Law in School Psychology **Credit Hours:** 2

Year 2 (Summer)

- PSYC 6133 - Personality Assessment of the Child **Credit Hours:** 3
- PSYC 6139 - Intervention I: Academic and Cognitive Skills **Credit Hours:** 3

Year 2, Semester 3 (Fall)

- PSYC 5630 - Behavioral Family Systems **Credit Hours:** 3
- PSYC 6034 - Consultation in School Psychology **Credit Hours:** 3
- PSYC 6039 - School Psychology Practicum **Credit Hours:** 3
- PSYC 6230 - Intervention II: Social and Behavioral Skills **Credit Hours:** 3

Year 2, Semester 4 (Spring)

- PSYC 6039 - School Psychology Practicum **Credit Hours:** 3
- PSYC 6231 - Intervention III: Affective and Adaptive Skills **Credit Hours:** 3
- PSYC 6332 - Advanced Consultation and Program Design/Evaluation **Credit Hours:** 3
- PSYC 6138 - Design/Evaluation of School Health Programs **Credit Hours:** 3

Year 3 (Summer)

- PSYC 6132 - Seminar in Professional School Psychology **Credit Hours:** 3

Year 3, Semester 5 (Fall)

- PSYC 6666 - Clinical Internship **Credit Hours:** 6

Year 3, Semester 6 (Spring)

- PSYC 6666 - Clinical Internship **Credit Hours:** 6

Master of Science

Dual Doctor of Chiropractic/M.S.

Program Requirements

Qualifying students may apply for the dual Doctor of Chiropractic (D.C.) Master of Science (M.S.) at the Texas Chiropractic College (TCC) and the University of Houston-Clear Lake (UHCL). The D.C. and degrees are conferred by the TCC and UHCL, respectively. Entry into the program requires independent university acceptance by the admissions office at both institutions. Completion of the joint program provides students with an opportunity to earn a clinical doctorate degree while gaining theoretical knowledge and practical field experience in exercise/sports science. Additionally, the dual degree program:

- Provides students with advanced knowledge in the physiological and physical mechanisms underlying exercise adaptation.
- Provides students with the knowledge needed to design and implement evidence-based strength and conditioning programs.
- Prepares students for employment in scientific environments that place emphasis on practical exercise and clinical outcomes research.
- Provides students with the knowledge and degree necessary to sit for state chiropractic licensing exams.

Students currently enrolled in the TCC-DC program who wish to enroll in the Master of Science in Exercise and Health Sciences program must:

- Earn a bachelor's degree at TCC or another institution prior to enrollment in the dual program.
- Complete the UHCL application form and pay the appropriate application fee. Copies of the student's official TCC transcripts showing conferred B.S. degree will be transferred to the UHCL admissions office and to the program director for review.
- Earn passing grades in all Tri-1 through Tri-5 courses at TCC. Earn a TCC GPA of 3.00 or higher at the time of application to the program.

Follow all UHCL academic standards and policies in addition to those of TCC.

Students enrolled in the dual program complete a total of 30 hours of advanced courses in the master's program at UHCL. Course requirements for EXHS 6032 and a concentration course of a student's choice will be waived, contingent upon earning a grade of B or higher in the following TCC classes: CH 6432: Orthopedics I and CP 6212: Physical Medicine and Rehabilitation. Students may complete the capstone requirement by selecting EXHS 6739 or another course from the EXHS curriculum.

Students pay current UHCL tuition and fees for all courses in which they are enrolled. In addition, students are responsible for any optional fee selected (parking, etc.). If students need to register for additional semesters at UHCL beyond graduation from TCC for the sole purpose of completing the degree, they will be charged only UHCL tuition and fees related to their remaining coursework and not general TCC tuition and fees.

It is a student's obligation to schedule their coursework to complete the degree in a timely manner. TCC is not responsible for students failing to complete the coursework necessary to earn the master's degree. Students must complete the master's degree within five years of starting their first course or they will be automatically dismissed from the joint program and will not receive the Master of Science degree. Students are eligible to attend graduation at UHCL upon completion of the 30-hour degree.

For additional information about this dual degree, students should contact Dr.Bill Amonette at amonette@uhcl.edu or 281-283-3381.

Exercise and Health Sciences, M.S.

The graduate program in Exercise and Health Sciences leads to a Master of Science degree. Exercise and Health Sciences graduate students may select one of three concentration areas: Sports Science, Public Health, or Clinical Exercise Physiology. The Sports Science concentration prepares students for careers as sport coaches, sport scientists, strength and conditioning professionals, and exercise specialists, where their primary duties are initiating, directing, and evaluating exercise and testing programs for athletes or healthy individuals. The Public Health concentration provides a broad background in public health and prevention, epidemiology, biostatistics, and other related disciplines. This concentration is ideal for individuals seeking employment in health-related fields or for practicing health and medical professionals who seek to further their education at the graduate level. The Clinical Exercise Physiology concentration prepares students for careers where their primary role is testing or prescribing exercise for people with chronic disease or long-term injuries. Graduates pursue careers in applied clinical practice and research. Graduates of all concentrations are adequately trained for entrance into terminal degree programs.

Admissions

Admissions Components

The typical components for admission to the Master of Science in Exercise & Health Sciences include:

1. Official transcripts of every institution attended, showing a recommended cumulative GPA of 3.0 or higher.
2. CV/Resume describing previous education, work experience, relevant coursework, relevant volunteer activities, any honors, published papers, or other relevant life experiences. Should include names and contact information of 3 references that can speak to applicant's academic and/or professional experience.
3. Statement of Purpose (approximately 500 words) describing the applicant's experience and interest in Exercise & Health Sciences in general, and specifically the program at UHCL. Include any relevant information that will help program faculty know you better.

Applying to the MS in Exercise & Health Sciences

- Applicants must complete a university Application for Admission and submit it and all required fees and documents to the university's Admission Office at the same time they are applying to the program.
- The application to the program is online, using the ApplyTexas system. Applicants should upload all components of their application to UHCL e-services. If you are having issues logging into E-Services, please contact UHCL Tech Support at supportcenter@uhcl.edu or (281) 283-2828.
- International students are advised to consult the relevant web pages and/or contact International Admissions in the Admissions Office as early as possible for information and admissions deadlines.
- Domestic students with international backgrounds must make an appointment with the Office of International Admissions and Programs (OIAP) to submit their foreign transcripts and proof of degree if they do not submit them electronically. OIAP may be reached at OIAP@uhcl.edu or (281) 283-2740.

Timeframe for Program Application and the Admission Process

Applications are accepted for the fall and spring semesters and are reviewed on a rolling basis. Applicants have the responsibility to ensure that their application and supporting documents are submitted by the stated deadline.

Fall semester application deadline: April 1

Spring semester application deadline: October 1

If the application deadline falls on a weekend or a university holiday, applications will be accepted before the close of business on the following workday.

Incomplete applications will not be considered for admission.

Applicants to the Exercise and Health Science program who are not adequately prepared with an exercise or basic science background may be required to complete leveling courses in preparation for the graduate program. The student's faculty advisor determines prerequisite course requirements.

Degree Requirements

Shared Core Requirements (12 hours)

Students must enroll in EXHS 5138 OR EXHS 5335.

- EXHS 5130 - Epidemiology **Credit Hours:** 3
- EXHS 5138 - Exercise in Chronic Disease: Musculoskeletal and Neurologic **Credit Hours:** 3
  OR
- EXHS 5335 - Exercise in Chronic Disease: Cardiopulmonary and Metabolic **Credit Hours:** 3
- EXHS 6035 - Biostatistics 1 **Credit Hours:** 3
- EXHS 6038 - Biostatistics 2 **Credit Hours:** 3

Concentrations

Sport Science Concentration (24 hours)

Students completing the Sports Science Concentration must complete an additional 9 hours of required courses and 15 hours of elective courses.

Sport Science Concentration Requirements (9 hours)

- EXHS 5131 - Applied Exercise Physiology: Neuromuscular **Credit Hours:** 3
- EXHS 5132 - Applied Exercise Physiology: Cardiopulmonary **Credit Hours:** 3
- EXHS 6032 - Advanced Seminar in Sports Medicine **Credit Hours:** 3

Sports Science Concentration Electives (Select 15 hours)

- EXHS 5133 - Sports Nutrition **Credit Hours:** 3
- EXHS 5231 - Technology in Human Performance **Credit Hours:** 3
- EXHS 6033 - Laboratory Techniques and Research Design **Credit Hours:** 3
- EXHS 6036 - Biomechanics of Sports and Exercise **Credit Hours:** 3
- EXHS 6037 - Advanced Seminar in Peak Performance **Credit Hours:** 3
- EXHS 6039 - Research in Human Performance **Credit Hours:** 3
- EXHS 6739 - Graduate Internship **Credit Hours:** 3

Public Health Concentration (24 hours)

Students completing the Public Health Concentration must complete an additional 15 hours of required courses and 9 hours of elective courses.

Public Health Concentration Requirements (15 hours)

- EXHS 5138 - Exercise in Chronic Disease: Musculoskeletal and Neurologic **Credit Hours:** 3
  OR
- EXHS 5335 - Exercise in Chronic Disease: Cardiopulmonary and Metabolic **Credit Hours:** 3
  Both EXHS 5138 and EXHS 5335 must be taken for the degree.
- EXHS 5135 - Social and Behavioral Aspects of Public Health **Credit Hours:** 3
- EXHS 5136 - Healthcare Management and Policy **Credit Hours:** 3
- EXHS 5139 - Public Health Communication **Credit Hours:** 3
- EXHS 6330 - Advanced Seminar in Public Health **Credit Hours:** 3

Public Health Concentration Electives (Select 9 hours)

Students may choose THREE electives from EXHS or other UHCL departments with prior approval by the public health concentration faculty advisor.

Clinical Exercise Physiology Concentration (24 hours)

Students completing the Clinical Exercise Physiology Concentration must complete an additional 12 hours of required courses and 12 hours of elective courses.

Clinical Exercise Physiology Concentration Requirements (12 hours)

- EXHS 5138 - Exercise in Chronic Disease: Musculoskeletal and Neurologic **Credit Hours:** 3
  OR
- EXHS 5335 - Exercise in Chronic Disease: Cardiopulmonary and Metabolic **Credit Hours:** 3
  Both EXHS 5138 and EXHS 5335 must be taken for the degree.
- EXHS 5131 - Applied Exercise Physiology: Neuromuscular **Credit Hours:** 3
- EXHS 5132 - Applied Exercise Physiology: Cardiopulmonary **Credit Hours:** 3
- EXHS 6032 - Advanced Seminar in Sports Medicine **Credit Hours:** 3

Clinical Exercise Physiology Concentration Electives (Select 12 hours)

- EXHS 5134 - Clinical Nutrition **Credit Hours:** 3
- EXHS 6033 - Laboratory Techniques and Research Design **Credit Hours:** 3
- EXHS 6034 - Screening and Testing in Chronic Disease **Credit Hours:** 3
- EXHS 6131 - Exercise Pharmacology **Credit Hours:** 3
- EXHS 6639 - Clinical Exercise Practicum **Credit Hours:** 3

- EXHS 6739 - Graduate Internship **Credit Hours:** 3

Master's Option (6 hours)

Exercise and Health Sciences students in any concentration may choose to complete a master's thesis. In such case, students will complete the thesis (EXHS 6939) in lieu of 6 approved hours in the concentration. Thesis credit requires 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 thesis, previously accumulated master's option credits will not count toward the master's degree.

Department of Communication and Studio Arts

The Department of Communication and Studio Arts (CASA) includes four programs - Communication, Digital Media Studies, Art and Design and Writing - that emphasize creativity and critical thinking. In state-of-the-art studios and computer laboratories, students prepare for career positions such as fine artists, professional writers, graphic designers and public relations professionals. Students work under the supervision of professors who are nationally and internationally recognized in their fields.

Students in the Master of Arts program in Digital Media Studies may design their degrees to meet their career goals by drawing from a curriculum that includes courses in communication, graphic design, computer science, marketing, management, psychology and instructional technology. Students focus on media management, design or production and then apply the skills they have acquired in our Digital Media Center to professional internships, graduate projects or practicum experiences.

Master of Arts

Digital Media Studies, M.A.

The Master of Arts in Digital Media Studies is designed to provide students with the necessary tools and skills to thrive as creative professionals in the ever-evolving industry of digital media production. The degree responds to a cultural shift toward media convergence and emphasizes the importance of adaptability and embracing constant change and innovation. It combines strategic communication and business skills with production and design competence in the areas of photography, video, and graphic design.

The program rests profoundly on three pillars:

- Creation and completion of hands-on industry-standard digital media projects;
- Extensive training in relevant and industry-standard communication skills, both written and spoken;
- Strong focus on conceptual and analytical skills, both visual and text-based, as well as technical skills.

The degree also emphasizes teamwork and network building. Students will not only graduate with an industry-relevant production portfolio but also with a network in place to demonstrate readiness for a career in the field.

The Digital Media Studies master's degree requires 36 hours of study. Students are required to take 9 hours of Core Curriculum courses, 6 hours of courses in Theoretical Foundations and 12 hours of Practical Applications courses in design and production. Students then select 3 additional hours in the area that most interests them. The course work is followed by a six-hour capstone experience in the form of a master's project, master's thesis, graduate internship, or comprehensive examination. Students are required to make a B- or better in all courses counting toward the degree and maintain a 3.00 or better GPA.

Admission

A last 60-hour GPA of 3.0 or higher is recommended. If the last 60-hour GPA is below a 3.00 or an applicant has not completed a prior advanced degree, the applicant's admission file will be sent to the program for individual review. To be considered for admission, students will submit a production portfolio accompanied by a statement of purpose (see guidelines below). The portfolio should demonstrate significant experience in the field. The statement of purpose should clearly define the student's goal with this degree and outline how the degree builds on the student's previous experience and education in the field. If the selection committee deems the student's experience and skills in the field as insufficient, students may be provisionally accepted into the program, but will be required to complete specifically recommended preparation courses within the first two semesters. Students may take the core classes (listed below) in conjunction with these recommended preparatory prerequisites but may not progress to further coursework until these prerequisites are completed.

Applications are accepted for review twice a year, from January 15 - August 10 and August 15 - December 1.

Portfolio Guidelines

All portfolio pieces must be accessible online. We do not accept physical objects such as slides or CDs. If passwords are necessary to access the pieces, it is the student's responsibility to communicate them. The committee will not reach out if pieces are not readily accessible. No more than 20 individual pieces should be submitted. The applicant must make clear his or her involvement in the production of each piece.

Examples for successful portfolio pieces are written strategic or creative writing materials, graphic design examples, a 15-minute film documentary, a series of digitally prepared photographs with a theme, a website, an app or a game. The most important function of the portfolio is to demonstrate to the selection committee that the intentions outlined in the statement of purpose may be achieved, based on the student's existing experience and skills.

Statement of Purpose

Statement of Purpose should clearly describe previous education, work experience, and relevant coursework. Include why you are interested in Digital Media and why you are interested in our program. The statement should be no more than 800 words. Send Submit the statement with a resume and a portfolio link to your UHCL E-Services account (assigned after you have completed the Apply Texas online application) and email directly to the Digital Media Studies Program Director: Dr. Leo Chan at chanta@uhcl.edu.

Equipment and Software

The university provides on-campus labs equipped with computers and the software needed for coursework. Students who wish to work from home may need to purchase equipment and software. A DSLR camera and a computer are highly recommended for students concentrating in Production Design.

Degree Requirements

Core Curriculum (9 hours)

Must be taken in the first year.

- DMST 5230 - Critical Approaches to Digital Media **Credit Hours:** 3
- DMST 5232 - Media and Communication Research Methods **Credit Hours:** 3
- DMST 5236 - Digital Storytelling **Credit Hours:** 3

Theoretical Foundations (6 hours)

DMST adviser permission required for DMST 5931.

- DMST 5034 - Global Issues in a Digital Society **Credit Hours:** 3
- DMST 5131 - Game Design and Theory **Credit Hours:** 3
- DMST 5233 - Digital Media Law and Ethics Seminar **Credit Hours:** 3
- DMST 5234 - Public Relations Writing **Credit Hours:** 3
- DMST 5333 - Social Media **Credit Hours:** 3
- DMST 5437 - Digital Media and Society **Credit Hours:** 3
- DMST 5931 - Research Topics in Digital Media Studies **Credit Hours:** 3

Practical Applications (12 hours)

DMST adviser permission required for DMST 5931 and/or COMM 4391.

- DMST 5033 - Advertising Design **Credit Hours:** 3
- DMST 5039 - Web Development **Credit Hours:** 3
- DMST 5132 - 3D Modeling **Credit Hours:** 3
- DMST 5235 - Animation **Credit Hours:** 3
- DMST 5231 - Advanced Digital Media Design **Credit Hours:** 3
- DMST 5330 - Strategic Campaign Planning **Credit Hours:** 3
- DMST 5332 - Motion Graphics **Credit Hours:** 3
- DMST 5436 - Interactive Animation **Credit Hours:** 3
- DMST 5534 - Video Production 1 **Credit Hours:** 3
- DMST 5535 - Narrative Video Production **Credit Hours:** 3
- DMST 5536 - Studio-Based Video Production **Credit Hours:** 3
- DMST 5537 - Documentary Video Production **Credit Hours:** 3
- DMST 5538 - Electronic Publishing **Credit Hours:** 3
- DMST 5931 - Research Topics in Digital Media Studies **Credit Hours:** 3
- COMM 4391 - Selected Topics in Communication **Credit Hours:** 3

Elective (3 hours)

Select ONE additional course from the list below or from the Theoretical Foundations and Practical Applications areas.

- MGMT 5638 - Leading Technology **Credit Hours:** 3
- ISAM 5030 - Fundamentals of Business Programming Applications **Credit Hours:** 3
- PSYC 6431 - User-Centered Design **Credit Hours:** 3

Capstone Experience (6 hours)

DMST adviser permission required for DMST Capstone Experience.

- DMST 6839 - Master's Project Research **Credit Hours:** 3
- DMST 6939 - Master's Thesis **Credit Hours:** 3
- DMST 6739 - Graduate Internship **Credit Hours:** 3
- DMST 6909 - Master's Exam Option **Credit Hours:** 0

Program Summary

Core Curriculum: 9 hours

Theoretical Foundations: 6 hours

Practical Applications: 12 hours

Elective: 3 hours

Capstone Experience: 6 hours

Total: 36 hours

Notes:

Based on student demand and industry trends and innovations, new courses are introduced under the DMST 5931 rubric - Research Topics in Digital Media Studies- on a regular basis. If a scheduled course is not listed in the curriculum, consult with your adviser to determine whether it falls under the theory, design or production area. Students are also allowed up to a total of two Independent Studies courses in the Practical Applications and/or the Electives sections; DMST instructor permission is required. In these classes, students work on a one-on-one basis with a faculty member to create projects specifically designed to match their interests and skill levels. These classes allow students to go far beyond the skill levels and expectations of the other classes offered and may be used to create a highly competitive skill set in a specific subsection of Digital Media Creation.

No more than 6 hours of undergraduate coursework may apply toward the DMST degree. DMST adviser permission is required for taking undergraduate coursework.

Students who have earned an undergraduate degree from UHCL will not be able to take cross-listed courses in the curriculum for master's-level credit that they took for undergraduate credit.

Career paths in public relations:

Public relations is a flourishing industry with a predicted growth of the workforce of 10% in the coming years. Career paths in public relations range from working for a multinational corporation to working for a large public relations agency or a small boutique public relations firm. Government agencies and nonprofits are also prominent employers of PR practitioners. Other job opportunities in public relations include gathering facts and data to keep track of public concerns and current trends affecting the public and corporations, creating promotional events to gain awareness and support of a specific product or client, and collecting data for news releases to promote awareness.

Career Opportunities in production and design:

Career opportunities in the digital media production industry include TV stations, film production companies, post-production houses and the media or PR departments of large companies. Due to the increased affordability of the production tools, there is a constantly growing and evolving freelance market for digital media production

specialists. Freelance opportunities include event videographers and photographers, photography, video or audio editing specialists and independent game or app designers, to mention just a few. The greater Houston area has a very vibrant digital media production industry with strong employment opportunities in all of the above fields.

Master of Science

Serious Games and Simulations, M.S.

The Master of Science degree with a major in Serious Games and Simulations is an interdisciplinary program designed for graduate students who want to pursue or advance a career in the design and the development of instructional games and simulations. The focus of the program will be on serious games where games are purposely designed for instruction and training, moving beyond entertainment games. To address the need to prepare graduates to have the levels of expertise necessary to be game/simulations developers, this master's degree moves beyond isolated skill development in the many specialized areas engaged in the games and simulations careers to prepare individuals to become designers and developers. Skills and knowledge must encompass all aspects of the world of game and simulation development, preparing graduates who will be able to manage game/simulation development teams, engage in all aspects of development, and prepare marketing plans for promoting product distribution. Building upon game design foundations (i.e., competition, curiosity, collaboration, individual challenge, game media), serious games motivate and engage learners as they gain knowledge and skills. Serious games can be used across a variety of instructional situations such as education, training, assessment, recruitment, knowledge management, innovation, and research. The degree advances skills in art, design, communication, computer programming, business principles, and theory by relying on the expertise of UHCL faculty members from the College of Human Sciences and Humanities, the College of Education, the College of Computer Science and Engineering, and the College of Business. Students with this degree will be employed by local industries and agencies to develop innovative instructional games and simulations for education, business, healthcare, and military professionals.

Admissions
GRE completion is not required for applicants to this program. Applicants with a last 60-hour GPA of 3.0 or higher and those who have completed advanced degrees will be automatically admitted. Applicants not meeting these criteria will be individually reviewed by program faculty who will make an admission decision based on the application file.

Degree Requirements

- CSCI 5131 - Simulation Techniques **Credit Hours:** 3

- DMST 5535 - Narrative Video Production **Credit Hours:** 3
- GAME 6931 - Serious Games and Simulations Capstone **Credit Hours:** 3 (2 semesters)
- MGMT 5133 - Teamwork and Leadership Skills: Theory in Practice **Credit Hours:** 3
- PSYC 6431 - User-Centered Design **Credit Hours:** 3

Choose ONE of the following courses.

- INST 5433 - Project Management for Instructional Projects **Credit Hours:** 3
- DMST 5831 - Project Management **Credit Hours:** 3

Electives (9 hours)

Choose TWO of the following courses:

- DMST 5436 - Interactive Animation **Credit Hours:** 3
- GAME 5736 - Character Design **Credit Hours:** 3
- CSCI 5737 - Mobile Applications Development **Credit Hours:** 3
- CSCI 5838 - Mobile Game Programming **Credit Hours:** 3
- SWEN 5134 - Gaming Software Development **Credit Hours:** 3
- SWEN 5137 - Game Design and Development **Credit Hours:** 3
- SWEN 5138 - Design and Development of Virtual Worlds, Sims and Animation Scripting **Credit Hours:** 3

Choose ONE of the following courses:

- GAME 5436 - Advanced Game Studies **Credit Hours:** 3
- GAME 5936 - Game Development Practicum **Credit Hours:** 3
- CSCI 5931 - Research Topics in Computer Science **Credit Hours:** 3

Department of Liberal Arts

The Department of Liberal Arts (LA), which houses the History, Humanities and Literature programs, is one of five departments within the College of Human Sciences and Humanities. The department's faculty members are dedicated teachers and scholars who strive to develop and enhance the analytical, communicative and research skills of their students by exposing students to the customs, values and behaviors of culturally diverse populations as expressed through the texts, arts and artifacts of those populations.

The Department of Liberal Arts offers the Master of Arts degree in History, Humanities and Literature. Students pursuing the Master of Arts in Humanities or the Master of Arts in Literature may focus their studies in one of the concentrations described in each program's section of the catalog.

Master of Arts

History, M.A.

The graduate program in History leads to the Master of Arts (M.A.) degree. Students may enroll with degrees from other fields, although undergraduate training in History is desirable. GRE completion is not required for applicants to this program. Applicants with a last 60-hour GPA of 3.0 or higher or for those who have completed advanced degrees will be automatically admitted. Those with a last 60-hour GPA below 3.0 will be individually reviewed by program faculty who will make an admission decision based on the application file.

Degree Requirements

All students seeking the Master of Arts degree in History must complete HIST 5031 in the first 12 hours of course work. This course is offered in the fall semester only. Students must also take at least one course in each of the four regions that the program offers: Europe, Latin America, the Middle East, and the United States.

Master's degree candidates prepare a Candidate Program of Study (CPS) with the assistance and approval of an adviser. All master's degree options must contain a minimum of 36 graduate semester credit hours. Only courses in which a grade of "B-" or better is earned may be applied toward any of the programs for a Master of Arts Degree in History; grades of "C+" or below are not acceptable.

Master's Degree Options

Master's theses and projects (Option 1 and 2 below) 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.

Option 1

The Master's Degree Option 1 requires a minimum of 36 graduate semester hours including six hours of master's thesis research and, at the discretion of the thesis adviser, an oral defense of the thesis.

For the successful completion of master's degree Option 1, the Master's Thesis, students are expected to complete an original, extensive work of historical scholarship based on intensive research using primary source documents. The thesis must enhance understanding of a defined sub-field of History. Faculty approval for this capstone option is required.

Option 2

The Master's Degree Option 2 requires a minimum of 36 graduate semester hours including six hours of master's project research and, at the discretion of the project adviser, an oral examination upon completion of the project.

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 an archive, library, historical society, or museum. Faculty approval for this capstone option is required.

Option 3

The Master's Degree Option 3 requires a minimum of 36 graduate semester hours of coursework plus a written comprehensive examination in the final semester of coursework. Students register for the zero credit-hour course HIST 6909 under the name of one of the two members of their examination committee. To form the committee, students choose two members of the History faculty prior to their final semester of coursework, contact them to request that they participate, and then obtain their written instructions. Each of the professors will require that the student produce short written critiques of six important books in their field over the course of the semester. This is the default capstone option.

Humanities, M.A.

The graduate program in Humanities leads to the Master of Arts (M.A.) degree. The program encourages interdisciplinary study in the humanities while allowing specialization in one of the following concentrations: studio arts, art history, museum studies, film studies, writing, and the history of ideas. Students in the program will gain an appreciation of major artistic and intellectual contributions across history and the global landscape. Students may enroll with degrees from one of the humanistic disciplines or from other fields, although prior coursework in the Humanities is desirable. Upon enrollment, a student will be assigned a faculty adviser who will help mentor the student through the program. The culmination of the program is the successful completion of one of the capstone options (thesis, internship, project, comprehensive exam, or exhibition); selection of the capstone options should be guided by the student's interests and professional goals. For additional information about the degree, contact the HSH Office of Academic Advising.

GRE completion is not required for applicants to this program. Applicants with a last 60-hour GPA of 3.0 or higher or for those who have completed advanced degrees will be automatically admitted. Those with a last 60-hour GPA below 3.0 will be individually reviewed by program faculty who will make an admission decision based on the application file.

Course of study:

The degree consists of a required core (9 hours), a concentration, and a capstone option. All options contain a minimum of 30 graduate semester hours. Depending on the concentration a student selects, there may be opportunities to enroll in elective courses as described at the end of the capstone options. With the approval of their faculty adviser, students pursuing an M.A. degree in Humanities may take up to six hours of credit outside those core rubrics. Further exceptions may be made at the discretion of the Liberal Arts Department in consultation with the faculty adviser.

Required Core:

All students will take 3 courses, 1 from each pair of courses listed below.

Art History (3 hours)

Students will take one of the following courses in the discipline of Art History

- HUMN 5430 - Issues in Art History I: Ancient to Modern **Credit Hours:** 3
- HUMN 5431 - Issues in Art History II: Renaissance to the Present **Credit Hours:** 3

Comparative Literature (3 hours)

Students will take one of the following courses in the discipline of Comparative Literature

- HUMN 5034 - Global Humanities I **Credit Hours:** 3
- HUMN 5036 - Global Humanities II **Credit Hours:** 3

Philosophy and Intellectual History (3 hours)

Students will take one of the following courses in Philosophy and Intellectual History

- HUMN 5030 - History of Ideas I **Credit Hours:** 3
- HUMN 5032 - History of Ideas II **Credit Hours:** 3

Concentrations

Students will select one or more of the following concentrations during their first year of study. Concentrations range from 9-21 credits. Additional course requirements for each are listed. Up to 15 hours of electives may be completed depending on the concentration that is selected.

Studio Arts (21 hours)

In addition to the core requirements, students are required to take 21 credit hours to complete this concentration and can choose from any of the courses listed. For ARTS 5233, the following may be substituted: HUMN 5233 For ARTS 5234, the following may be substituted: HUMN 5234

- ARTS 5037 - Studies in Art History **Credit Hours:** 3
- ARTS 5038 - Crafts Design and History **Credit Hours:** 3
- ARTS 5231 - Sculpture and Ceramics Studio **Credit Hours:** 3
- ARTS 5233 - Art of Ancient Iraq and the Near East **Credit Hours:** 3
- ARTS 5234 - Art of the Ancient Greek World **Credit Hours:** 3
- ARTS 5331 - Painting-Drawing-Printmaking **Credit Hours:** 3

- ARTS 5931 - Research Topics in Art **Credit Hours:** 3
- ARTS 5939 - Independent Study in Art **Credit Hours:** 3
- DMST 5031 - Graphic Design **Credit Hours:** 3
- DMST 5039 - Web Development **Credit Hours:** 3
- DMST 5538 - Electronic Publishing **Credit Hours:** 3

Art History (9 hours)

In addition to the core requirements, students are required to take 9 credit hours in art history, as follows: 1 additional course in Issues in Art History 2 additional courses in Art History, which may include:

- ARTS 5037 - Studies in Art History **Credit Hours:** 3
- ARTS 5233 - Art of Ancient Iraq and the Near East **Credit Hours:** 3
- ARTS 5234 - Art of the Ancient Greek World **Credit Hours:** 3
- ARTS 5931 - Research Topics in Art **Credit Hours:** 3
- ARTS 5939 - Independent Study in Art **Credit Hours:** 3
- CRCL 5131 - Gender, Culture, and Power **Credit Hours:** 3
- CRCL 5132 - Women of Color **Credit Hours:** 3

Museum Studies (12 hours)

In addition to the core requirements, students are required to take 12 credit hours in courses related to museums, culture, and/or heritage, as follows: HUMN 5235 is required. 3 additional courses, which may include: For ANTH 5537, the following may be substituted: CRCL 5537

- HUMN 5235 - Museums and the Public **Credit Hours:** 3
- ANTH 5333 - Cultures of Mexico and Central America **Credit Hours:** 3
- ANTH 5334 - Native American Cultures **Credit Hours:** 3
- ANTH 5535 - Cultures of Asia **Credit Hours:** 3
- ANTH 5537 - Topics in African Studies **Credit Hours:** 3
- ANTH 5538 - Cultures of the Middle East **Credit Hours:** 3
- ARTS 5037 - Studies in Art History **Credit Hours:** 3
- ARTS 5233 - Art of Ancient Iraq and the Near East **Credit Hours:** 3
- ARTS 5234 - Art of the Ancient Greek World **Credit Hours:** 3
- ARTS 5931 - Research Topics in Art **Credit Hours:** 3
- ARTS 5939 - Independent Study in Art **Credit Hours:** 3
- CRCL 5131 - Gender, Culture, and Power **Credit Hours:** 3
- CRCL 5132 - Women of Color **Credit Hours:** 3
- DMST 5034 - Global Issues in a Digital Society **Credit Hours:** 3

Film Studies (9 hours)

In addition to the core requirements, students are required to take 9 credit hours in film studies, which may include: For the following courses choose between HIST 5236 or HUMN 5236

- HIST 5236 - Studies in History and Film **Credit Hours:** 3
- HUMN 5236 - Studies in Film **Credit Hours:** 3
- HIST 5237 - Nazi Cinema and the Third Reich **Credit Hours:** 3
- HIST 5238 - Weimar Cinema and the Great War **Credit Hours:** 3
- HIST 5239 - The Vietnam War in Film **Credit Hours:** 3
- HIST 5330 - Memory and Representation in Holocaust Cinema **Credit Hours:** 3
- HUMN 5238 - World Cinema **Credit Hours:** 3
- HUMN 5239 - Indian Cinema **Credit Hours:** 3

Writing (9 hours)

In addition to the core requirements, students are required to take 9 credit hours in Writing, which may include:

- WRIT 5130 - Composition Theory **Credit Hours:** 3
- WRIT 5131 - Writing Pedagogy **Credit Hours:** 3
- WRIT 5134 - Special Topics in Discourse Studies **Credit Hours:** 3
- WRIT 5137 - Grant and Proposal Writing **Credit Hours:** 3
- WRIT 5138 - Multimedia Composition and Theory **Credit Hours:** 3
- WRIT 5139 - Digital Rhetoric **Credit Hours:** 3

History of Ideas (12 hours)

In addition to the core requirements, students are required to take 12 credits in courses from HIST, HUMN, LITR, PHIL, or WGST.

Capstone options

Students select one of the following four options as a capstone for the completion of the M.A. in Humanities:

1. Thesis - 30 hours of coursework plus 6 hours of thesis research. This option is recommended for students who plan to move on to a Ph.D. degree.
2. Project - 30 hours of coursework plus 6 hours of project research.
3. Internship - 30 hours of coursework plus 6 hours of internship.
4. Comprehensive Exam - 36 hours of coursework plus a comprehensive written examination.
5. Exhibition - 30 hours of coursework plus 6 credit hours of exhibition planning and a comprehensive art exhibition. Support material requirements will consist of a digital portfolio, an artist statement, a biography, an artist resume, an artist web presence, and a reflective report on the exhibition.

The Exhibition option is available for Concentration 1: Studio Art Only

*Studio art students may only select internship or exhibition options.

Master's Options should be interdisciplinary in orientation, concept, and context. Master's Options require registration inappropriate course rubrics. These require continuous registration during each fall and spring semester until completion.

Electives

Electives (0-15 hours)

Students may choose 0-15 hours of electives (in related disciplines such as ARTS, COMM, CRCL, DMST, HIST, LITR, PHIL, and WGST) and up to 6 elective hours can be 3000-4000-level courses.

Literature, M.A.

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. Concentrations are available in American Studies and in Writing Theory and Practice.

Admission to the Program

GRE completion is not required for applicants to this program. Applicants with a last 60-hour GPA of 3.0 or higher or for those who have completed advanced degrees will be automatically admitted. Those with a last 60-hour GPA below 3.0 will be individually reviewed by program faculty who will make an admission decision based on the application file. Applications and inquiries should be addressed to the university Office of Admissions or the HSH Office of Academic Advising.

Undergraduate students in the final semester of their Literature B.A. and Post-Baccalaureate students enrolled in their final six hours of required undergraduate LITR coursework may, with permission from their faculty advisor and their course instructor, take two graduate (5000-level) LITR courses. However, undergraduate students may not count a graduate course toward their undergraduate degree.

Advising

Every M.A. student is assigned an adviser from the full-time Literature faculty. Early in the first semester, the student must initiate a meeting with the faculty adviser to create an individual Candidate Plan of Study (CPS).

Degree Requirements

The Literature M.A. offers two 36-hours plans of study featuring different capstones:

- Coursework-Comprehensive Examination Option (default plan): 36 hours of coursework + comprehensive written exam (LITR 6909, a zero-credit-hour course).
- Thesis Option: 30 hours of graduate coursework + minimum of 6 hours thesis (LITR 6939) + thesis defense conference.

Incoming students are automatically enrolled in the Coursework-Comprehensive Examination Option. This option offers the broadest exposure to literature and is the shorter, lower-cost path for completing the M.A. in Literature. Unlike the Thesis Option, the Coursework-Comprehensive Examination Option it rarely requires additional semesters.

Required Coursework

First year of graduate work

All candidates for the M.A. in Literature must take

- LITR 5132 - Literary Theory **Credit Hours:** 3

18 hours of Literature courses focused on analysis of literary texts

TWO courses in British Literature, one pre-Restoration and one post-Restoration; ONE course in American Literature; ONE course in Multicultural/World Literature; and TWO additional courses devoted to the study of literary texts.

Capstone Options

Each capstone option requires the specified number of graduate LITR courses. Coursework-Comprehensive Examination Option: at least 27 of the 36 coursework hours must be graduate LITR (5000-level) courses. Thesis Option: at least 24 of the 30 coursework hours must be graduate LITR (5000-level) courses. All non-LITR courses must be approved in advance by a student's faculty adviser and support an intellectually coherent plan of study, or they will not count toward the hours required for the M.A. Undergraduate courses (4000-level and lower) will not count toward the M.A. Students interested in completing an Independent Study (LITR 5939) should consult with program faculty about opportunities for such work. Students are not permitted to register for either capstone option until they have cleared all Incompletes.

Comprehensive Examination Capstone

The comprehensive examination requires students to think comparatively about the courses they have taken and texts they have read, to demonstrate knowledge of those texts and literary history, and to exhibit competence in critical thinking and composition. Examinations are designed to reflect and to support the student's chosen course of study.

The comprehensive examination is offered on two weekends each semester; students may opt for either weekend. Special accommodations for students with disabilities may be made according to university policy: communicate with faculty adviser and the Accessibility Support Center. For complete examination guidelines, consult the Capstone Options Guide for Literature M.A. Students, available from the Literature program director.

Thesis Capstone

Students who wish to pursue the thesis option must petition for reclassification as they approach the 30-hour coursework minimum. A thesis may be 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. A creative thesis must also include a substantial "learning commentary" describing the thesis's background and composition, its literary models, and its potential for continued development. Students wishing to write creative theses must take at least one of the genres offered through the graduate Seminars in Creative Writing (LITR 5430). Students cannot be enrolled for thesis hours (LITR 6939) until they have a complete and approved proposal on file in the HSH Office of Academic Advising.

Master's theses require continuous registration in all fall and spring semesters until completion for a minimum of six hours. If students do not maintain continuous registration in LITR 6939, previously accumulated thesis hours will not count toward the 6-hour minimum of LITR 6939 registration required for the Master's degree.

For complete thesis guidelines, consult the Capstone Guide for Literature M.A. students, available from the Literature program director.

Concentration Requirements

The Concentrations in American Studies and Writing Theory and Practice have additional requirements as set forth below.

American Studies Concentration

The concentration 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 **Credit Hours:** 3

Two courses from (may be repeated for credit when content varies.)

For ANTH 5032, the following may be substituted: CRCL 5032

- LITR 5431 - American Literature **Credit Hours:** 3

One course with American (Western Hemisphere) content from:

One course with American (Western Hemisphere) content from: ANTH, ARTS, SOCI, HIST, HUMN, PHIL, WGST. Note: One of the above courses must be in ANTH or SOCI.

Writing Theory and Practice Concentration

Students may obtain a Literature M.A. with an emphasis in Writing Theory and Practice. Depending on their course choices, this concentration prepares them either to teach writing at the community college and university levels or to work in advanced business communication and creative communication fields.

Required Courses (9 hours)

- LITR 5130 - Composition: Theory and Practice **Credit Hours:** 3

Six additional units from any of the following:

- LITR 5039 - Editing **Credit Hours:** 3
- LITR 5430 - Creative Writing **Credit Hours:** 3
- WRIT 5131 - Writing Pedagogy **Credit Hours:** 3
- WRIT 5137 - Grant and Proposal Writing **Credit Hours:** 3
- WRIT 5138 - Multimedia Composition and Theory **Credit Hours:** 3
- WRIT 5139 - Digital Rhetoric **Credit Hours:** 3
- WRIT 5230 - Collaborative Writing Pedagogy **Credit Hours:** 3
- WRIT 5939 - Independent Study in Writing **Credit Hours:** 3

Academic Standards

As with all academic standards in the UHCL Graduate Catalog, the following academic performance standards apply to all LITR M.A. students regardless of the catalog under which they entered the university.

Minimum GPA for Graduation

All courses for the M.A. in Literature, including all courses on the CPS and all courses transferred in for credit must be completed with grades of B or higher.

Suspension

Students who are suspended from the program and wish to return should refer to UHCL's policy on reinstatement found in the "General Program Requirements" section of this catalog.

Hours Completed as a Non-Degree Graduate Student

The advising and degree-planning process is integral to the student's educational experience. The Literature program therefore will accept toward the number of required hours no more than two graduate (5000-level) LITR courses completed while a student holds Graduate Non-Degree Student status. These courses will remain current for five years from the end of the semester in which they were taken.

Accountability

Students are responsible for working with their faculty advisers to ensure that all coursework and plans of study comply with catalog provisions. Variances will be approved only in exceptional cases; students desiring a variance must petition the associate dean who will confer with program faculty in making this decision.

Department of Psychology

Psychology is the scientific study of human behavior that includes the critical analysis of data and the potential for the application of those analyses in our communities. The Department of Psychology includes the Bachelor of Science in Psychology and the Master of Science in Psychology degrees. All aspects of the psychology degree are guided by the curricula suggested by the American Psychological Association and have been developed by our faculty for optimum learning in classroom, laboratory and applied settings. Faculty expertise and course requirements within the program include biological bases of behavior, developmental psychology, learning and cognition, scientific methods and sociocultural psychology. The psychology of diverse peoples and experiences is included in these areas.

Graduate students who complete their degrees in psychology gain a specific orientation in psychology through critical analysis, application and the integration and synthesis of knowledge. Students also acquire research and practical experience through thesis, project or internship capstone options. Students graduating with the Master of Science in Psychology are prepared to work as human services and research managers, to teach at the community college level, or to pursue doctoral degrees. Students who wish to complete a concentration with the Master of Science program must complete a separate application to be admitted to that concentration.

The Women's and Gender Studies program at UHCL offers a certificate at the graduate level. Women's and Gender Studies is an interdisciplinary unit that is aligned with the Department of Psychology for administrative purposes. Students enrolled in Women's and Gender Studies courses gain an understanding of multiple and alternative perspectives of lived experience related to race, ethnicity, class,

sexual orientation, ability and additional identities. Women's and Gender Studies students learn to value social action regarding the empowerment of women and girls. Such students go on to a variety of careers including social services in non-profit and governmental agencies, research, education, business and law as well as graduate programs.

Master of Science

Psychology, Human Factors Concentration, M.S.

Human Factors Psychology is the application of principles and techniques of psychology to real-world problems. In Human Factors Psychology (HFP), principles and methods associated with Cognitive Psychology are applied to the human-machine interface to improve the usability and effectiveness of the interface. The Human Factors Psychology Concentration is designed to focus on human factors and ergonomics to provide students with a well-rounded foundation in psychology, the user-centered design process and the methods used to evaluate human-machine interfaces. Students will obtain basic competency in perception, cognition and information processing systems as well as the skills to apply this knowledge to the design of the human-machine interface. The Human Factors Psychology program is accredited by the Human Factors and Ergonomics Society.

Practicum and research experiences will be provided in laboratory and industrial settings. All students will complete a major research project prior to graduation. The concentration includes a course sequence that prepares the student to take the exam to become a Certified Professional Ergonomist (CPE) or Certified Human Factors Professional (CHFP).

GRE completion is not required for applicants to this program. Applicants with a last 60-hour GPA of 3.5 or higher or for those who have completed advanced degrees will be automatically admitted. Those with a last 60-hour GPA below 3.5 will be individually reviewed by program faculty who will make an admission decision based on the application file. For more information about applying for this concentration, please contact Dr. Steven Sutherland at sutherland@uhcl.edu. All applications will be individually reviewed by program faculty for an admission decision.

Degree Requirements

Research and Statistics (6 hours)

- PSYC 6036 - Advanced Nonexperimental Methods and Statistics **Credit Hours:** 3
- PSYC 6037 - Advanced Experimental Methods and Statistics **Credit Hours:** 3

Core Psychology Courses (12 hours)

- PSYC 6030 - Sensation and Perception **Credit Hours:** 3
- PSYC 6832 - Advanced Cognitive and Affective Psychology **Credit Hours:** 3

Core Psychology Courses

Students must take at least two of the following three Psychology classes. For PSYC 5532, the following may be substituted: SOCI 5532

- PSYC 5235 - Learning Principles **Credit Hours:** 3
- PSYC 5532 - Advanced Social Psychology **Credit Hours:** 3
- PSYC 6134 - Biological Basis of Behavior **Credit Hours:** 3

Required Applied Cognitive Psychology Courses (18 hours)

- PSYC 5932 - Research Topics in Applied Cognitive Psychology **Credit Hours:** 3
- PSYC 6431 - User-Centered Design **Credit Hours:** 3
- PSYC 6434 - Human Factors Engineering **Credit Hours:** 3
- PSYC 6435 - Human Factors, Methods, and Analysis **Credit Hours:** 3
- PSYC 6439 - Practicum in Psychology **Credit Hours:** 3

Additional Information

PSYC 5932 must be taken for two semesters.

Human Factors Psychology Elective (3 hours)

Three additional hours are selected from Psychology or other relevant disciplines with the approval of the academic adviser. These hours are designed to provide a specific disciplinary focus within Human Factors Psychology.

Master's Option (6 Hours)

Choose ONE of the following options.

- PSYC 6739 - Graduate Internship **Credit Hours:** 3
  (This course will be taken up to 6 hours)
- PSYC 6939 - Master's Thesis Research **Credit Hours:** 3
  (This course will be taken for up to 6 hours).

Additional Information

PSYC 6739, PSYC 6939: prerequisite PSYC 6439

Psychology, M.S.

For the graduate programs in Clinical Psychology, Family Therapy, Health Service Psychology, School Psychology, and Industrial/Organizational Psychology, please see their respective sections.

The Master of Science in Psychology prepares students to be applied problem solvers who address challenges in life and society. This is accomplished through a curriculum that provides a strong foundation in the core areas of psychology, data analysis, and an applied capstone experience. Research opportunities with faculty and a thesis capstone are available for students seeking a career in research or pursuing doctoral studies. This program does not prepare students for licensure to provide therapy services.

The Master of Science in Psychology requires 36 hours. Any undergraduate prerequisite hours not completed before enrollment will become additional requirements. Concentrations are available in the following areas: Human Factors Psychology and Neuroscience and Behavior. Students accepted into concentration areas may be required to take additional hours. For more information about concentration opportunities, refer to individual concentration sections in this catalog.

Admissions

Applicants who have completed the prerequisites with an undergraduate GPA of 3.5 or higher or those who have completed advanced degrees will be automatically admitted. Those with a GPA below 3.5 and/or have not completed the prerequisites will be individually reviewed by program faculty, who will make an admission decision based on the application file. Please contact the graduate director, Dr. Christine Walther, at walther@uhcl.edu for application information.

Prerequisites

The following prerequisites are required for this degree. Prerequisite courses must be completed before graduate coursework can begin.

1. PSYC 2301 or equivalent (three hours).
2. Course in statistics. Students whose undergraduate work does not include three hours in statistics must take PSYC 4370 or PSYC 4371.
3. Students are expected to demonstrate graduate-level writing ability. Those students whose writing is deemed unacceptable will be advised to take remedial courses.

Grades

Only grades of B- or better will count toward the Master of Science in Psychology. Grades of C+ or below are not acceptable.

Degree Requirements

Research and Statistics (6 hours)

Choose TWO of the following courses:

- PSYC 6035 - Qualitative Research Methods **Credit Hours:** 3
- PSYC 6036 - Advanced Nonexperimental Methods and Statistics **Credit Hours:** 3
- PSYC 6037 - Advanced Experimental Methods and Statistics **Credit Hours:** 3

Psychology Core (12 hours)

Choose FOUR of the following courses:

- PSYC 5031 - Human Growth and Development **Credit Hours:** 3
- PSYC 5235 - Learning Principles **Credit Hours:** 3
- PSYC 5532 - Advanced Social Psychology **Credit Hours:** 3
- PSYC 6134 - Biological Basis of Behavior **Credit Hours:** 3
- PSYC 6832 - Advanced Cognitive and Affective Psychology **Credit Hours:** 3

Psychological Diversity (3 hours)

Choose ONE of the following courses:

Another comparable class may be approved by the faculty adviser.

- PSYC 5437 - Aging **Credit Hours:** 3
- PSYC 5438 - Development of Gender and Racial Identity **Credit Hours:** 3
- PSYC 5533 - Psychology of Gender, Race, and Sexuality **Credit Hours:** 3

Electives (9-12 hours)

Students completing the Practicum in Psychology Master's option will choose twelve additional hours selected from Psychology. Students completing the Thesis Master's option will choose nine additional hours selected from Psychology. Courses from other disciplines may be approved by the faculty adviser. No more than six hours from PSYC 5939 or PSYC 6739 can count toward the degree.

Master's Option (3-6 hours)

Choose ONE of the following courses:

For thesis, complete 6 hours. For practicum, complete 3 hours.

- PSYC 6439 - Practicum in Psychology **Credit Hours:** 3
- PSYC 6939 - Master's Thesis Research **Credit Hours:** 3

Additional Information

A psychology faculty member must agree to supervise a thesis and may choose to cease supervision if a student does not make satisfactory progress. Master's 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 thesis, previously accumulated master's option credits will not count toward the master's degree.

Psychology, Neuroscience and Behavior Concentration, M.S.

Neuroscience and Behavior is the study of the neural and physiological basis of behaviors. This includes the study of psychology, biology, pharmacology, physiology and genetics. This concentration is designed to give students a strong background in both psychology and neuroscience. Graduates of this concentration will be prepared to pursue careers in neuroscience or biomedical research or to apply to doctoral programs. One of the most important prerequisites needed for both research careers and doctoral admission is research experience; therefore, this concentration places a strong emphasis on research participation. Students will be expected to be active members of research teams that make research presentations at professional conferences and culminate in a capstone research experience. Students must take a course in general biology before entering this concentration. To fulfill all prerequisites for graduate courses, students should complete additional courses in general chemistry, anatomy and physiology, statistics, cognitive psychology, physiological psychology and statistics.

Applying to the Program

GRE completion is not required for applicants to this program. Applicants with a last 60-hour GPA of 3.5 or higher or for those who have completed advanced degrees will be automatically admitted. Those with a last 60-hour GPA below 3.5 will be individually reviewed by program faculty who will make an admission decision based on the application file. Students wishing to enroll in the Neuroscience and Behavior Concentration must be admitted to the Psychology master's program and formally apply to the concentration online. Instruction for applying can be obtained by contacting Dr. Georgina Moreno, MorenoG@uhcl.edu. All applications will be individually reviewed by program faculty for an admission decision.

Degree Requirements

Research and Statistics (6 hours)

- PSYC 6036 - Advanced Nonexperimental Methods and Statistics **Credit Hours:** 3
- PSYC 6037 - Advanced Experimental Methods and Statistics **Credit Hours:** 3

Required Neuroscience Courses (12 hours)

- PSYC 5235 - Learning Principles **Credit Hours:** 3
- PSYC 6134 - Biological Basis of Behavior **Credit Hours:** 3
- PSYC 6832 - Advanced Cognitive and Affective Psychology **Credit Hours:** 3
- BIOL 5635 - Neuroscience **Credit Hours:** 3

Psychology Core Courses (3 Hours)

Choose ONE of the following courses. For PSYC 5532, the following may be substituted: SOCI 5532

- PSYC 5031 - Human Growth and Development **Credit Hours:** 3
- PSYC 5532 - Advanced Social Psychology **Credit Hours:** 3

Elective Neuroscience and Behavior Courses (9 hours)

Choose THREE of the following courses.

- PSYC 5432 - Psychoactive Drugs **Credit Hours:** 3
- PSYC 6030 - Sensation and Perception **Credit Hours:** 3
- PSYC 6335 - Research Methods in Neuroscience I **Credit Hours:** 3
- PSYC 6336 - Research Methods in Neuroscience II **Credit Hours:** 3

Additional Information

Other courses may be substituted with approval of the faculty of the concentration.

Master's Options

Choose ONE of the following options. For thesis and project, complete 6 hours. For internship, complete 6 hours plus PSYC 5135.

- PSYC 6739 - Graduate Internship **Credit Hours:** 3
- PSYC 6839 - Master's Project Research **Credit Hours:** 3
- PSYC 6939 - Master's Thesis Research **Credit Hours:** 3

Additional Information

Choosing to complete a Graduate Internship and the internship placement must be approved by the faculty of the concentration.

Department of Social and Cultural Sciences

The Department of Social and Cultural Sciences (SCS) provides students with critical thinking skills and analytical knowledge to help them understand the social contexts of their intellectual, artistic and professional work. The faculty of our interdisciplinary department span the social sciences: Behavioral Sciences-General, Criminology,

Cross-Cultural and Global Studies and Sociology. The department's elective courses highlight interdisciplinary approaches and intellectual diversity that foster critical investigation and curiosity. Students may choose from a variety of courses that examine the political, social, cultural and geographical forces that shape life.

Master of Arts

Behavioral Sciences - General M.A.

The graduate program in Behavioral Sciences leads to the Master of Arts (M.A.) degree. The plan is a vehicle for the advanced multidisciplinary study of human behavior. Students in Behavioral Sciences address problems from multiple perspectives, whether through a pre-developed concentration or an individually tailored degree. Students pursue this degree to learn about theories from different disciplines related to a specific problem, to identify methods from a variety of disciplines to investigate programs, and to participate in a capstone experience that examines a specific problem.

Admissions

The M.A. in Behavioral Sciences is no longer accepting applications for admission for the program. To discuss other options for study in similar areas, contact Dr. Christine Walther at walther@uhcl.edu.

Degree Requirements (36 hours)

Grades of B- or better must be earned for at least 30 hours of coursework. Grades of C+ or below are not acceptable for these 30 hours. Grades of C are not acceptable for any classes.

Methods and Statistics Requirements (6 hours)

Option 1

- PSYC 6036 - Advanced Nonexperimental Methods and Statistics **Credit Hours:** 3
- PSYC 6037 - Advanced Experimental Methods and Statistics **Credit Hours:** 3

Option 2

- SOCI 6730 - Advanced Non-Experimental Research and Statistics **Credit Hours:** 3
- SOCI 6731 - Graduate Research Methods **Credit Hours:** 3

Option 3

- SOCI 6730 - Advanced Non-Experimental Research and Statistics **Credit Hours:** 3
- CRCL 5631 - Qualitative Research Methods **Credit Hours:** 3

Option 4

- CRIM 5036 - Criminological Research and Statistics I **Credit Hours:** 3
- CRIM 5037 - Criminological Research and Statistics II **Credit Hours:** 3

Capstone Requirements (6 hours)

Courses

- BSCI 6739 - Graduate Internship **Credit Hours:** 3
- BSCI 6839 - Master's Project Research **Credit Hours:** 3
- BSCI 6939 - Master's Thesis Research **Credit Hours:** 3

Identified Concentration or Individualized Courses (24 hours)

Students must complete a concentration listed below or create an individualized plan of study. The concentration or the individual plan must be identified in the student's Candidate Plan of Study (CPS).

Individualized plans must have the following characteristics: at least 12 credit hours must be drawn from a combination of courses from the following areas: BSCI, GEOG, PSYC, SOCI, CRCL, ANTH, and CRIM. Additionally, no more than 12 of these 24 hours of courses may be taken from one area.

Capstone Notes

Students wishing to complete a master's option must submit a master's option proposal. For the thesis or project, the proposal should be 3-6 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 the thesis or project, students must have the approval of a faculty member who agrees to supervise the work. Faculty supervise work based on their availability and their ability to help students in an area. Before registering for an internship, students 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 to remove a student from a specific internship.

Women's and Gender Studies Concentration

Students may elect to have an identified concentration in Women's and Gender Studies. This concentration makes students eligible for the Women's and Gender Studies certificate sponsored by the Women's and Gender Studies program.

Courses

As part of this area of specialization students take at least 9 hours selected from the list below.

- CRCL 5131 - Gender, Culture, and Power **Credit Hours:** 3
- HUMN 5732 - Seminar in Women's Studies **Credit Hours:** 3
- PSYC 5533 - Psychology of Gender, Race, and Sexuality **Credit Hours:** 3

Additional Information

Students must take 3 hours of Women's and Gender Studies classes from graduate-level courses in ARTS, HIST, HUMN, LITR, or PHIL.

Criminology and Criminal Justice, M.A.

The graduate program in Criminology and Criminal Justice leads to the Master of Arts (M.A.) degree. This degree requires 36 hours for students completing a thesis, and 33 hours for students selecting the internship or additional coursework option. Undergraduate courses may not be used to fulfill degree requirements.

The academic goal of the program 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. Students will also develop the knowledge and skills needed to attain successful careers in the criminal justice system or to advance in their current careers and/or pursue further education.

Applicants with a last 60-hour GPA of 3.0 or higher or for those who have completed advanced degrees will be automatically admitted. Those with a last 60-hour GPA below 3.0 and without an advanced degree will be required to take the GRE.

Degree Requirements

Required Courses (15 hours)

- CRIM 5036 - Criminological Research and Statistics I **Credit Hours:** 3
- CRIM 5037 - Criminological Research and Statistics II **Credit Hours:** 3
- CRIM 5136 - Race and Crime **Credit Hours:** 3
- CRIM 5331 - Advanced Criminology **Credit Hours:** 3
- CRIM 5532 - Criminal Justice Leadership and Management **Credit Hours:**

Selected THREE from the following core courses (6 hours):

- CRIM 5133 - Advanced Juvenile Delinquency **Credit Hours:** 3
- CRIM 5139 - Correctional Institutions **Credit Hours:** 3
- CRIM 5336 - Law and Society **Credit Hours:** 3

- CRIM 5533 - Issues in Policing **Credit Hours:**

Master's Option

Students may select the Coursework or Internship Option (3 hours + 6 hours electives) or the Master's Thesis Research Option (6 hours + 6 hours electives).

Master's Options Courses

Choose ONE of the following courses.

- CRIM 6735 - Seminar in Criminology **Credit Hours:** 3
- CRIM 6739 - Graduate Internship **Credit Hours:** 3
- CRIM 6939 - Master's Thesis Research **Credit Hours:** 3

Additional Information

Students choosing CRIM 6735 and CRIM 6739 will complete one semester for a total of 3 hours. Students chossing CRIM 6735 and CRIM 6739 must also select an additional 6 hours of electives from Criminology or Criminal Justice and/or other relevant disciplines with prior written authorization from a Criminology faculty academic advisor. These classes will result in a total of 33 degree hours.

Students may not enroll in CRIM 6735 or CRIM 6739 until they have completed at least 21 hours of their degree plan.

Master's Thesis Research Option

Students may choose the option below in place of the Coursework option or graduate internship. Students choosing this option must complete 3 hours per semester for two consecutive semesters for a total of 6 hours.

Master's Thesis Research Option (6 hours + 6 hours Elective Courses)

- CRIM 6939 - Master's Thesis Research **Credit Hours:** 3

Additional Information

Students selecting the thesis option must take two semesters of CRIM 6939 (3 credits each) and an additional 6 hours of electives from Criminology and Criminal Justice and/or other relevant disciplines with prior written authorization from a Criminology faculty academic adviser. This option of classes will result in a total of 36 hours.

Students may not enroll in CRIM 6939 until they have completed at least 21 hours of their degree plan.

Available Criminology and Criminal Justice Electives

Criminology and Criminal Justice Electives:

- CRIM 5135 - The Death Penalty **Credit Hours:** 3
- CRIM 5138 - Homeland Security **Credit Hours:** 3
- CRIM 5335 - Criminal Justice and the Mass Media **Credit Hours:** 3
- CRIM 5338 - Criminal Law **Credit Hours:** 3
- CRIM 5339 - Comparative Criminology **Credit Hours:** 3
- CRIM 5431 - Domestic Violence **Credit Hours:** 3
- CRIM 5432 - Culture of Law Enforcement **Credit Hours:** 3
- CRIM 5433 - Serial Murder **Credit Hours:** 3
- CRIM 6734 - Future of Crime and Justice **Credit Hours:** 3

Additional Information

Courses from the core course list not utilized to fulfill the core requirement may be used as electives.

Cross-Cultural and Global Studies, M.A.

The Master of Arts in Cross-Cultural & Global Studies program examines the relationships among culture, diversity, and power in the U.S. and in a global context. The program emphasizes the study of differences and inequalities structured by race, gender, ethnicity, class, sexuality and nationality. It develops an understanding of social and political conflict and strategies of conflict resolution. Cross-Cultural & Global Studies is an interdisciplinary program drawing from anthropology and diverse course options, such as humanities, history, literature, sociology, and business. 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 program emphasizes religion, gender, human rights, and immigration. Focusing on contemporary and historical issues, courses provide theoretical and practical training that may be applied in many fields, including non-profit, legal, service, religious, and educational institutions.

GRE completion is not required for all applicants to this program. Applicants with a last 60-hour GPA of 3.0 or higher and those who have completed advanced degrees will be automatically admitted. Applicants with a last 60-hour GPA below 3.0 or without prior completion of advanced degrees will undergo individual review. To complete individual review, such applicants should submit a statement of purpose, not to exceed two single-spaced pages, describing the reasons for desiring this degree and how it fits into the applicant's career goals. Personal statements should be emailed directly to the Director of the Cross-Cultural & Global Studies program, Dr. Maria Curtis, at Curtis@uhcl.edu.

Degree Requirements

Core Requirements (9 hours)

- CRCL 5031 - Theories of Cultural Diversity **Credit Hours:** 3
  or ANTH 5931: Theories of Cultural Diversity
- CRCL 5037 - Theories and Practices of Mediation **Credit Hours:** 3
- CRCL 5631 - Qualitative Research Methods **Credit Hours:** 3

Foundation Courses (6 hours)

For CRCL 5033, the following course may be substituted: SOCI 5236.

- CRCL 5033 - Religion and Community **Credit Hours:** 3
- CRCL 5035 - Health and Human Rights **Credit Hours:** 3
- CRCL 5131 - Gender, Culture, and Power **Credit Hours:** 3
- CRCL 5533 - Community Health in Cross-Cultural Perspective **Credit Hours:** 3
- CRCL 5733 - Program Seminar: Contemporary Issues in Cross-Cultural Studies **Credit Hours:** 3

Area Studies (3 hours)

These courses address cultural and historic aspects of populations in specific geographic regions as well as immigrants and refugees living in Houston and throughout U.S. For CRCL 5537, the following course may be substituted: ANTH 5537.

- CRCL 5232 - Cultures of Mexico and Central America **Credit Hours:** 3
  *ANTH 5333 may be substituted for CRCL 5232
- CRCL 5535 - Cultures of Asia **Credit Hours:** 3
  *ANTH 5333 may be substituted for CRCL 5535
- CRCL 5538 - Cultures of the Middle East **Credit Hours:** 3
  *ANTH 5538 may be substituted for CRCL 5538
- CRCL 5330 - Cultural Study Abroad **Credit Hours:** 3
  (Prior approval from ANTH faculty is required)

Program Courses (6 hours)

For SOCI 5333, PSYC 5533 may be substituted. Area Studies or Foundation courses may also satisfy this requirement.

- CRCL 5132 - Women of Color **Credit Hours:** 3
- CRCL 5531 - Families, Communities, and Diversity **Credit Hours:** 3
  *ANTH 5531 may be substituted for CRCL 5531

- GEOG 5134 - Introduction to Geographic Information Systems **Credit Hours:** 3
- HIST 5232 - U.S. Social Movements **Credit Hours:** 3
- HIST 5434 - Studies in Latin American History **Credit Hours:** 3
- LITR 5831 - World/Multicultural Literature **Credit Hours:** 3
- PSYC 5533 - Psychology of Gender, Race, and Sexuality **Credit Hours:** 3
- SOCI 5333 - Minorities and Majorities **Credit Hours:** 3
- SOCI 5537 - Urban Problems **Credit Hours:** 3
- SOCI 5633 - American Immigration Studies **Credit Hours:** 3

Master's Option

Select ONE (6 hours)

Students will begin planning their Master's option when they have successfully completed 21 credit hours (i.e. 7 courses). Students must contact the internship coordinator or thesis/project faculty adviser *the long semester before beginning an internship, project, or thesis for approval and registration*. Discussion, planning, and a written proposal is required no later than week 8 of the previous long semester for approval to move forward with either an internship, thesis, or project. Contact your faculty adviser for more details.

- CRCL 6939 - Master's Thesis Research **Credit Hours:** 3
- CRCL 6839 - Master's Project Research **Credit Hours:** 3
- CRCL 6739 - Graduate Internship **Credit Hours:** 3

Coursework Option

Courses

Students selecting the coursework option instead of the master's thesis, project, or internship will complete 30 hours of courses plus the zero-credit course below:

- CRCL 6909 - Cross-Cultural Studies Comprehensive Exam **Credit Hours:** 0

Electives (6 hours)

To complete the additional 6 hours of coursework, students may take additional CRCL program, foundation, or area studies courses, or select other elective courses within or outside of HSH with prior approval of their faculty advisor.

Concentrations

In order to organize their studies and, explore a specific topic and prepare for careers, students may select one of the following concentrations.

Religions, Ethics, Values

Select three of the following courses: For CRCL 5033, the following course may be substituted: SOCI 5236. CRCL 5931 may be selected when the course is linked to the study of religion.

- CRCL 5033 - Religion and Community **Credit Hours:** 3
- CRCL 5931 - Research Topics in Cross-Cultural Studies **Credit Hours:** 3
  OR
- ANTH 5931 - Research Topics in Anthropology **Credit Hours:** 3
- HUMN 5034 - Global Humanities I **Credit Hours:** 3
- HUMN 5036 - Global Humanities II **Credit Hours:** 3
- HUMN 5336 - Philosophy in Religion **Credit Hours:** 3
- HUMN 5430 - Issues in Art History I: Ancient to Modern **Credit Hours:** 3

Women, Gender, and Sexuality

Select three of the following courses: HIST 5232 may be selected only when the topic is American Feminisms"

- CRCL 5131 - Gender, Culture, and Power **Credit Hours:** 3
- CRCL 5132 - Women of Color **Credit Hours:** 3
- CRCL 5531 - Families, Communities, and Diversity **Credit Hours:** 3
  OR
- ANTH 5531 - Families, Communities, and Globalization **Credit Hours:** 3
- CRCL 5538 - Cultures of the Middle East **Credit Hours:** 3
  OR
- ANTH 5538 - Cultures of the Middle East **Credit Hours:** 3
- HIST 5232 - U.S. Social Movements **Credit Hours:** 3
- PSYC 5533 - Psychology of Gender, Race, and Sexuality **Credit Hours:** 3

Latin American Studies

Select three of the following courses. Only one of the following courses may count for credit in this concentration: ANTH 5333 or CRCL 5232. WGST 5931 may be selected only when the topic is Latina and Latin American Feminisms.

- ANTH 5333 - Cultures of Mexico and Central America **Credit Hours:** 3
- CRCL 5232 - Cultures of Mexico and Central America **Credit Hours:** 3
- HIST 5434 - Studies in Latin American History **Credit Hours:** 3
- WGST 5931 - Research Topics in Women's and Gender Studies **Credit Hours:** 3
- ANTH 5939 - Independent Study in Anthropology **Credit Hours:** 3

Culture, Health, and Inequality

Select three of the following courses:

- CRCL 5035 - Health and Human Rights **Credit Hours:** 3
- CRCL 5131 - Gender, Culture, and Power **Credit Hours:** 3
- CRCL 5533 - Community Health in Cross-Cultural Perspective **Credit Hours:** 3
- SOCI 6737 - Medical Sociology **Credit Hours:** 3

Immigration and Refugees

Select three of the following courses:

- CRCL 5232 - Cultures of Mexico and Central America **Credit Hours:** 3
  *ANTH 5538 may be substituted for CRCL 5232
- CRCL 5535 - Cultures of Asia **Credit Hours:** 3
  *ANTH 5535 may be substituted for CRCL 5535
- CRCL 5538 - Cultures of the Middle East **Credit Hours:** 3
  *ANTH 5538 may be substituted for CRCL 5538
- SOCI 5633 - American Immigration Studies **Credit Hours:** 3

Sociology, M.A.

Are you curious about social problems? Do you have ideas about how to improve society? Are you interested in social policies and their effects? If so, sociology may be for you. A sociology degree prepares you for a wide range of careers in the following areas: business and industry, government, community and social services, the legal system, education and research. Our graduates work in nonprofit organizations, government, marketing, urban planning and human resources. They also work with at-risk youth, senior citizens and people struggling with substance abuse. Our faculty have areas of specialization in family sociology, medical sociology, immigration, religion, race and ethnic relations, social inequality, complex organizations and nonprofit organizations, and conflict resolution.

The Candidate Plan of Study (CPS) must include the following requirements:

1. A minimum of 12 undergraduate upper-level hours in the behavioral sciences (anthropology, psychology, and sociology). If this requirement has not been met prior to admission, then such courses should be completed before beginning work toward the Master of Arts degree.
2. If students are not taking the coursework option (30 hours; see details below), then a minimum of 6 hours is required in one of the following master's options:
   a. Master's thesis
   b. Graduate internship
3. Registering for a master's thesis or internship should not be seen as a right. Students wishing to complete a master's option must submit a master's

option proposal. For the thesis, the proposal should be 3-6 pages in length. It should include a literature review with references and a statement of the proposed methodology for carrying out the thesis. Before registering for a thesis, a student must have the approval of a faculty member who agrees to supervise the work. Before registering for a graduate 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 to remove a student from an internship.

4. Grades of B- or better must be earned for all coursework.
5. No more than 6 credit hours may be transferred toward the SOCI MA. Courses may be transferred if:
    a. The courses are pertinent to the degree.
    b. The courses were taken not more than five years prior to admission to graduate study at UHCL.
    c. Grades of B- or better were earned.
    d. The courses were not applied to a graduate degree already earned.
    e. The courses were not taken by correspondence or extension.
6. At least 24 credits of the degree plan must be earned at UHCL.

GRE completion is not required for applicants to this program. Applicants with a last 60-hour GPA of 3.0 or higher and those who have completed advanced degrees will be automatically admitted. Applicants with a last 60-hour GPA below 3.0 or without prior completion of advanced degrees will undergo individual review. To complete individual review, such applicants should submit a statement of purpose, not to exceed two single-spaced pages, describing the reasons for desiring this degree and how it fits into the applicant's career goals. Personal statements should be emailed directly to the Director of the Sociology program, Dr. Jennifer Arney, at Arney@uhcl.edu.

Degree Requirements

General Requirements

SOCI 6730 and SOCI 6432 must be completed for credit within the first three long semesters (fall/spring) of a student's graduate coursework. Students seeking an exception must obtain written approval from the sociology program director.

Note: SOCI 6432 is offered in the spring and SOCI 6730 is offered in the fall and spring.

Core Sociology Courses

Courses

- SOCI 5032 - Mental Health and Illness **Credit Hours:** 3
- SOCI 5233 - Religion and Immigration Studies in Houston **Credit Hours:** 3

- SOCI 5236 - Religion and Global Change **Credit Hours:** 3
- SOCI 5333 - Minorities and Majorities **Credit Hours:** 3
- SOCI 5334 - Social Stratification **Credit Hours:** 3
- SOCI 5337 - Complex Organizations **Credit Hours:** 3
- SOCI 5433 - Social Conflict and Mediation **Credit Hours:** 3
- SOCI 5434 - Marriage and Family **Credit Hours:** 3
- SOCI 5435 - Gendered Inequality: Work and Family **Credit Hours:** 3
- SOCI 5438 - Sociology of the Life Course and Aging **Credit Hours:** 3
- SOCI 5537 - Urban Problems **Credit Hours:** 3
- SOCI 5633 - American Immigration Studies **Credit Hours:** 3
- SOCI 5731 - Politics and Protest **Credit Hours:** 3
- SOCI 5732 - Seminar in Social Problems **Credit Hours:** 3
- SOCI 6734 - Women's Health **Credit Hours:** 3
- SOCI 6737 - Medical Sociology **Credit Hours:** 3

Concentrations

Sociology graduate students are also encouraged to work with their faculty adviser to structure their plans of study in order to reflect concentrations within the discipline. Six concentrations are available.

Concentration in Diversity

Choose three of the following courses. For SOCI 5236, the following may be substituted: CRCL 5033. For SOCI 5333, the following may be substituted: PSYC 5534.

- SOCI 5233 - Religion and Immigration Studies in Houston **Credit Hours:** 3
- SOCI 5236 - Religion and Global Change **Credit Hours:** 3
- SOCI 5333 - Minorities and Majorities **Credit Hours:** 3
- SOCI 5334 - Social Stratification **Credit Hours:** 3
- SOCI 5633 - American Immigration Studies **Credit Hours:** 3

Concentration in Work and Occupations

Choose three of the following courses. For SOCI 5532, the following may be substituted; PSYC 5532.

- SOCI 5337 - Complex Organizations **Credit Hours:** 3
- SOCI 5433 - Social Conflict and Mediation **Credit Hours:** 3
- SOCI 5435 - Gendered Inequality: Work and Family **Credit Hours:** 3
- SOCI 5532 - Advanced Social Psychology **Credit Hours:** 3

Concentration in Urban Studies

Choose three of the following courses. For SOCI 5333, the following may be substituted: PSYC 5534.

- GEOG 5134 - Introduction to Geographic Information Systems **Credit Hours:** 3
- SOCI 5233 - Religion and Immigration Studies in Houston **Credit Hours:** 3
- SOCI 5333 - Minorities and Majorities **Credit Hours:** 3
- SOCI 5334 - Social Stratification **Credit Hours:** 3
- SOCI 5537 - Urban Problems **Credit Hours:** 3
- SOCI 5633 - American Immigration Studies **Credit Hours:** 3

Concentration in Health and Medicine

Choose three of the following courses.

- SOCI 5032 - Mental Health and Illness **Credit Hours:** 3
- SOCI 6734 - Women's Health **Credit Hours:** 3
- SOCI 6737 - Medical Sociology **Credit Hours:** 3

Concentration in Family Sociology

Choose three of the following courses.

- SOCI 5434 - Marriage and Family **Credit Hours:** 3
- SOCI 5435 - Gendered Inequality: Work and Family **Credit Hours:** 3
- SOCI 5438 - Sociology of the Life Course and Aging **Credit Hours:** 3
- SOCI 5533 - Sociology of Human Intimacy **Credit Hours:** 3

Concentration in Research Methods

Choose three of the following courses. SOCI 6432 and SOCI 6730 are required; you may choose between GEOG 5134 and PSYC 6037.

- SOCI 6432 - Qualitative Research Methods **Credit Hours:** 3
- SOCI 6730 - Advanced Non-Experimental Research and Statistics **Credit Hours:** 3
- GEOG 5134 - Introduction to Geographic Information Systems **Credit Hours:** 3
- PSYC 6037 - Advanced Experimental Methods and Statistics **Credit Hours:** 3

Master's Options

Thesis Option (30 hours)

In addition to the courses below, students should choose 15 hours from the Core Sociology Classes listed above; students should also complete a 3-hour SOCI elective.

- SOCI 5131 - Contemporary Sociological Theory **Credit Hours:** 3
- SOCI 6432 - Qualitative Research Methods **Credit Hours:** 3
- SOCI 6730 - Advanced Non-Experimental Research and Statistics **Credit Hours:** 3
- SOCI 6939 - Master's Thesis Research **Credit Hours:** 3
  (Repeat fo a total of 6 hours)

Additional Information

The thesis is a 35-40 page paper that could potentially be published in a sociology scholarly journal; it must be in American Sociological Association format, use real data (qualitative and/or quantitative), contain a literature review and test at least one hypothesis derived from a sociological theory. Students must work with a thesis committee consisting of at least two faculty members. A thesis proposal must be approved by the student's thesis committee and the completed thesis must be approved by the committee, as well as by the dean and the associate dean. Students are required to hold a public defense (presentation) of their completed thesis.

Internship Option (30 hours)

In addition to the courses below, students should choose 15 hours from the Core Sociology Classes listed above; students should also complete a 3-hour SOCI elective.

- SOCI 5131 - Contemporary Sociological Theory **Credit Hours:** 3
- SOCI 6432 - Qualitative Research Methods **Credit Hours:** 3
- SOCI 6730 - Advanced Non-Experimental Research and Statistics **Credit Hours:** 3
- SOCI 6739 - Graduate Internship **Credit Hours:** 3

Additional Information

Internships are a 100-hour commitment to be completed over the course of one long semester. Internships may be completed in one of three ways: 1) community placement: students may complete an internship at a social service agency, nonprofit organization or other association related to career goals and with approval of the sociology internship coordinator; 2) teaching: students may complete a teaching internship, in which the student will be partnered with a UHCL faculty member to gain experience teaching an undergraduate course. The course will be decided in consultation with the faculty member; or 3.) research: students may complete a research internship in the area of medical sociology.

Additional Coursework Option (30 hours)

In addition to the courses below, students should choose 18 hours from the "Core Sociology Classes" listed above; student should also complete a 3-hour SOCI elective.

- SOCI 5131 - Contemporary Sociological Theory **Credit Hours:** 3
- SOCI 6730 - Advanced Non-Experimental Research and Statistics **Credit Hours:** 3
- SOCI 6432 - Qualitative Research Methods **Credit Hours:** 3

Additional Information

Students should complete SOCI 6909 in the last semester of the degree. The comprehensive exam will be either a research proposal developed by the student in consultation with a faculty adviser or a written examination that includes questions contributed by all full-time sociology faculty.

College of Science and Engineering

The College of Science and Engineering (CSE) offers high-quality academic degrees consistent with the role of a regional public university. Plans within the college prepare graduates to enter fields in natural sciences, mathematics, computing and computer engineering. Individuals in the college'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 for society to benefit from the interfaces with advanced technology and science.

The college 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.

Accreditations and Approvals

Various programs in CSE are accredited by the following organizations:

- The undergraduate programs in computer science and computer information systems are accredited by the Computer Accreditation Commission of ABET, www.abet.org.
- The undergraduate degree programs in Computer Engineering and Mechanical Engineering are accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.
- The chemistry program has complete accreditation from the American Chemical Society (ACS). The undergraduate occupational safety and health programs are accredited by the Commission of ABET.
- The collaborative UHCL-UTMB Bachelor of Science in Biology-Master of Clinical Laboratory Sciences degree plan is approved by the Southern Association of Colleges and Schools.

Maximum Number of Attempts

The College of Science and Engineering does not allow a student to attempt any individual required course in any program's curriculum more than three times. Counted attempts include all courses that resulted in a grade of "A-F","W" or "I." In the event of documented extenuating circumstances, a student may petition to be allowed a fourth attempt.

Departments

The College of Science and Engineering has 6 departments. The faculty of each department aspires to a professional model that includes balance among the components of the CSE mission: teaching, research and service.

- Department of Computing Sciences
- Department of Engineering
- Department of Physical and Applied Sciences
- Department of Biology and Biotechnology
- Department of Environmental Sciences
- Department of Mathematics and Statistics

Contact Us

Office of the Dean
Phone: 281-283-3703
Web: http://www.uhcl.edu/science-engineering
Bayou Building 3611

Office of Academic Advising
Phone: 281-283-3711
Email: cseadvising@uhcl.edu
Web: http://www.uhcl.edu/science-engineering/advising
Bayou Building 3611

Admission into a CSE Degree Plan

Following admission to the university, students' transcript evaluations are forwarded to the Office of Student Advising. 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 at New Student Orientation to obtain detailed instructions about 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 nine 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 college. 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.

Standards for Graduate Degrees

It is recommended that students who apply for admission to a graduate plan have a cumulative GPA of at least 3.000 on a 4.000 scale from the regionally accredited institution(s) of higher education in which the most recent degree was awarded. The

GRE is required for most graduate plans in the college. Engineering Management may accept the Graduate Management Admission Test (GMAT) in lieu of the GRE. A minimum GRE score of 290 (verbal + quantitative) is preferred. 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. Individual degree plans may specify additional qualifications. (See individual plan descriptions.)

All graduate degrees in the College of Science and Engineering require 30-36 hours depending on specific plan requirements; a minimum of 24 hours must be graduate courses. No more than 6 hours of upper-level (4000 level) credit will be allowed in any master's degree. A maximum of 6 hours of independent study may be applied to any master's degree. A maximum of 6 hours of grades within the range of C+ or C may be counted toward any graduate degree.

Foreign Transcript Evaluation - Approved Evaluation Services

Applicants to College of Science and Engineering Graduate Programs MUST have their foreign transcripts evaluated by a credential evaluation service which is a member of the National Association of Credential Evaluation Services (NACES). This applies to all academic transcripts from institutions outside the United States which do not have an active MOU with the University of Houston - Clear Lake. The transcript evaluation must include course by course grades, a grade point average calculation and indicate the diploma or degree conferred and U.S equivalency. An original evaluation must be forwarded to The University of Houston - Clear Lake directly from the credential evaluation agency.

Below are approved services:

World Education Services, Inc.
Main Office
PO Box 5087
Bowling Green Station
New York, NY 10274, USA
212-966-6311
212-739-6100 - fax
Email: info@wes.org
Website: www.wes.org

Or

SDR Educational Consultants
2600 N. Gessner, Suite 267
Houston, Texas 77080
Phone: 713-460-3525
Web: SDR Educational Consultants (credentialconnection.com)
email: info@sdreducational.org

Or

Educational Credential Evaluators (ECE)
101 W. Pleasant St. Suite 200

Milwaukee, WI 53212-3963
Phone: 414-286-7319
Web: https://www.ece.org/
email: ecemail@ece.org

Or

SPANTRAN

https://spantran.com/web/

2400 Augusta Drive Suite 451

Houston, Tx 77057

713.266.8805

https://spantran.com/web/contact

email: status@spantran.com

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 two members, two of whom must be full-time UHCL faculty members. A fulltime faculty member of the College of Science and 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 Master's Degree Option: Master's Thesis for more information.

University and CSE 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 and online at http://www.uhcl.edu/science-engineering/student-resources/masters-thesis.

Extended Course Work Option

All graduate plans in the college offering this option require a capstone course. See the specific plan area for the specific extended coursework option requirements.

Internship Option

Some plans offer an internship option. See the specific plan of interest.

Research Project Course Option

Some plans offer a research project course option. See the specific plan of interest.

Bachelor of Science/Master of Science

Computer Engineering Dual Degree Program

The Dual Degree Program in Computer Engineering (CENG) at University of Houston-Clear Lake (UHCL) is developed for high-performing CENG undergraduate students who would like to continue their graduate study in CENG master's. program immediately upon completion of the bachelor's degree. Students accepted into this program can take up to 6 graduate credit hours that are applied to both undergraduate and graduate degrees. One major goal of this new program is to build a pathway for our CENG undergraduate students to enter the graduate CENG degree plan at several points in their undergraduate study and complete it in a more affordable way.

Students may pursue either thesis or extended coursework master's degree completion options. This dual degree program requires 153 credit hours for master's thesis option and 156 credit hours for extended coursework option. The plan offers 123 hours of coursework at the undergraduate level. At the graduate level, it offers 30 hours of graduate hours for master's thesis option and 33-credit hours for extended coursework option. Currently, ABET-accredited CENG BS program requires 129 credit hours including 9-hour electives. The students accepted into this program take 6-hour graduate credit as their 6-hour of 9-hour electives.

The graduate courses must be approved prior to enrollment. The graduate courses should provide a good substitution for the undergraduate courses required in the undergraduate program. Students may begin taking graduate courses after completing 100 credit hours including transfer credits that count towards CENGB.S. degree. GRE score is not required for the application.

Eligibility and application: Interested students should submit a CENG Dual Degree Program Application Form to the program chair. Minimum eligibility requirements are as follows: (1) Junior or Senior standing and at least 20 credit hours of CENG and CSCI course work completed, (2) 3.0/4 grade point average overall UHCL course work, (3) 3.0/4 grade point average over all CENG and CSCI course work.

Admission to the graduate program: Acceptance into the dual degree program does not constitute automatic admission to the graduate program. Completion of the bachelor's degree and the standard admission requirements for the graduate degree program apply.

Performance requirements While in the Program: A committee of CENG faculty members monitors the progress of students participating in this program. After a student is accepted into this program, if the student's cumulative UHCL GPA falls below 3.0/4, the student will be on probation. The probation will be lifted once the cumulative GPA again rises to 3.0. If the student's cumulative UHCL GPA falls below 3.0 for two consecutive semesters, the student will automatically be transferred to the regular BS program. The UHCL graduate GPA requirement of 3.0 or higher continues to be operational for all students in this plan.

Granting of degrees: Students in dual-degree programs receive a bachelor's degree upon completion of the master's degree. Students in dual-degree programs not completing the master's degree may apply for graduation with a bachelor's degree. Dual-degree program students must complete the undergraduate residency requirements.

Certificate

Data Science Basics Certificate

The admission requirements for the Data Science Basics Certificate Program is a Bachelor's degree in any field. The GRE is not required since the certificate program is considered as a non-degree seeking program. The following factors will be considered favorably.

A GPA of 3.0 or above

Having taken some computing and statistics courses

Prior data-related job experience.

To earn the certificate, the four-course set must be completed within a two-year time limit. Please note that the certificate adheres to standard university policy on continuous enrollment. Upon the successful completion of the certificate with a four-course GPA of 3.0 or above, students will satisfy the admission requirements of the Data Science Certificate Program, or the Master of Science in Data Science degree program. They will need to apply within one year of the completion of the certificate. DASC 5133 is a core requirement of the MS DS program, and it will be accepted to fulfill this requirement.

Requirements

To receive the certificate, students need to complete the following four courses with a four-course GPA of B or above. Note that STA 3334 has prerequisite courses. STAT 3308 Computational Statistics is an acceptable replacement of STAT 3334.

- DASC 5031 - Python for Data Science **Credit Hours:** 3

- DASC 5032 - Data Structures for Data Science **Credit Hours:** 3
- STAT 3334 - Probability and Statistics for Scientists and Engineers **Credit Hours:** 3
- DASC 5133 - Introduction to Data Science **Credit Hours:** 3

Department of Biology and Biotechnology

Students desiring to study in the biology and biotechnology department may choose from the graduate plans below. Applicants should consult the chair of the division for additional information.

Master of Science

Biological Sciences, M.S.

The graduate plan in Biological Sciences leads to the master of science 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.

Requirements

Students should have completed the basic requirements for the Bachelor of Science degree in Biological Sciences at UHCL or the following courses (including prerequisites or equivalents) before applying for admission:

Courses

- BIOL 3341 - Molecular Genetics **Credit Hours:** 3
- BIOL 4341 - Biochemistry I **Credit Hours:** 3
- CHEM 2323 - Organic Chemistry I **Credit Hours:** 3
- CHEM 2123 - Laboratory for Organic Chemistry I **Credit Hours:** 1
- CHEM 2325 - Organic Chemistry II **Credit Hours:** 3
- CHEM 2125 - Laboratory for Organic Chemistry II **Credit Hours:** 1
- MATH 2413 - Calculus I **Credit Hours:** 4
- PHYS 1301 - College Physics I **Credit Hours:** 3
- PHYS 1101 - Laboratory for College Physics I **Credit Hours:** 1
- PHYS 1302 - College Physics II **Credit Hours:** 3
- PHYS 1102 - Laboratory for College Physics II **Credit Hours:** 1
- STAT 3308 - Computational Statistics **Credit Hours:** 3

Students should have completed one of the following courses or its equivalent:

- BIOL 4344 - Comparative Animal Physiology **Credit Hours:** 3
- BIOL 4345 - Human Physiology **Credit Hours:** 3
- BIOL 4343 - Plant Physiology **Credit Hours:** 3

Students should also have completed coursework in at least two of the following areas:

- BIOL 2321 - Microbiology for Science Majors **Credit Hours:** 3
- BIOL 4311 - Ecology **Credit Hours:** 3
- BIOL 4347 - Cellular Physiology **Credit Hours:** 3
- BIOL 4351 - Molecular Biology **Credit Hours:** 3

Additional Information

A maximum of six credit hours of the 4000 level courses listed above, taken as foundation required for admission, may be applied toward the MS degree.

The GRE score is not required if GPA is a 3.0 or greater. If GPA is below a 3.0 the GRE score is required with an overall (verbal + quantitative) minimum of 290 points, with a minimum quantitative score of 150, verbal score of 140. As a condition of admittance to the graduate program, students who do not meet school GRE and/or GPA standards will 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.

For students pursuing the Pre-Health Specialization only, MCAT or DAT scores will be considered as grounds for waiving the GRE requirement. A copy of the official MCAT/DAT test score report must be provided.

All graduate students in the Biological Sciences program must complete a Candidate Plan of Study (CPS) with their assigned faculty adviser before they complete 9 hours of graduate credit. Courses completed past the initial 9 hours that are not on the approved CPS may not be counted toward the degree.

The Master of Science in Biological Science requires 36 hours of coursework in one of four specialization areas, of which 24 hours must be in biology courses. Students enrolling in the non-thesis option must complete 33 hours of coursework (which may include independent study research) and the capstone course, BIOL 6838 - Research Project and Seminar. BIOL 6838 must be taken in the last 12 hours. Alternately, students may elect to pursue the thesis option, which requires 27 hours of coursework, plus BIOL 5530 - Research Methods in Biology (3hours) and BIOL 6939 - Master's Thesis Research (6 hours). Students pursuing the master's thesis option are advised to consult with their faculty adviser early in their studies for guidance in preparation for beginning the thesis.

Information on the certificate option in biotechnology can be found in the Undergraduate Catalog: Biotechnology Certificate Option.

Biological Science M.S. Specializations (36 hours)

Pre-Health Specialization

The master's degree in Biological Science 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, three hours of capstone course (BIOL 6838), and six hours of graduate electives. A thesis option is also available.

Biological Science Core coursework (28 hours)

- BIOL 4342 - Biochemistry II **Credit Hours:** 3
- BIOL 5132 - Cell Signaling **Credit Hours:** 3
- BIOL 5332 - Toxicology **Credit Hours:** 3
- BIOL 5417 - Lab for Human Gross Anatomy **Credit Hours:** 1
- BIOL 5432 - Principles of Pharmacology **Credit Hours:** 3
- BIOL 5435 - Advanced Immunology **Credit Hours:** 3
- BIOL 5437 - Human Gross Anatomy **Credit Hours:** 3
- BIOL 5635 - Neuroscience **Credit Hours:** 3
- BIOL 5736 - Bioethics **Credit Hours:** 3
- BIOL 5436 - Physiological Basis of Disease **Credit Hours:** 3

Designated electives (6 hours)

- BIOL 4332 - Histology **Credit Hours:** 3
- BIOL 4347 - Cellular Physiology **Credit Hours:** 3
- BIOL 4348 - Developmental Biology **Credit Hours:** 3
- BIOL 4351 - Molecular Biology **Credit Hours:** 3
- BIOL 5131 - Membrane Biology **Credit Hours:** 3
- BIOL 5433 - Enzymology **Credit Hours:** 3
- BIOL 5731 - Advanced Cancer Biology **Credit Hours:** 3
- BIOL 5734 - Oncogenes **Credit Hours:** 3
- BIOL 5939 - Independent Study in Biological Science **Credit Hours:** 3

Cell/Molecular Specialization

The master's degree in biology with a cell/molecular biology focus consists of coursework that is intended to prepare the student for a career in biomedical research. The cell/molecular specialization includes coursework selected from the list below, in consultation with the faculty adviser, and a 3-hour capstone course (BIOL 6838). A thesis option is also available.

Core coursework (select 33 hours)

- BIOL 5131 - Membrane Biology **Credit Hours:** 3
- BIOL 5132 - Cell Signaling **Credit Hours:** 3
- BIOL 5433 - Enzymology **Credit Hours:** 3
- BIOL 5435 - Advanced Immunology **Credit Hours:** 3
- BIOL 5634 - Apoptosis **Credit Hours:** 3
- BIOL 5731 - Advanced Cancer Biology **Credit Hours:** 3
- BIOL 5732 - Advances in Molecular Biology **Credit Hours:** 3
- BIOL 5733 - Epigenetics and miRNA **Credit Hours:** 3
- BIOL 5734 - Oncogenes **Credit Hours:** 3
- BIOL 5738 - Gene Therapy **Credit Hours:** 3
- BIOL 5931 - Research Topics in Biology **Credit Hours:** 3
- BIOL 5939 - Independent Study in Biological Science **Credit Hours:** 3
- BIOT 5031 - Applied Biotechnology **Credit Hours:** 3
- BIOT 5021 - Methods of Biotechnology **Credit Hours:** 2
- BIOT 5011 - Methods of Biotechnology Discussions **Credit Hours:** 1
- BIOT 5121 - Advanced Methods of Biotechnology I **Credit Hours:** 2
- BIOT 5111 - Advanced Methods of Biotechnology I Discussions **Credit Hours:** 1
- BIOT 5122 - Advanced Methods of Biotechnology II **Credit Hours:** 2
- BIOT 5112 - Advanced Methods of Biotechnology II Discussions **Credit Hours:** 1

Ecology/Microbiology/Aquatic and Marine Biology Specialization

The Master of Science in biological science with an ecology/microbiology/aquatic and marine biology focus consists of coursework that is intended to prepare the student for a career in environmental biology research, consulting, or in the government/regulatory sector. The ecology/microbiology/aquatic and marine biology specialization includes coursework selected from the list below, in consultation with the faculty adviser and a 3-hour capstone course (BIOL 6838). A thesis option is also available.

Core coursework (select 33 hours)

- BIOL 5235 - Ichthyology **Credit Hours:** 3
- BIOL 5215 - Laboratory for Ichthyology **Credit Hours:** 1
- BIOL 5233 - Ecotoxicology **Credit Hours:** 3
- BIOL 5234 - Population and Community Dynamics **Credit Hours:** 3
- BIOL 5332 - Toxicology **Credit Hours:** 3
- BIOL 5334 - Microbial Ecology **Credit Hours:** 3
- BIOL 5517 - Limnology and Aquatic Biology **Credit Hours:** 1
- BIOL 5531 - Aquatic Toxicity Testing **Credit Hours:** 3
- BIOL 5532 - Coastal and Estuarine Ecology **Credit Hours:** 3

- BIOL 5512 - Laboratory for Coastal and Estuarine Ecology **Credit Hours:** 1
- BIOL 5533 - Ecological Methods **Credit Hours:** 3
- BIOL 5534 - Conservation Biology **Credit Hours:** 3
- BIOL 5535 - Neotropical Rainforest Ecology **Credit Hours:** 3
- BIOL 5537 - Limnology and Aquatic Biology **Credit Hours:** 3
- BIOL 5931 - Research Topics in Biology **Credit Hours:** 3
- BIOL 5939 - Independent Study in Biological Science **Credit Hours:** 3
- ENSC 5331 - Wetlands **Credit Hours:** 3

Additional Information

The following courses are co-requisites and must be taken concurrently:

- BIOL 5235 - Ichthyology **Credit Hours:** 3
- BIOL 5215 - Laboratory for Ichthyology **Credit Hours:** 1

- BIOL 5532 - Coastal and Estuarine Ecology **Credit Hours:** 3
- BIOL 5512 - Laboratory for Coastal and Estuarine Ecology **Credit Hours:** 1

- BIOL 5537 - Limnology and Aquatic Biology **Credit Hours:** 3
- BIOL 5517 - Limnology and Aquatic Biology **Credit Hours:** 1

Plant Biology Specialization

The master's degree in biological science with a plant biology focus consists of coursework that is intended to prepare the student for a career in plant biochemistry and genetics, nutritional biochemistry and biomedical research. The plant biology specialization includes coursework selected from the list below in consultation with the faculty adviser and a 3-hour capstone course (BIOL 6838). A thesis option is also available.

Core coursework (select 33 hours)

- BIOL 5131 - Membrane Biology **Credit Hours:** 3
- BIOL 5132 - Cell Signaling **Credit Hours:** 3
- BIOL 5433 - Enzymology **Credit Hours:** 3
- BIOL 5533 - Ecological Methods **Credit Hours:** 3
- BIOL 5534 - Conservation Biology **Credit Hours:** 3
- BIOL 5732 - Advances in Molecular Biology **Credit Hours:** 3
- BIOL 5931 - Research Topics in Biology **Credit Hours:** 3
- BIOL 5939 - Independent Study in Biological Science **Credit Hours:** 3
- BIOT 5031 - Applied Biotechnology **Credit Hours:** 3

Additional Information

- Students may select any BIOL 5x3x course including BIOT 5x3x Plant Genomic Analysis to fulfill this requirement.

Biotechnology M.S.

The graduate plan in biotechnology leads to the Master of Science degree. This innovative and interdisciplinary master's degree program offers an industry focus on a comprehensive exploration of basic science, applied science, and lab science. The biotechnology graduate program at UHCL provides a solid foundation in biochemistry, molecular biology, cell biology, genomics and proteomics. The student's course of study qualifies them for careers in research and development, teaching or private industry. Students must specialize in one of the following areas:

- Molecular Biotechnology
- Bioinformatics/Computational Biology
- Biotechnology Management

The GRE is optional. The suggested GRE score (verbal + quantitative) should be a minimum of 290 points, with a minimum quantitative score of 150, verbal score of 140 and writing score of 3.5. Required GPA should be 3.0 or higher.

Students must submit transcripts of past college and university experience. Students who do not submit and/or do not meet college GRE/or GPA standards will be required to meet additional performance criteria by submitting three letters of recommendation, a resume, and a personal statement detailing future work and research plans.

Successful applicants should have completed the basic requirements for the Bachelor of Science degree in Biological Sciences or a related field or have completed the following courses (including prerequisites or equivalents) before applying for admission:

Requirements

Basic Requirements

- BIOL 3341 - Molecular Genetics **Credit Hours:** 3
- BIOL 4341 - Biochemistry I **Credit Hours:** 3
- BIOL 4344 - Comparative Animal Physiology **Credit Hours:** 3
- BIOL 4345 - Human Physiology **Credit Hours:** 3
- BIOL 4343 - Plant Physiology **Credit Hours:** 3
- BIOL 4347 - Cellular Physiology **Credit Hours:** 3
- BIOL 4351 - Molecular Biology **Credit Hours:** 3
- BIOT 5011 - Methods of Biotechnology Discussions **Credit Hours:** 1
- BIOT 5021 - Methods of Biotechnology **Credit Hours:** 2
- STAT 3308 - Computational Statistics **Credit Hours:** 3

Additional Information

- Students must select from BIOL 4344 Or BIOL 4345 Or BIOL 4343.
- In all cases for basic requirements, evidence of completion of the course with a grade of C or better is required.
- Students must be registered concurrently for both the lab and discussion course BIOT 5021/BIOT 5011.
- Students missing some basic requirements may be admitted to the program on the condition that such courses will need to be taken at UHCL within the first 18 hours.

Core Requirements (9 hours)

The master's degree requires the completion of 30 hours. All core requirements and biotechnology electives must be completed with a grade of C or better and a GPA of ≥ 3.0 must be maintained.

All graduate students in the biotechnology program must complete a Candidate Plan of Study (CPS) with their assigned faculty adviser before they complete 9 hours of graduate credit. Courses completed past the initial 9 hours that are not on the approved CPS may not be counted toward the degree.

Although the Master of Science in Biotechnology does not require independent study, co-op (internship), field experience (practicum) or thesis, these options are available and students are strongly encouraged to participate in these courses and experiences.

In addition to the following required courses, there are additional required courses for each specialization: Refer to Biotechnology Program Specialization Areas and Electives sections.

Required Courses

- BIOT 5031 - Applied Biotechnology **Credit Hours:** 3
- BIOT 5733 - Bioinformatics **Credit Hours:** 3
- BIOT 5736 - Bioethics **Credit Hours:** 3

Biotechnology Extended Coursework Option

Under the extended coursework option, a minimum of 27 hours of coursework in one of the three specialization areas, of which 18-24 hours (depending on the specialization) must be biotechnology (BIOT) courses and three hours of BIOT 6838 - Research Project and Seminar taken in the last 12 hours. Non-thesis students who complete BIOT 5530 as an elective will still be required to complete BIOT 6838.

Biotechnology Thesis Option

The thesis option requires a minimum of 21 hours of biotechnology (BIOT) courses in one of the 3 specialization areas, BIOT 5530 - Research Methods in Biotechnology, and 6 hours of BIOT 6939 - Master's Thesis Option. Graduate students who are pursuing the master's thesis option are advised to consult with their faculty adviser early in their studies for guidance in preparation for beginning the thesis and register for BIOT 5530 - Research Methods in Biotechnology early in their studies.

If students take more than 6 hours of BIOT 6939, they are not able to count them toward their degree and they will only receive a grade for 6 hours. Once they enroll in the course, students must stay continually enrolled until they graduate. Any hours above the 6 will show a credit only with no grade.

Biotechnology Program Specialization Areas and Electives

Specialization Prerequisites

Please be informed that there are additional prerequisites for each specialization/concentration. In all cases for specialization requirements, evidence of completion of the course with a grade of C or better is required.

Molecular Biotechnology Specialization

The Master of Science in Biotechnology with a Specialization in Molecular Biotechnology requires 30 hours of coursework, of which 24 hours must be biotechnology (BIOT).

Required Courses

- BIOT 5111 - Advanced Methods of Biotechnology I Discussions **Credit Hours:** 1
- BIOT 5112 - Advanced Methods of Biotechnology II Discussions **Credit Hours:** 1
- BIOT 5121 - Advanced Methods of Biotechnology I **Credit Hours:** 2
- BIOT 5122 - Advanced Methods of Biotechnology II **Credit Hours:** 2

Additional Information

- Students must complete Methods of Biotechnology laboratory and discussions BIOT 5021/BIOT 5011 before registering for laboratory and discussion sections BIOT 5121/BIOT 5111 and BIOT 5122/BIOT 5112.
- Students must be registered concurrently for both the laboratory and discussion courses (BIOT 5021/BIOT 5011, BIOT 5121/BIOT 5111, and BIOT 5122/BIOT 5112).

Molecular Biotechnology Specialization Electives (3-9 hours)

- BIOT 5231 - Advanced Mammalian Tissue Culture **Credit Hours:** 3
- BIOT 5235 - Bacterial Taxonomy and Biotechnology Laboratory **Credit Hours:** 3
- BIOT 5331 - Stem Cell Biotechnology **Credit Hours:** 3
- BIOT 5431 - Genomic Analysis **Credit Hours:** 3
- BIOT 5433 - Marine Biotechnology Seminar **Credit Hours:** 3
- BIOT 5535 - Environmental Biotechnology **Credit Hours:** 3
- BIOT 5833 - Proteomics **Credit Hours:** 3
- BIOT 5915 - Cooperative Education Work Term **Credit Hours:** 1
- BIOT 5921 - Laboratory Topics in Biotechnology **Credit Hours:** 2
- BIOT 5931 - Research Topics in Biotechnology **Credit Hours:** 3
- BIOT 5939 - Independent Study in Biotechnology **Credit Hours:** 3
- BIOT 6011 - Biotechnology Practicum **Credit Hours:** 1
- BIOT 6021 - Biotechnology Practicum **Credit Hours:** 2
- BIOT 6031 - Biotechnology Practicum **Credit Hours:** 3
- BIOL 5131 - Membrane Biology **Credit Hours:** 3
- BIOL 5132 - Cell Signaling **Credit Hours:** 3
- BIOL 5332 - Toxicology **Credit Hours:** 3
- BIOL 5433 - Enzymology **Credit Hours:** 3
- BIOL 5435 - Advanced Immunology **Credit Hours:** 3
- BIOL 5634 - Apoptosis **Credit Hours:** 3
- BIOL 5635 - Neuroscience **Credit Hours:** 3
- BIOL 5732 - Advances in Molecular Biology **Credit Hours:** 3
- BIOL 5734 - Oncogenes **Credit Hours:** 3
- BIOL 5738 - Gene Therapy **Credit Hours:** 3

Specialization Prerequisites

Although laboratory courses in Molecular Biology and Biochemistry will greatly assist students, these skills will be reviewed and enhanced in Methods of Biotechnology laboratory and discussion sessions BIOT 5021/BIOT 5011, therefore none are required.

Bioinformatics/Computational Biology Specialization

The Master of Science in Biotechnology with a Specialization in Bioinformatics/Computational Biology requires 30 hours of coursework, of which 18 hours must be in biotechnology (BIOT). Additional prerequisites for the Bioinformatics/Computational Biology Specialization (UHCL course or equivalent) are:

Specialization Prerequisites

UHCL course or equivalent.

- CSCI 1320 - C Programming **Credit Hours:** 3
- CSCI 1470 - Computer Science I **Credit Hours:** 4

- CSCI 2305 - Data Structures for Science and Engineering **Credit Hours:** 3
- CSCI 4333 - Design of Database Systems **Credit Hours:** 3

Additional Information

- Students must complete CSCI 1320 or CSCI 1470, and CSCI 2305 in the listed order as each one is a pre-requisite for the following course.
- In all cases for specialization requirements, evidence of completion of the course with a grade of C or better is required.

Required Courses

- CSCI 5833 - Data Mining: Tools and Techniques **Credit Hours:** 3
- CSCI 5933 - Computational Bioinformatics **Credit Hours:** 3

Additional Information

CSCI 5833 must be taken prior to CSCI 5933.

Bioinformatics/Computational Specialization Electives (3-9 hours)

- BIOT 5111 - Advanced Methods of Biotechnology I Discussions **Credit Hours:** 1
- BIOT 5112 - Advanced Methods of Biotechnology II Discussions **Credit Hours:** 1
- BIOT 5121 - Advanced Methods of Biotechnology I **Credit Hours:** 2
- BIOT 5122 - Advanced Methods of Biotechnology II **Credit Hours:** 2
- BIOT 5235 - Bacterial Taxonomy and Biotechnology Laboratory **Credit Hours:** 3
- BIOT 5431 - Genomic Analysis **Credit Hours:** 3
- BIOT 5915 - Cooperative Education Work Term **Credit Hours:** 1
- BIOT 5919 - Independent Study in Biotechnology **Credit Hours:** 1
- BIOT 5921 - Laboratory Topics in Biotechnology **Credit Hours:** 2
- BIOT 5931 - Research Topics in Biotechnology **Credit Hours:** 3
- BIOT 5939 - Independent Study in Biotechnology **Credit Hours:** 3
- BIOT 6011 - Biotechnology Practicum **Credit Hours:** 1
- BIOT 6031 - Biotechnology Practicum **Credit Hours:** 3
- CSCI 4333 - Design of Database Systems **Credit Hours:** 3
- CSCI 5530 - Pattern Classification **Credit Hours:** 3
- CSCI 5532 - Pattern Recognition and Image Processing **Credit Hours:** 3
- CSCI 5633 - Web Database Development **Credit Hours:** 3

Biotechnology Management Specialization

The Master of Science in Biotechnology with a Specialization in Management requires 30 hours of coursework, of which 18 hours must be in biotechnology (BIOT). Additional prerequisites for the Biotechnology Management specialization (UHCL course or equivalent) are:

Specialization Prerequisites

UHCL course or equivalent.

- MGMT 3301 - Management Theory and Practice **Credit Hours:** 3
- MGMT 4354 - Organizational Behavior Theory and Application **Credit Hours:** 3

Additional Information

- If students have not taken MGMT 3301 and MGMT 4354 they may take MGMT 5032 to fulfill the foundation requirements of this specialization.
- In all cases for specialization requirements, evidence of completion of the course with a grade of C or better is required.

Required Courses

- BIOT 5111 - Advanced Methods of Biotechnology I Discussions **Credit Hours:** 1
- BIOT 5112 - Advanced Methods of Biotechnology II Discussions **Credit Hours:** 1
- BIOT 5121 - Advanced Methods of Biotechnology I **Credit Hours:** 2
- BIOT 5122 - Advanced Methods of Biotechnology II **Credit Hours:** 2
- EMGT 5430 - Professional Project Management **Credit Hours:** 3

Additional Information

- Students select BIOT 5111/B121 Or BIOT 5112/BIOT 5122.
- Students must complete Methods of Biotechnology laboratory and discussions BIOT 5011/BIOT 5021 before registering for laboratory and discussion sections BIOT 5111/BIOT 5121 and/or BIOT 5112/BIOT 5122.

Designated Electives

Students are required to take 3 of the following electives:

- MGMT 5032 - Human Behavior in Organizations **Credit Hours:** 3
- MGMT 5133 - Teamwork and Leadership Skills: Theory in Practice **Credit Hours:** 3
- MGMT 5434 - Negotiation Skills and Strategies **Credit Hours:** 3
- MGMT 5636 - Management of Technology **Credit Hours:** 3
- MGMT 5638 - Leading Technology **Credit Hours:** 3

Biotechnology Management Specialization Electives (3-9 hours)

- BIOT 5111 - Advanced Methods of Biotechnology I Discussions **Credit Hours:** 1
- BIOT 5112 - Advanced Methods of Biotechnology II Discussions **Credit Hours:** 1
- BIOT 5121 - Advanced Methods of Biotechnology I **Credit Hours:** 2
- BIOT 5122 - Advanced Methods of Biotechnology II **Credit Hours:** 2
- BIOT 5915 - Cooperative Education Work Term **Credit Hours:** 1
- BIOT 5919 - Independent Study in Biotechnology **Credit Hours:** 1
- BIOT 5921 - Laboratory Topics in Biotechnology **Credit Hours:** 2
- BIOT 5929 - Independent Study in Biotechnology **Credit Hours:** 2
- BIOT 5931 - Research Topics in Biotechnology **Credit Hours:** 3
- BIOT 5939 - Independent Study in Biotechnology **Credit Hours:** 3
- BIOT 6011 - Biotechnology Practicum **Credit Hours:** 1
- BIOT 6021 - Biotechnology Practicum **Credit Hours:** 2
- BIOT 6031 - Biotechnology Practicum **Credit Hours:** 3
- MGMT 6332 - International Management **Credit Hours:** 3

Additional Information

- Students enrolled in the Management specialization cannot take more than 15 hours of Management.

Cooperative Doctor of Chiropractic Master of Science in Biology Degree Program

The Texas Chiropractic College (TCC) and UHCL have established a cooperative D.C./M.S. degree program. Students meeting the requirements (see below) may apply to enter the cooperative D.C./M.S. program. This program provides students with the opportunity to earn a clinical doctorate degree while gaining theoretical knowledge and practical experience in the biological sciences. Students wishing to participate in this cooperative program must be accepted into both the TCC D.C. program and the graduate program in Biological Sciences at UHCL. Upon completion of the cooperative program the degrees of Doctor of Chiropractic and Master of Science in Biology will be conferred by the Texas Chiropractic College and UHCL, respectively.

Entry Requirements to participate in Cooperative D.C./M.S. Program:

- Independent admission to TCC and the master's degree program at UHCL.
- Earn passing grades in all Tri-1 Tri-5 courses at TCC.
- Prior to enrollment in the cooperative program, the student must earn a bachelor's degree or have earned TCC's Bachelor of Science (B.S.) degree in Human Biology (at the completion of Tri-5).

- Earn a TCC GPA of 3.0 or higher at the time of application to the program.

- All students who apply to the cooperative D.C./M.S. program are required to follow all UHCL academic standards and policies in addition to those of TCC as well as complete the UHCL application forms and fees.
- Copies of the student's official TCC transcripts showing conferred B.S. degree will be made available for the Biological Sciences graduate department at UHCL.
- Upon acceptance into the program, students must maintain a 3.0 or better GPA at UHCL. Earning a C at UHCL will result in academic probation in accordance with UHCL policies, which could ultimately result in their dismissal from themaster's program.
- The GRE Exam will not be required for admission to the cooperative degree program.

Students enrolled in the cooperative D.C./M.S. program will complete a total of 36 hours of advanced courses in the master's program at UHCL as detailed below. The required foundation courses for admission to the Biology master's degree program [BIOL 3431 (Genetics), BIOL 4431 (Biochemistry), MATH 3038 (Computational Statistics), BIOL 3231 Microbiology, BIOL 4437 Cellular Physiology, and BIOL 4435 (Human Physiology)] will be waived contingent on the candidate's earning a B (3.0 GPA) or higher in the first five trimesters of TCC classes.

The cooperative degree program consists of 7 hours of course credit for basic science courses at TCC, 17 core degree hours at UHCL, and 12 credit hours of elective courses. Key required courses include two cooperative education work term courses in which the student will serve as: 1) a laboratory instructor in gross anatomy and 2) as a facilitator for a problem-based learning small group in physiology courses at TCC. A capstone course (3 hours) will also require students to write and deliver an original basic science lecture in their area of specialization to first-year TCC students. The student will pay all tuition and related course fees, as well as any additional fees (ex. parking, etc.) incurred.

Requirements for D.C./M.S. Cooperative Degree

Seven transfer hours from TCC courses are required.

D.C./M.S. Core Requirements

- BIOL 5131 - Membrane Biology **Credit Hours:** 3
- BIOL 5132 - Cell Signaling **Credit Hours:** 3
- BIOL 5435 - Advanced Immunology **Credit Hours:** 3
- BIOL 5736 - Bioethics **Credit Hours:** 3
- BIOL 5915 - Cooperative Education Work Term **Credit Hours:** 1
- BIOL 6838 - Research Project and Seminar **Credit Hours:** 3

Elective Concentration Area: Biological Sciences

Biological Sciences (9 hours required)*

- BIOL 4332 - Histology **Credit Hours:** 3
- BIOL 4347 - Cellular Physiology **Credit Hours:** 3
- BIOL 4348 - Developmental Biology **Credit Hours:** 3
- BIOL 4351 - Molecular Biology **Credit Hours:** 3
- BIOL 5432 - Principles of Pharmacology **Credit Hours:** 3
- BIOL 5436 - Physiological Basis of Disease **Credit Hours:** 3

Additional Information

A maximum of 6 hours of 4000-level courses may be applied to the master's degree plan.

Elective Concentration Area: Education

Education (3 hours required)

- INST 5130 - Learning Theory and Instruction **Credit Hours:** 3
- INST 5035 - Creating Digital Resources **Credit Hours:** 3
- INST 5233 - Performance Technology **Credit Hours:** 3
- INST 5535 - Internet for Instruction **Credit Hours:** 3
- INST 6337 - Motivational Design of Instruction **Credit Hours:** 3

Additional Information

Students in the program will be responsible for completing the program in a timely manner. Neither TCC nor UHCL are responsible for students failing to complete the cooperative degree coursework necessary to earn the DC or M.S. degree. Students must complete the master's degree within seven years of starting their first course or they will automatically be dismissed from the cooperative program and will not receive the master's degree

Department of Environmental Sciences

Students desiring to study in the environmental sciences department may choose from the graduate plans below. Applicants should consult the chair of the division for additional information.

Master of Science

Environmental Science, M.S.

The graduate plan in environmental science leads to the Master of Science 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. Students must specialize in one of the following areas:

- Environmental Biology
- Environmental Chemistry
- Environmental Geology

All graduate students are required to produce a major paper and present a public seminar via ENSC 5530 and ENSC 6838, ENSC 6731 or ENSC 6939. Prior to enrolling in ENSC 5530 (proposal), students must have a faculty adviser and an approved research topic. Following completion of ENSC 5530, the student will be advised into ENSC 6731 (seminar), ENSC 6838 (project) or ENSC 6939 (thesis).

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.

Degree Requirements

Environmental Science Basic Requirements

Students seeking a master's degree must have coursework preparation appropriate to their area of specialization. At least 34 hours of natural science and 6 hours of mathematics are required prior to admission.No GRE required for applicants with GPA ≥3.0. GRE ≥290 (≥150 quantitative and ≥140 verbal) required for applicants with GPA ≤3.0Scores will be evaluated by the college's admissions committee.

Students should submit a written statement to the Science and Computer Engineering Academic Advising Office (sceadvising@uhcl.edu) specifying their educational goals and objectives as well as their intended areas of specialization, i.e., Environmental Biology, Environmental Chemistry or Environmental Geology. 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 I and II with labs
- General Physics I and II with labs
- Calculus I

The following must be completed prior to or within the first year of study:

- Organic Chemistry I with lab
- Statistics

The master's degree requires completion of a minimum of 36 hours.

Environmental Science Thesis Option (36 hours)

Designated electives 24 hours (maximum of six hours of 4000-level credit) and 6 hours of thesis. Select one of the following Statistics courses.

- STAT 5135 - Applied Statistical Methods **Credit Hours:** 3
- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- ENSC 5530 - Research Methods: Environmental Science **Credit Hours:** 3
- ENSC 6939 - Master's Thesis Research **Credit Hours:** 3

Additional Information

- A maximum of six hours of environmental management (ENVR) courses may be included.

Environmental Science Research Project Course Option (36 hours)

Designated electives 27 hours (maximum 6 hours of 4000-level credit). Select one of the following two Statistics courses.

- STAT 5135 - Applied Statistical Methods **Credit Hours:** 3
- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- ENSC 5530 - Research Methods: Environmental Science **Credit Hours:** 3
- ENSC 6838 - Research Project **Credit Hours:** 3
- ENSC 6731 - Graduate Seminar **Credit Hours:** 3

Additional Information

- Students will be advised to take ENSC 6838 or ENSC 6731.
- A maximum of six hours of environmental management (ENVR) courses may be included.

Environmental Science Specializations

Environmental Biology Specialization Electives:

Selected in consultation with adviser (24-27 hours).

- ENSC 5233 - Ecotoxicology **Credit Hours:** 3
- ENSC 5333 - Fundamentals of Environmental Engineering **Credit Hours:** 3
- ENSC 5533 - Environmental Biotechnology **Credit Hours:** 3
- BIOL 5235 - Ichthyology **Credit Hours:** 3
- BIOL 5215 - Laboratory for Ichthyology **Credit Hours:** 1
- ENSC 5332 - Toxicology **Credit Hours:** 3
- ENSC 5431 - Contaminant Fate and Transport **Credit Hours:** 3

- ENSC 5531 - Aquatic Toxicity Testing **Credit Hours:** 3
- BIOL 5532 - Coastal and Estuarine Ecology **Credit Hours:** 3
- BIOL 5533 - Ecological Methods **Credit Hours:** 3
- BIOL 5535 - Neotropical Rainforest Ecology **Credit Hours:** 3
- BIOL 5931 - Research Topics in Biology **Credit Hours:** 3
- ENSC 5532 - Hydrology of Surface Water **Credit Hours:** 3
- ENSC 5536 - Environmental Remediation **Credit Hours:** 3
- ENSC 5535 - Sampling and Analysis of Environmental Contaminants **Credit Hours:** 3
- ENSC 5537 - Hydrology of Groundwater **Credit Hours:** 3
- ENSC 5931 - Research Topics in Environmental Science **Credit Hours:** 3
- ENSC 5939 - Independent Study in Environmental Science **Credit Hours:** 3
- ENSC 5231 - Conservation Biology **Credit Hours:** 3
- ENSC 5234 - Population & Community Dynamics **Credit Hours:** 3

Additional Information

BIOL 5235 and BIOL 5215 are co-requisites.

Environmental Chemistry Specialization Electives:

Selected in consultation with adviser (24-27 hours).

- CHEM 4251 - Laboratory for Environmental Analysis **Credit Hours:** 2
- ENSC 5333 - Fundamentals of Environmental Engineering **Credit Hours:** 3
- ENSC 5431 - Contaminant Fate and Transport **Credit Hours:** 3
- ENSC 5531 - Aquatic Toxicity Testing **Credit Hours:** 3
- ENSC 5533 - Environmental Biotechnology **Credit Hours:** 3
- ENSC 5536 - Environmental Remediation **Credit Hours:** 3
- ENSC 5731 - Environmental Organic Chemistry **Credit Hours:** 3
- ENSC 5535 - Sampling and Analysis of Environmental Contaminants **Credit Hours:** 3
- ENSC 5633 - Environmental Chemodynamics **Credit Hours:** 3
- ENSC 5931 - Research Topics in Environmental Science **Credit Hours:** 3
- ENSC 5939 - Independent Study in Environmental Science **Credit Hours:** 3

Environmental Geology Specialization Electives:

- GEOL 4323 - Soils in the Environment **Credit Hours:** 3
- GEOL 5331 - Advanced Environmental Geology **Credit Hours:** 3
- GEOL 5233 - Environmental Geochemistry **Credit Hours:** 3
- GEOL 5931 - Research Topics in Geology **Credit Hours:** 3
- ENSC 5332 - Toxicology **Credit Hours:** 3
- ENSC 5333 - Fundamentals of Environmental Engineering **Credit Hours:** 3
- ENSC 5431 - Contaminant Fate and Transport **Credit Hours:** 3

- ENSC 5535 - Sampling and Analysis of Environmental Contaminants **Credit Hours:** 3
- ENSC 5537 - Hydrology of Groundwater **Credit Hours:** 3
- ENSC 5532 - Hydrology of Surface Water **Credit Hours:** 3
- ENSC 5632 - Hazardous Materials in Geological Environment **Credit Hours:** 3
- ENSC 5536 - Environmental Remediation **Credit Hours:** 3
- ENSC 5233 - Ecotoxicology **Credit Hours:** 3
- ENSC 5331 - Wetlands **Credit Hours:** 3

Environmental Science, Online Option, M.S.

All graduate students are required to produce a major paper and present an online public seminar. Prior to enrolling in ENSC 5530, students must have a faculty adviser and an approved research topic. Following completion of ENSC 5530, and in consultation with their faculty adviser, on-line students will enroll in ENSC 6731 or ENSC 6838 and prepare their major capstone research paper.

Degree Requirements

Environmental Science General Online Option Core Courses (9 hours)

- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- ENSC 5530 - Research Methods: Environmental Science **Credit Hours:** 3
- ENSC 6731 - Graduate Seminar **Credit Hours:** 3
- ENSC 6838 - Research Project **Credit Hours:** 3

Additional Information

Students are advised to take ENSC 6838 or ENSC 6731.

Environmental Science General Online Course Electives (27 hours)

Selected in consultation with adviser. Must include at least 18 hours of ENSC courses.

- BIOL 5534 - Conservation Biology **Credit Hours:** 3
- ENSC 5233 - Ecotoxicology **Credit Hours:** 3
- ENSC 5332 - Toxicology **Credit Hours:** 3
- ENSC 5532 - Hydrology of Surface Water **Credit Hours:** 3
- ENSC 5535 - Sampling and Analysis of Environmental Contaminants **Credit Hours:** 3
- ENSC 5536 - Environmental Remediation **Credit Hours:** 3
- ENSC 5537 - Hydrology of Groundwater **Credit Hours:** 3

- ENSC 5333 - Fundamentals of Environmental Engineering **Credit Hours:** 3
- ENVR 5332 - Environmental Law **Credit Hours:** 3
- ENVR 6133 - Environmental Risk Management **Credit Hours:** 3
- ENSC 5631 - Remote Sensing: Applications in Geology **Credit Hours:** 3
- OSHE 5131 - Control of Occupational and Environmental Hazards **Credit Hours:** 3
- OSHE 5333 - Air Pollution **Credit Hours:** 3

Additional Information

- Electives are selected in consultation with the faculty adviser.
- A maximum of six hours of environmental management (ENVR) courses may be included.

Department of Computing Sciences

Students desiring to study in the computing sciences may choose any one of the graduate plans below. Applicants should consult the chair of the division for additional information.

Graduate Degrees

Data Science-- Pending SACSCOC approval

Bachelor of Science/Master of Science

Computer Information Systems 5-year B.S./M.S. Dual Degree Program

The Computer Information Systems (CIS) program currently offers bachelor's and master's degrees in the Department of Computing Sciences at the College of Science and Engineering (CSE) at University of Houston-Clear Lake (UHCL). The CIS undergraduate program is ABET-accredited. The dual degree CIS program is designed for high-performing CIS undergraduate students who would like to pursue a master's degree in CIS at UHCL. For students who are accepted into this program, up to six graduate credit hours can count toward both undergraduate and graduate degrees. The overall objective of this initiative is to provide qualified CIS undergraduate students a fast track to a master's degree.

Number of credit hours for degree completion:

This dual degree program allows students to earn degrees at an accelerated pace by allowing up to 6 credit hours to count toward both undergraduate and graduate degrees. For CIS, a total of 152 credit hours is required by the program for both the extended coursework option and the thesis option.

In this program, undergraduates with 90 or more credit hours may take up to 6 graduate credit hours toward their Bachelor's degree. The same 6 graduate credit hours may also count towards a master's degree.

Graduate courses utilized for a bachelor's degree cannot be utilized for a graduate degree outside of the accelerated bachelor's-to-master's degree program. No more than 6 graduate hours can be taken as an undergraduate.

Program participant performance monitoring: After a student is admitted to the program, his/her academic performance will be closely monitored. If a student's cumulative UHCL GPA falls below 3.0/4.0, the student will be put on probation. The probation will be lifted if the student manages to increase the GPA back to3.0/4.0. If a student fails to reach the 3.0/4.0GPA requirement for two consecutive semesters, he/she will be automatically transferred to the regular B.S. program. The general 3.0 GPA or higher requirement for all UHCL graduate students remains effective throughout the program.

A student who becomes ineligible to participate in or withdraws from the program cannot double count any courses for both bachelor's and master's degrees. However, courses successfully completed with a 3.0 or better may count toward the bachelor's degree as appropriate substitutions.

Degree-granting process:

Students in dual degree programs receive a bachelor's degree upon completion of the master's degree.

Students in dual degree programs not completing the Master's degree may apply for graduation with a bachelor's degree.

Dual-degree-program students must complete the undergraduate residency requirements.

Requirements

Eligibility Requirements

Students must apply to the dual-degree program the semester before completing their bachelor's degree requirements. Interested students should submit a CIS Dual Degree Program application form to CIS program chair or his/her designee while meeting all of the following criteria: junior or senior standing and at least 20 credit hours of CINF and CSCI course work completed; Overall GPA of 3.0 or better; 3.0 or above GPA on all CINF and CSCI course work. Students interested in this program must meet with a dual-degree adviser in our college before enrolling in graduate courses.

Additional Information

GRE score is not required for the application.

Computer Science B.S./M.S. Dual Degree Program

The Computer Science (CS) program currently offers bachelor's and master's degrees in the Department of Computing Sciences at the College of Science and Engineering (CSE) at University of Houston-Clear Lake (UHCL). The CS undergraduate program is ABET-accredited. Additionally, we offer the option for a dual-degree CS program for high-performing CS undergraduate students who would like to pursue a master's degree in CS at UHCL. For students who are accepted into this program, up to 6 graduate credit hours can count toward both undergraduate and graduate degrees. The overall objective of this initiative is to provide qualified CS undergraduate students a fast track to a master's degree.

Students may apply for the dual-degree program at any point in the first 80 hours of their Candidate Plan of Study, but must have completed 20 credits hours at UHCL. After completion of course requirements of the regular bachelor's degree which may include no more than two graduate courses, students will then be granted graduate standing. Students in the dual-degree program are not required to take the GRE. Students in dual-degree programs receive a Bachelor's degree upon completion of the master's degree. Students in dual-degree programs not completing the master's degree may apply for graduation with a bachelor's degree. Dual-degree program students must complete the undergraduate residency requirements.

If a student's cumulative UHCL GPA falls below 3.0, the student will be on probation. Probation will be lifted once the cumulative UHCL GPA again rises to 3.0. If a student's cumulative UHCL GPA falls below 3.0 for two consecutive semesters, the student will automatically be transferred to the regular bachelor's degree program.

Requirement

Eligibility Requirements

The UHCL graduate GPA requirement of 3.0 or higher continues to be operational for all students in this plan. The dual-degree program consists of 152 credit hours, offering the full 122 undergraduate hours of coursework which is ABET-accredited and 30 hours of graduate hours required by THECB.

Certificate

Data Science Certificate

The admission requirements for the Data Science Certificate Program is a Bachelor's degree in any field. Students should have already completed at least two of the following three preparatory requirements.

1. DASC 5031 Python for Data Science, or equivalent (3 hours)

2. DASC 5032 Data Structures for Data Science, or equivalent (3 hours)

3. STAT 3334 Probability and Statistics for Scientists and Engineers, or equivalent (3 hours)

Students may take the last remaining preparatory course concurrently with courses in the certificate program.

The GRE is not required since the certificate program is considered as a non-degree seeking program. The following factors will be considered favorably.

- A GPA of 3.0 or above
- A degree in a computing or mathematics area
- Prior data-related job experience.

Alternatively, a student successfully completed the Data Science Basics Certificate with a four-course GPA of 3.0 or above will be accepted.

To earn the certificate, the four-course set must be completed within a two-year time limit. Please note that the certificate adheres to standard university policy on continuous enrollment. Upon the successful completion of the certificate with a four-course GPA of 3.0 or above, students will satisfy the admission requirements of the Master of Science in Data Science degree program. They will need to apply within one year of the completion of the certificate. The 12 hours of courses in the certificate program will fulfill 12 hours of requirements in the MS DS program.

Requirements

To receive the certificate, students need to complete the following four courses with a four-course GPA of B or above

- DASC 5133 - Introduction to Data Science **Credit Hours:** 3
- CSCI 5833 - Data Mining: Tools and Techniques **Credit Hours:** 3
- DASC 5231 - Visualization in Data Science **Credit Hours:** 3
- STAT 5135 - Applied Statistical Methods **Credit Hours:** 3

Master of Science

Computer Information Systems, M.S.

Graduate studies in Computer Information Systems lead to a master of science degree. The mission of Computer Information Systems Master of Science degree

program is to prepare
students from diverse backgrounds for a promising career in Information Systems by providing them knowledge through rigorous coursework and experience through exciting research activities, as well
as practical and innovative projects so that they can excel in solving real business problems using information technology-based solutions for various sectors.

Requirements

Computer Information Systems Basic Preparation

Students aspiring to graduate degree candidacy must have a bachelor's degree in a related area. Preparatory requirements are proficiency in one or more high-level languages, preferably 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 4320 - Web Application Development **Credit Hours:** 3
- CSCI 4333 - Design of Database Systems **Credit Hours:** 3
- CINF 3331 - Business Data Communications **Credit Hours:** 3
- CINF 4324 - Modern System Analysis and Design **Credit Hours:** 3

Additional Information

- Student select from CINF 3331 Or CENG 3331 And CENG 3131
- 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 (15 hours)

The following courses, or approved substitutions are required for both the thesis option and extended course work options:

- CINF 5231 - Strategic Information Systems **Credit Hours:** 3
- CINF 5234 - Advanced Systems Analysis and Design **Credit Hours:** 3
- CSCI 5132 - Internet Protocols **Credit Hours:** 3
- CSCI 5333 - Database Management Systems **Credit Hours:** 3
- CSCI 6530 - Research Methods in Computer Science **Credit Hours:** 3

Computer Information Systems Thesis Option (18 hours)

3 hours of CENG/CINF/CSCI/SWEN or other approved related courses 6 hours of CINF/CSCI/DASC 4000-6000 levels 3 hours of CINF/CSCI/DASC 5100-6000

- CINF 6939 - Master's Thesis Research **Credit Hours:** 3

Additional Information

CINF/CSCI courses, 5100-6000 level: 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).

Computer Information Systems Extended Course Work Option (21 hours)

Students desiring to follow the extended course work option must successfully complete the capstone project course (CINF 6838). 3 hours of CENG/CINF/CSCI/SWEN or other approved related courses 6 hours of CINF/CSCI/DASC 4000-6000 levels 9 hours of CINF/CSCI/DASC 5100-6000

- CINF 6838 - Research Project and Seminar **Credit Hours:** 3

Additional Information

- CINF 6838 must be taken after completion of the required core and during last 12 hours.
- All electives must be approved before enrolling.

Computer Information Systems Specializations

Note: Data Science Specialization requires STAT 4345 or any calculus-based statistics course as a prerequisite. (STAT 4345 may be allowed as an elective in this specialization if not taken previously.)

Data Science Specialization

- STAT 5531 - Multivariate Statistical Analysis **Credit Hours:** 3
  or
- STAT 5537 - Elements of Statistical Learning **Credit Hours:** 3

Additional Information

Choose 3 (for thesis) or 5 (for extended course work) of

- CINF 5432 - Data Warehousing and Business Intelligence **Credit Hours:** 3
- CSCI 5832 - Financial Data Mining **Credit Hours:** 3

- CSCI 5833 - Data Mining: Tools and Techniques **Credit Hours:** 3

and two other related.

Cyber Security Specialization

- CSCI 5233 - Computer Security and Cryptography **Credit Hours:** 3
- CSCI 5234 - Web Security **Credit Hours:** 3
- CSCI 5235 - Network Security **Credit Hours:** 3

Additional Information

Choose 1 (for thesis) or 3 (for extended course work) of CSCI 5737, CSCI 5931,CINF/CSCI/DASC 5000-6000 approved electives.

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)

- CINF 5231 - Strategic Information Systems **Credit Hours:** 3
- CSCI 5132 - Internet Protocols **Credit Hours:** 3
- CSCI 5333 - Database Management Systems **Credit Hours:** 3

Semester 2 (9 credits)

- CINF 5234 - Advanced Systems Analysis and Design **Credit Hours:** 3
- CINF 5939 - Independent Study in Computer Information Systems **Credit Hours:** 3
- CSCI 6530 - Research Methods in Computer Science **Credit Hours:** 3

Semester 3 (9 credits)

CINF/CSCI/DASC 4000-6000 level elective

- CINF 6939 - Master's Thesis Research **Credit Hours:** 3

Semester 4 (6 credits)

6 hours of CINF/CSCI/DASCI 5100-6000

- CINF 6939 - Master's Thesis Research **Credit Hours:** 3

Computer Science, M.S.

The plan in Computer Science leads to the Master of Science degree. This plan is designed to prepare students to hold key technical positions in the development of computer-based solutions to complex systems problems.

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 to the waiver committee in their first semester of enrollment. This will allow proper evaluation and appropriate credit.

Students may select from the thesis option or the extended coursework option. The thesis option requires 33 credit hours of graduate work. The extended coursework option requires 36 credit hours.

Requirements

Computer Science 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 Graduate Record Examination (GRE) score required for acceptance into the plan be reasonably balanced among the different components of the GRE exam. The GRE score (verbal + quantitative) should be a minimum of 290 points, with a minimum quantitative score of 150. 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 one object-oriented computer programming languages, such as JavaME# or C++ plus the completion of the following undergraduate courses, their equivalents or successful completion of equivalence exams upon approval from the admissions committee.

- CSCI 2315 - Data Structures **Credit Hours:** 3
- CSCI 2331 - Computer Organization & Assembly Language **Credit Hours:** 3
- CSCI 4333 - Design of Database Systems **Credit Hours:** 3
- CSCI 4354 - Operating Systems **Credit Hours:** 3
- MATH 2414 - Calculus II **Credit Hours:** 4

Additional Information

Students should also have 3 hours of credit for an object oriented programming language. Students with credit for CENG 3351 will satisfy the CSCI 2331 requirement.

Additionally, at least two of the following must be completed:

- CSCI 3321 - Numerical Methods **Credit Hours:** 3
- MATH 2305 - Discrete Mathematics **Credit Hours:** 3
- MATH 2318 - Linear Algebra **Credit Hours:** 3
- MATH 2320 - Differential Equations **Credit Hours:** 3
- PHYS 2326 - University Physics II **Credit Hours:** 3
- STAT 3334 - Probability and Statistics for Scientists and Engineers **Credit Hours:** 3
- SWEN 4342 - Software Engineering **Credit Hours:** 3

Core Requirements (15 Hours)

The following courses or their approved substitutions are required for both the thesis and the extended course work options:

- CSCI 5134 - Concurrent Programming and Software Modeling **Credit Hours:** 3
- CSCI 5333 - Database Management Systems **Credit Hours:** 3
- CSCI 5531 - Advanced Operating Systems **Credit Hours:** 3
- CSCI 5432 - Design and Analysis of Algorithms **Credit Hours:** 3
- CSCI 6530 - Research Methods in Computer Science **Credit Hours:** 3

Thesis Option (18 hours)

Computer Science Thesis Option (18 hours)

Complete the following courses.

- CSCI 6939 - Master's Thesis Research **Credit Hours:** 3

Additional Information

- A student must take an additional 12 hours of electives.
- Students may take 3 hours of 4000-6000 level CSCI/CINF/DASC/SENG/CENG/SWEN as electives.
- Students take CSCI 6939 for 6 hours
- Note: All electives must be approved before enrolling.

Extended Course Work Option (21 hours)

Computer Science Extended Course Work Option (21 hours)

Complete the following course:

- CSCI 6838 - Research Project and Seminar **Credit Hours:** 3

Additional Information

•A student must take an additional 18 hours of electives pending faculty adviser approval.

•Students may take either 6 hours of 4000 level CSCI electives or may take 3 hours of 4000 level CSCI and 3 hours CINF/DASC/SENG/CENG/SWEN/STAT* electives. Additionally, students may also take 6 hours of 5000-6000 level CSCI/CINF/DASC electives.

Note: CSCI 6838 must be taken during the last 12 hours, after completion of CSCI 5531 and CSCI 5333. All electives must be approved before enrolling.

* The statistics course must be approved by a faculty adviser.

Computer Science Specializations

Students interested in a specialization should take the courses listed below:

Note: Data Science Specialization requires students to have taken a statistics course in their undergraduate study that is equivalent to STAT 3334 (Probability and Statistics for Scientists and Engineers).

Data Science Specialization

- STAT 5531 - Multivariate Statistical Analysis **Credit Hours:** 3
  or
- STAT 5532 - Linear Models and Regression Analysis **Credit Hours:** 3

Additional Information

Choose 3 (for thesis) or 4 (for extended course work) from the following:

- CINF 5432 - Data Warehousing and Business Intelligence **Credit Hours:** 3
- CSCI 5532 - Pattern Recognition and Image Processing **Credit Hours:** 3
- CSCI 5833 - Data Mining: Tools and Techniques **Credit Hours:** 3
- CINF/CSCI 5000-6000 approved course related to Data Science

Cybersecurity Specialization

- CSCI 5132 - Internet Protocols **Credit Hours:** 3
- CSCI 5233 - Computer Security and Cryptography **Credit Hours:** 3
- CSCI 5235 - Network Security **Credit Hours:** 3

Additional Information

Choose 1 (for thesis) or 2 (for extended course work) from the following:

- CSCI 5234 - Web Security **Credit Hours:** 3
- CSCI 5737 - Mobile Applications Development **Credit Hours:** 3
- CSCI/CINF 5000-6000 approved course related to Cybersecurity.

Data Science, M.S.

The plan in Data Science leads to the Master of Science degree. This plan is designed to equip students with the capability of integrating a wide spectrum of interdisciplinary knowledge and skills to uncover and utilize data to produce, apply and communicate value-adding intelligence for organizations and the society, in various key technical, analytical, architectural and managerial positions.

Requirements

Data Science Basic Preparation

Students entering the Master of Science in Data Science program should hold a bachelor's degree with a background in programming in Python or equivalent, data structures, and probability and statistics. Students without the necessary background can take the following 3 foundation courses.

Foundation Course Requirements

- DASC 5031 - Python for Data Science **Credit Hours:** 3
- DASC 5032 - Data Structures for Data Science **Credit Hours:** 3
- STAT 3334 - Probability and Statistics for Scientists and Engineers **Credit Hours:** 3

Additional Information

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 (21 hours)

The following courses, or approved substitutions, are required for both the thesis option and extended course work options

- CSCI 5833 - Data Mining: Tools and Techniques **Credit Hours:** 3

- DASC 5133 - Introduction to Data Science **Credit Hours:** 3
- DASC 5231 - Visualization in Data Science **Credit Hours:** 3
- DASC 5333 - Database Systems for Data Science **Credit Hours:** 3
- DASC 5433 - Big Data Analytics **Credit Hours:** 3
- STAT 5135 - Applied Statistical Methods **Credit Hours:** 3
- STAT 5532 - Linear Models and Regression Analysis **Credit Hours:** 3

Additional Information

With the approval of the faculty adviser, students who have taken an equivalent course of a core required course in their undergraduate study will not need to retake the course. Instead, the required course will be replaced by an additional 3 credit hours of elective courses.

Data Science Thesis Option (12 hours)

6 hours of approved related courses

6 hours of DASC 6939 - Master's Thesis Research Credit Hours: 3

- DASC 6939 - Master's Thesis Research **Credit Hours:** 3

Additional Information

Students interested in pursuing the thesis option are encouraged to take DASC 5939 (Independent Study in Data Science) during their first year, in order to write up their thesis proposals (with the sponsoring of a faculty adviser). All electives must be approved before enrolling.

Data Science Extended Course Work Option (15 hours)

Students desiring to follow the extended course work option must successfully complete the capstone project course (DASC 6838) and 12 hours of approved electives.

Additional Information

DASC 6838 must be taken after completion of the required core and during last 12 hours. All electives must be approved before enrolling.

Data Science Specializations

Data Science students pursuing the extended course work option should select 9 to 12 credits of courses in one of the following three specialization areas.

Business Analytics Specialization

- CINF 5231 - Strategic Information Systems **Credit Hours:** 3
- CSCI 5832 - Financial Data Mining **Credit Hours:** 3
- DSCI 5131 - Business Analytics I **Credit Hours:** 3
- ISAM 5330 - Management Information Systems **Credit Hours:** 3
- MGMT 6135 - Data Visualization and Communication **Credit Hours:** 3
- CINF 5432 - Data Warehousing and Business Intelligence **Credit Hours:** 3

Additional Information

Cloud and Big Data Solutions Specialization

- DASC 5335 - Deep Learning **Credit Hours:** 3
- CSCI 5355 - Internet of Things (IoT) **Credit Hours:** 3
- CSCI 5336 - Machine Learning **Credit Hours:** 3

Bioinformatics Specialization

- BIOL 4341 - Biochemistry I **Credit Hours:** 3
- BIOT 5733 - Bioinformatics **Credit Hours:** 3
- CSCI 5933 - Computational Bioinformatics **Credit Hours:** 3

Additional Information

BIOL 4341 and BIOL 4351 have other BIOL courses as prerequisites. A student who has already taken this course in undergraduate study should take an additional elective course below.

Bioinformatics Elective

- BIOT 5011 - Methods of Biotechnology Discussions **Credit Hours:** 1
- BIOT 5021 - Methods of Biotechnology **Credit Hours:** 2
- BIOT 5431 - Genomic Analysis **Credit Hours:** 3
- BIOT 5331 - Stem Cell Biotechnology **Credit Hours:** 3
- BIOT 5433 - Marine Biotechnology Seminar **Credit Hours:** 3
- BIOT 5535 - Environmental Biotechnology **Credit Hours:** 3

Department of Engineering

Students desiring to study in the engineering department may choose from the graduate plans below. Applicants should consult the chair of the department for additional information.

Certificate

Certificate of Engineering Data Analytics (CEDA)

The Certificate in Engineering Data Analytics provides engineers the necessary tools and methods to improve products, processes, and operations in any industry. The students will gain skills to assemble and analyze data in order to improve engineering systems. Courses in this certificate will include topics such as statistical methods, decision science, and predictive analytics. This certificate will be available only to students seeking an EMGT Master's Degree. Two courses in the certificate (EMGT 5630 QDM and EMGT 5731 BA) will focus on quantitative and statistical analysis of data. The remaining two courses (EMGT 5330 SOM and EMGT 5732 Advanced Business Analytics) will focus on predictive approaches, such as forecasting, optimization, and prescriptive analysis.

Certificate Requirements:

To earn the certificate, the four-course set below must be complete at UHCL within a four-year time limit with grades of B or better.

Certificate Requirements

To earn the certificate, the four-course set below must be complete at UHCL within a four-year time limit with grades of B or better

- EMGT 5330 - Service and Operations Management **Credit Hours:** 3
- EMGT 5630 - Quantitative Decision Making for Engineering Management **Credit Hours:** 3
- EMGT 5731 - Business Analytics **Credit Hours:** 3
- EMGT 5732 - Advanced Business Analytics **Credit Hours:** 3

Project Management and Six Sigma Certificate

This is a joint certificate for Project Management and Six Sigma Green Belt. This joint certificate may be obtained by EMGT degree-seeking students only. To earn the certificate, each of the four UHCL courses listed below must be completed with a grade of B or better (B- will not be considered).

The EMGT degree-seeking students could obtain the certificate as part of their master's degree by completing the course set.

Requirements

Required courses

- EMGT 5230 - Negotiation Strategies **Credit Hours:** 3
- EMGT 5231 - Engineering Management Planning **Credit Hours:** 3
- EMGT 5331 - Six-Sigma Quality **Credit Hours:** 3
- EMGT 5430 - Professional Project Management **Credit Hours:** 3

Project Management Certificate

The admission requirements for the certificate program are as follows:

Bachelor's degree in science, engineering, or other disciplines related to Engineering Management. If applicants have a bachelor's degree from other disciplines, then, at least one year of work experience in a technical field is required.

- Minimum GPA of 3.0/4.0
- Prerequisite: College level statistics or equivalent (STAT 3334 Probability and Statistics for Scientists and Engineers or DSCI 3321 Statistics I) with C or above

The GRE is not required for the certificate since the certificate program is considered a non-degree seeking program. A student pursuing the certificate could possibly transfer the certificate courses to the EMGT degree after completion of the certificate. To do this, the student must apply and be accepted to the EMGT program. The certificate cannot be pursued at the same time as the EMGT degree, since students pursuing a certificate are considered non-degree seeking and therefore cannot be enrolled in a degree-seeking program at the same time.

To earn the certificate, the four-course set below must be completed within a four-year time limit with an overall GPA of 3.0 or above (minimum C or above for each course). No transferred course will be accepted. Successfully completed courses will be counted toward the EMGT MS degree once students are accepted into the degree-seeking program.

Elective Requirements

Required courses

- EMGT 5230 - Negotiation Strategies **Credit Hours:** 3
- EMGT 5231 - Engineering Management Planning **Credit Hours:** 3
- EMGT 5430 - Professional Project Management **Credit Hours:** 3
- EMGT 5530 - Organizational Analysis and Management **Credit Hours:** 3

SAP Student Recognition Award

Gain Valuable Skills in Logistics and Data Analysis

If you're seeking a data-driven career in a STEM field, University of Houston-Clear Lake's SAP Student Recognition Award can open the door to that path. Founded in

1972, SAP (Systems, Applications, and Products in Data Processing) is the market leader in enterprise application software, helping companies perform at their best.

The SAP Student Recognition Award, also known as the SAP Certificate, is a valuable certificate from the overall market leader in the worldwide Enterprise Resource Planning (ERP) market. Many employers in the Greater Houston area use SAP as their enterprise backbone to integrate and analyze their business data. With this award, you can become a more desirable candidate in the SAP-related job market.

SAP America, Inc. and the Engineering Management program at UH-Clear Lake jointly award a SAP Student Recognition Award to the students who complete three SAP-related courses successfully. After earning the SAP, you'll be able to:

- Understand the role of integrated processes within business enterprises.
- Understand the issues in logistics system design and operations.
- Analyze data with critical thinking to create information and knowledge for business decisions.

Certificate Requirements

You must be an engineering management (EMGT) graduate student at UHCL to claim the SAP certificate. You may also earn the certificate as part of your Engineering Management M.S. degree by selecting the courses as your electives.

To earn the certificate, each of the three UHCL courses listed below must be completed at UHCL within a four-year time limit with grades of "B" or better. Note that a "B-" is not accepted. No transferred course will be accepted.

Required Courses:

- EMGT 5632 Logistics Management
- EMGT 5730 Fundamentals of Enterprise Resource Planning Software
- EMGT 5731 Business Analytics

How to Claim Your Certificate

Once you have successfully completed the certificate requirement, fill out the SAP Student Recognition claim form and send it to your faculty advisor to request the certificate. Your faculty advisor will sign the document and send to the academic advising office.

Software Engineering Certificate

The admission requirements for the certificate program are as follows:

- A bachelor's degree in a computing-related field.
- A course in computer programming and data structures or related programming work experience.
- Undergraduate GPA of 3.0 or greater

Requirements

The GRE is not required. To earn the certificate, twelve hours of required courses must be completed within a four-year time limit with a grade of B or better in each course. The certificate adheres to standard university policy on continuous enrollment and certificate students are not allowed to enroll in more than 12 hours. Students completing the certificate who wish to continue with the MS Software Engineering degree must apply to the program. If accepted, certificate courses with grades of B or better are eligible for transfer to the MS possibly reducing the required hours by as many as 12. All foundations required for the SWEN MS, except for data structures, are met by the successful completion of the certificate with a B or better in all certificate courses.

Required courses

- SWEN 5236 - Engineering Software I **Credit Hours:** 3
- SWEN 5237 - Engineering Software II **Credit Hours:** 3
- SWEN 4320 - Introduction to Software Process and Project Management **Credit Hours:** 3
- SWEN 4346 - Software Testing **Credit Hours:** 3

Supply Chain and Analytics Certificate

This is a certificate for Supply Chain Management and its related analytics. This certificate is available to EMGT degree-seeking students only. To earn the certificate, each of the following four UHCL courses below must be completed with a grade B or better (B- will not be considered). The EMGT degree-seeking students can obtain the certificate as part of their master's degree by completing the course set.

Requirements

Required courses

- EMGT 5330 - Service and Operations Management **Credit Hours:** 3
- EMGT 5630 - Quantitative Decision Making for Engineering Management **Credit Hours:** 3
- EMGT 5631 - Supply Chain Management **Credit Hours:** 3
- EMGT 5731 - Business Analytics **Credit Hours:** 3

Systems Engineering Certificate

Students may already have a master's 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 careers. 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:

Certificate Requirements

Systems Engineering Basic Courses

- SENG 5130 - Systems Engineering Processes **Credit Hours:** 3
- SENG 5230 - Systems Engineering Economics **Credit Hours:** 3
- SENG 5330 - Risk Management **Credit Hours:** 3
- SENG 5332 - Decision Analysis for Systems Engineering **Credit Hours:** 3
- SENG 5231 - Concurrent Engineering **Credit Hours:** 3
- SENG 5233 - Systems Engineering Analysis and Modeling **Credit Hours:** 3
- SENG 5334 - Human Factors Engineering **Credit Hours:** 3
- OSHE 5335 - Ergonomic Methods and Analysis Techniques **Credit Hours:** 3
- OSHE 6332 - Safety Engineering **Credit Hours:** 3

Master of Science

Computer Engineering, M.S.

The plan in Computer Engineering leads to the Master of Science degree. Graduate study in this plan prepares students to occupy leading roles in the development and use of computers and computing 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 robotics, embedded system design, digital signal and image processing, integrated circuits and systems, communication and networks and high-performance computing. The plan consists of formal courses, laboratory work and research in one of the specialty areas conducted under the guidance of a faculty adviser. Students have two degree-completion options: thesis option (30 credit hours) or extended course work option (33 credit hours).

Degree Requirements

Computer Engineering Basic Preparation

Candidates should have a bachelor's degree in Computer Engineering or related areas.

Students should consult an academic adviser to determine if they have sufficient background to satisfy the required foundation courses. At a minimum, the following foundation courses, or their equivalents, are required and should be completed prior to enrolling in certain graduate courses:

- CENG 2312 - Digital Circuits **Credit Hours:** 3
- CENG 3316 - Electronics **Credit Hours:** 3
- CENG 3351 - Computer Architecture **Credit Hours:** 3
- CENG 2371 - Microcontroller Programming **Credit Hours:** 3
- CENG 4313 - Microprocessor Interfacing **Credit Hours:** 3
- CENG 4331 - Analysis and Design of Linear Systems **Credit Hours:** 3
- CENG 4354 - Digital System Design **Credit Hours:** 3
- CSCI 1320 - C Programming **Credit Hours:** 3
- MATH 2305 - Discrete Mathematics **Credit Hours:** 3
- MATH 2320 - Differential Equations **Credit Hours:** 3

Computer Engineering Core Requirements (9 hours)

The following courses or their approved substitutions are required for both the thesis and the extended course work options.

- CENG 5131 - Engineering Applications **Credit Hours:** 3
- CENG 5133 - Computer Architecture Design **Credit Hours:** 3
- CENG 6332 - High Performance Computer Architecture **Credit Hours:** 3

Computer Engineering Elective Core Requirements (6 hours)

Students will select two or more elective core courses from the following list:

- CENG 5334 - Fault Tolerant Computing **Credit Hours:** 3
- CENG 5431 - Digital Signal Processing **Credit Hours:** 3
- CENG 5433 - Principles of Digital Communications Systems **Credit Hours:** 3
- CENG 5434 - Microcomputer Systems Design **Credit Hours:** 3
- CENG 5534 - Advanced Digital System Design **Credit Hours:** 3
- CENG 6533 - Robotics **Credit Hours:** 3

Elective Requirements for Thesis Option (15 hours)

3 hours of 5100-6000 level CENG courses3 hours of 5100-6000 level CENG/CSCI/SWEN/SENG courses 3 hours of 4000-6000 level CENG/CSCI/SWEN courses 6 hours of CENG 6939 - Master's Thesis Research

Elective Requirements for Extended Course Work Option (18 hours)

Nine hours of 5100-6000 level CENG courses 3 hours of 5100-6000 level CENG/CSCI/SWEN/SENG course 3 hours of 4000-6000 level CENG/CSCI/SWEN course 3 hours of CENG 6838 - Research Project and Seminar

Prior approval of non-CENG electives is required from the faculty adviser. Up to 3 hours of combined internship and co-op can be used as an elective with the approval of the faculty adviser.

Computer Engineering Specialization Areas

Students interested in focusing on a specialization area are suggested to take the courses listed below.

Robotics

- CENG 5435 - Robotics and ROS **Credit Hours:** 3
- CENG 5436 - Computer Vision and Applications **Credit Hours:** 3
- CENG 5437 - Mobile Robots **Credit Hours:** 3
- CENG 5531 - Machine Learning and Applications **Credit Hours:** 3
- CENG 6533 - Robotics **Credit Hours:** 3

Integrated Circuits and Systems

- CENG 5335 - Digital Systems Testing **Credit Hours:** 3
- CENG 5336 - Functional Verification of Digital Systems **Credit Hours:** 3
- CENG 5337 - Low-Power System Design **Credit Hours:** 3
- CENG 5338 - VLSI Design **Credit Hours:** 3
- CENG 5534 - Advanced Digital System Design **Credit Hours:** 3
- CENG 6534 - Digital Systems Synthesis and Optimization **Credit Hours:** 3

Digital Signal and Image Processing

- CENG 5431 - Digital Signal Processing **Credit Hours:** 3
- CENG 5436 - Computer Vision and Applications **Credit Hours:** 3
- CENG 5631 - Digital Image Processing **Credit Hours:** 3
- CENG 6431 - DSP Implementations **Credit Hours:** 3
- CENG 6432 - Bio-Medical Signal Processing **Credit Hours:** 3

Communication and Networks

- CENG 5331 - Theory of Information and Coding **Credit Hours:** 3
- CENG 5332 - Wireless Communications and Networks **Credit Hours:** 3
- CENG 5433 - Principles of Digital Communications Systems **Credit Hours:** 3
- CENG 5532 - Tele-Medicine **Credit Hours:** 3
- CENG 5535 - Wireless Sensor Networks **Credit Hours:** 3

Embedded System Design

- CENG 5434 - Microcomputer Systems Design **Credit Hours:** 3
- CENG 5534 - Advanced Digital System Design **Credit Hours:** 3
- CENG 6534 - Digital Systems Synthesis and Optimization **Credit Hours:** 3

Engineering Management, M.S.

The graduate plan in Engineering Management (EMGT) leads to the Master of Science degree. The Engineering Management plan offers the candidate the opportunity to earn an advanced degree in two years while maintaining full-time employment. The broad EMGT curriculum is designed to prepare students with technical backgrounds to become industry leaders. To achieve this objective, the curriculum is carefully designed by integrating courses from the College of Science and Engineering and the College of Business. The program focuses on multiple disciplines such as Business Management/Administration, Project Management, Systems Engineering, and Industrial Engineering among others.

The Engineering Management (EMGT) curriculum is composed of 33 hours of graduate course work of which 15 hours will be core requirements and 18 hours will be electives with capstone or a thesis option. The EMGT master's program offers two different options-traditional EMGT MS and fully online EMGT Master of Science. Students in the traditional option complete the program either in person or partially online while students in the fully online option complete all courses online.

Admissions Requirements

To enter the EMGT plan, applicants must hold a bachelor's degree in science, engineering or other disciplines related to Engineering Management. If applicants have a bachelor's degree from other disciplines, at least one year of work experience in a technical field is required.

It is recommended that candidates who apply for admission have a grade point average (GPA) of3.0 or greater (four point grade scale).

The Graduate Record Examination (GRE) is required of all candidates applying for admission, a minimum GRE score (verbal+quantitative) of 290 points with a minimum quantitative score of 145, a verbal score of 140.The Graduate Management Admission Test (GMAT) of 500 with minimum quantitative score of 35 may substitute for the GRE. GRE/GMAT is waived if one of the following conditions is met: (i) Applicants with a GPA 3.0 or above;(ii) Applicants with at least one year of post-graduate full-time work experience in a technical field.

The application materials should include a resume summarizing the candidate's career objectives and professional experience as well as two letters of recommendation from current or former academic advisers or work supervisors.

No 4000 level credits will be allowed for the EMGT master's degree. A maximum of six hours of grades of C or C+ may be counted toward the graduate degree; grades of C- will not apply.

Engineering Management Online

The Engineering Management program may be taken online. Online courses are offered less frequently than face-to-face courses. Students requiring 100% of their courses online can expect to take longer to graduate than those who choose a mix of face-to-face and online courses to fulfill the degree. Foundation courses may only be offered as traditional on-campus classes. These courses must be taken either at UHCL or at another university before entry into the EMGT online option.

Degree Requirements

Foundation Courses Required for Entrance

In addition, the program requires that a set of foundation courses and their prerequisites be completed before enrolling in graduate EMGT program. The foundation courses are:

- MATH 2413 - Calculus I **Credit Hours:** 4
- STAT 3334 - Probability and Statistics for Scientists and Engineers **Credit Hours:** 3
- DSCI 3321 - Statistics I **Credit Hours:** 3

Additional Information

STAT 3334 is equivalent to DSCI 3321. Only one will be counted.

The program may also assign further prerequisites depending upon the candidate's qualifications in terms of professional experience and English proficiency. The admission committee, based upon plan needs, the guidelines stated herein and UHCL admission requirements will decide acceptance into the program. Once admitted, the candidate must file a Candidate Plan of Study (CPS) in the first semester of enrollment.

EMGT Core Requirements (15 hours)

The following core requirements must be completed for both thesis and capstone options.

- EMGT 5130 - New Business Development **Credit Hours:** 3
- EMGT 5231 - Engineering Management Planning **Credit Hours:** 3
- EMGT 5330 - Service and Operations Management **Credit Hours:** 3
- EMGT 5430 - Professional Project Management **Credit Hours:** 3

- EMGT 5531 - Technology Planning and Management **Credit Hours:** 3

EMGT Elective Requirements

The following 12 and 15 hours of elective requirements must be completed both thesis and capstone options, respectively from the courses below:

EMGT Elective Requirements (12-15 hours)

- EMGT 5131 - Legal Issues in Engineering Management **Credit Hours:** 3
- EMGT 5132 - Engineering Leadership and Ethics **Credit Hours:** 3
- EMGT 5230 - Negotiation Strategies **Credit Hours:** 3
- EMGT 5331 - Six-Sigma Quality **Credit Hours:** 3
- EMGT 5431 - Contract Management **Credit Hours:** 3
- EMGT 5530 - Organizational Analysis and Management **Credit Hours:** 3
- EMGT 5630 - Quantitative Decision Making for Engineering Management **Credit Hours:** 3
- EMGT 5631 - Supply Chain Management **Credit Hours:** 3
- EMGT 5632 - Logistics Management **Credit Hours:** 3
- EMGT 5730 - Fundamentals of Enterprise Resource Planning Software **Credit Hours:** 3
- EMGT 5731 - Business Analytics **Credit Hours:** 3
- EMGT 5732 - Advanced Business Analytics **Credit Hours:** 3
- EMGT 5830 - Modeling and Simulation **Credit Hours:** 3
- SENG 5130 - Systems Engineering Processes **Credit Hours:** 3
- SENG 5332 - Decision Analysis for Systems Engineering **Credit Hours:** 3

Additional Information

- SWEN 5130 - Requirements Engineering **Credit Hours:** 3
- MGMT 5133 - Teamwork and Leadership Skills: Theory in Practice **Credit Hours:** 3
- MGMT 5638 - Leading Technology **Credit Hours:** 3

EMGT Capstone Option (15 hours of core requirements + 15 hours of electives + 3 hours of Capstone)

The Capstone enrollment is limited to candidates who have completed 24 hours of the EMGT core and elective requirements after completion of their prerequisites. Under the capstone option, the master degree candidates must complete 15 hours of core requirements and 15 hours of elective requirements. The capstone course is counted as 3 hours and may be available online.

- EMGT 6837 - Engineering Management Capstone Project **Credit Hours:** 3

EMGT Thesis Option (15 hours of core requirements + 12 hours of electives + 6 hours of thesis)

Master degree candidates must complete 15 hours of core requirements and 12 hours of elective requirements. The thesis is counted as 6 hours.

- EMGT 6939 - Master's Thesis Research **Credit Hours:** 3

Software Engineering M.S.

The graduate plan in software engineering leads to the Master of Science degree. The plan prepares students for key software positions in industry, government and institutions where software engineering has become a key activity. It prepares students for jobs such as system analyst, requirements engineer, software architect, software project manager or software process designer, etc. The master's degree plan requires a total of 30 hours of study. The plan allows for one of four optional specializations:

- Gaming
- Robotics Software
- Software Project Management
- Data Mining

Credit Earned Before Acceptance

No more than 6 hours of graduate-level software engineering classes may be applied to the SWEN degree if taken without admission into the program. No more than 6 hours of graduate credit may be transferred to the software engineering degree.

Students accepted in the software engineering program must file a Candidate Plan of Study (CPS) with their assigned faculty adviser within the first semester of study. Specializations in one of the areas listed above may be selected but it is not required. If a specialization is chosen electives must be chosen from within the specialization. The CPS, once completed, will list all courses the student must take to fulfill the degree requirements.

Requirements

Students seeking admission into the degree plan in Software Engineering should hold a bachelor's degree in computer science, computer engineering or other computing or engineering-related discipline and have a grade point average (GPA) of 3.0 or greater. The GRE is waived if one of the following conditions is met: (i) Applicants with a GPA 3.0 or above; (ii) Applicants with at least one year of post-graduate full-time work experience in a computing field. For those applicants not meeting these waiver requirements a minimum GRE score (verbal +quantitative) of 290 points with a minimum quantitative score of 145, a verbal score of 140 is required. It is also possible for an applicant with significant software development work experience to apply this work experience as an offset to a borderline GPA or to demonstrate

competency in computing in the case of a non-related degree. If an applicant applies with the intention of having their work experience considered in lieu of GPA or GRE or a degree outside of the listed related degree areas, then the application materials should include both a letter from the student and a resume summarizing the candidate's professional experience in software development. Once admitted, the student must file a candidate plan of study (CPS) in the first semester of enrollment.

Applicants with a bachelor's degree from a non-computing related discipline, if accepted, can expect to be assigned one or more foundation courses in computing unless the student has relevant computing classes on their transcript or can demonstrate proficiency by virtue of work experience. These courses may include programming in C, programming in Java and a course in data structures.

All applicants must have had courses in programming through data structures or their equivalent. A degree in Computer Science will suffice and no foundation courses will be required of those students holding a bachelor's degree in Computer Science. For students holding other degrees, one or more courses may be added as foundation courses for those students found to be lacking in one or more of these areas. Foundation courses may be taken at UHCL or any other accredited university.

Foundation courses assigned will be added to the CPS and must be completed in the first year of enrollment or before.

Online Option

The software engineering master's degree online program can be completed fully online. The online master's degree plan has the same curriculum requirements, same core and elective requirements and entry requirements as the traditional master's program. All core courses are offered fully online. Students needing foundation work for entry may consider choosing the SWEN online certificate as preparation for entry into the SWEN MS program.

Degree Requirements

Software Engineering Core Requirements (18 hours)

- SWEN 5135 - Configuration Management **Credit Hours:** 3
  OR
- SWEN 5534 - Reuse and Reengineering **Credit Hours:** 3

- SWEN 5236 - Engineering Software I **Credit Hours:** 3
- SWEN 5237 - Engineering Software II **Credit Hours:** 3
- SWEN 5239 - Agile Software Development **Credit Hours:** 3
- SWEN 5233 - Software Architecture **Credit Hours:** 3
- SWEN 5432 - Software Engineering Life Cycle **Credit Hours:** 3

Software Engineering Internship Option

- SWEN 5739 - Internship in Software Engineering **Credit Hours:** 3
- SWEN technical elective 4000-6000 level **Credit Hours**: 6
- SWEN 6837 - Software Engineering Capstone Project **Credit Hours:** 3

Additional Information

Internship option requires approval from SWEN internship committee as well as permission of the faculty adviser.

Software Engineering Capstone Option (3 hours of Capstone + 9 hours of electives)

- SWEN 6837 - Software Engineering Capstone Project **Credit Hours:** 3
- SWEN technical elective 4000-6000 level **Credit Hours**: 6
- SWEN technical elective 5000-6000 level **Credit Hours**: 3

Additional Information

- Capstone enrollment is limited to students who are in their graduating semester (last 9 hours of study including capstone) and have completed any required foundation courses identified on their CPS.
- Courses taken as electives in SWEN require permission of the faculty adviser before enrolling. Non-SWEN courses may be taken as electives but require permission of the faculty adviser and must be in an area of study that is beneficial to the SWEN degree.

Software Engineering Thesis Option (3 hours of thesis + 9 hours of electives)

- SWEN 6939 - Master's Thesis Research **Credit Hours:** 3
- SWEN technical elective 4000-6000 level **Credit Hours**: 6
- SWEN technical elective 5000-6000 level **Credit Hours**: 3

Additional Information

- Thesis students must form a thesis committee and prepare a thesis proposal in the semester prior to enrollment into the thesis.
- Independent study courses to prepare a thesis topic require the permission of the SWEN thesis chair as well as the program chair before enrolling. Only three such hours of independent study are allowed.
- Contact the CSE advising office for instructions.
- Courses taken as electives require the permission of the faculty adviser before enrolling.

Software Engineering Specializations

Students interested in a specialization in software engineering such as gaming, robotics, data mining or project management should choose electives from the specializations listed below. Any course within a specialization is an allowable elective in SWEN.

Gaming Specialization

- DMST 5131 - Game Design and Theory **Credit Hours:** 3
- DMST 5132 - 3D Modeling **Credit Hours:** 3

Robotic Software Specialization

- CENG 5437 - Mobile Robots **Credit Hours:** 3
- CENG 5435 - Robotics and ROS **Credit Hours:** 3

Software Project Management Specialization

Pick 2 courses from below

- SWEN 4320 - Introduction to Software Process and Project Management **Credit Hours:** 3
- SWEN 5230 - Software Project Management **Credit Hours:** 3
- SWEN 5435 - Personal Software Process **Credit Hours:** 3
- EMGT 5230 - Negotiation Strategies **Credit Hours:** 3

Data Mining Specialization

Pick 2 courses from below

- SWEN 5139 - Data Science and R in Software Engineering **Credit Hours:** 3
- CSCI 5832 - Financial Data Mining **Credit Hours:** 3
- CSCI 5833 - Data Mining: Tools and Techniques **Credit Hours:** 3

Software Engineering, M.S. 1.5 Year Degree Map

Year 1

Semester 1 Fall

- SWEN 5236 - Engineering Software I **Credit Hours:** 3 (Core)
- SWEN 5237 - Engineering Software II **Credit Hours:** 3 (Core)
- SWEN 5230 - Software Project Management **Credit Hours:** 3 (Core)

- SWEN 4320 - Introduction to Software Process and Project Management **Credit Hours:** 3 (Elective)

Semester Hours: 12

Semester 2 Spring

- SWEN 5135 - Configuration Management **Credit Hours:** 3 (or 5534 Reuse) (Core)
- SWEN 5130 - Requirements Engineering **Credit Hours:** 3 (Elective)
- SWEN 4346 - Software Testing **Credit Hours:** 3 (Elective)
- SWEN 5432 - Software Engineering Life Cycle **Credit Hours:** 3 (Core)

Semester Hours: 12

Year 2

Semester 1 Fall

- SWEN 5233 - Software Architecture **Credit Hours:** 3 (Core)
- SWEN 6837 - Software Engineering Capstone Project **Credit Hours:** 3 (Core)

Semester Hours: 6

Total Plan Hours: 30

Plans shown are examples paths to graduation. There are numerous other paths possible. It is also possible to finish in 2 semesters and a summer depending on courses selected and courses taken in summer. SWEN 5236 and SWEN 5237 must be taken in the first semester of enrollment.

Software Engineering, M.S. 2 Year Degree Map

Year 1

Semester 1 Fall

- SWEN 5236 - Engineering Software I **Credit Hours:** 3 (Core)
- SWEN 5237 - Engineering Software II **Credit Hours:** 3 (Core)
- SWEN 5230 - Software Project Management **Credit Hours:** 3 (Core)

Semester Hours: 9

Semester 2 Spring

- SWEN 5135 - Configuration Management **Credit Hours:** 3 (or 5534 Reuse) (Core)
- SWEN 5130 - Requirements Engineering **Credit Hours:** 3 (Elective)
- SWEN 4320 - Introduction to Software Process and Project Management **Credit Hours:** 3 (Elective)

Semester Hours: 9

Year 2

Semester 1 Fall

- SWEN 4346 - Software Testing **Credit Hours:** 3 (Elective)
- SWEN 5432 - Software Engineering Life Cycle **Credit Hours:** 3 (Core)

Semester Hours: 6

Semester 2 Spring

- SWEN 5233 - Software Architecture **Credit Hours:** 3 (Core)
- SWEN 6837 - Software Engineering Capstone Project **Credit Hours:** 3 (Core)

Semester Hours: 6

Total Plan Hours: 30

SWEN 5236 and SWEN 5237 must be taken in the first semester of enrollment. Electives shown may be replaced with other allowable elective choices.

Systems Engineering, M.S.

The graduate plan in Systems Engineering leads to a Master of Science degree. The plan prepares 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 including 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 web site for the Systems Engineering program is https://www.uhcl.edu/science-engineering/departments/engineering/systems-engineering.

Degree Requirements

Basic Preparation

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: STAT 3334 - Probability and Statistics for Scientists and Engineers 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.

Systems Engineering Core Requirements (21 hours)

- SENG 5130 - Systems Engineering Processes **Credit Hours:** 3
- SENG 5230 - Systems Engineering Economics **Credit Hours:** 3
- SENG 5231 - Concurrent Engineering **Credit Hours:** 3
- SENG 5232 - Engineering Specialty Integration **Credit Hours:** 3
- SENG 5233 - Systems Engineering Analysis and Modeling **Credit Hours:** 3
- SENG 5330 - Risk Management **Credit Hours:** 3
- SWEN 5230 - Software Project Management **Credit Hours:** 3
- EMGT 5430 - Professional Project Management **Credit Hours:** 3

Additional Information

Students select between SWEN 5230 or EMGT 5430.

Systems Engineering Elective Options

- SENG 5332 - Decision Analysis for Systems Engineering **Credit Hours:** 3
- SENG 5334 - Human Factors Engineering **Credit Hours:** 3
- SENG 5532 - Advanced Decision Analysis for Systems Engineering **Credit Hours:** 3
- MGMT 5636 - Management of Technology **Credit Hours:** 3
- MGMT 5638 - Leading Technology **Credit Hours:** 3
- OSHE 5335 - Ergonomic Methods and Analysis Techniques **Credit Hours:** 3
- OSHE 6332 - Safety Engineering **Credit Hours:** 3

Additional Information

These candidates may also choose elective options from the CENG, SWEN or EMGT engineering programs.

Systems Engineering Elective Hours

Thesis Option (six hours of thesis + nine hours of electives)

Electives in engineering, science, and mathematics approved by the student's adviser

- SENG 6939 - Master's Thesis Research **Credit Hours:** 3

Capstone Option (3 hours of capstone + 12 hours of electives)

Electives in engineering, science, and mathematics approved by the students' adviser

- SENG 6837 - Systems Engineering Capstone Project **Credit Hours:** 3

Systems Engineering Specialization

Healthcare Systems Engineering

- SENG 5335 - Healthcare Systems Engineering **Credit Hours:** 3
- SENG 5336 - Healthcare Systems Analytics and Optimization **Credit Hours:** 3
- SENG 5337 - Healthcare Systems Integration **Credit Hours:** 3

Department of Mathematics and Statistics

Students desiring to study in the mathematics and statistics department may choose from the graduate plans below. Applicants should consult the chair of the division for additional information.

Master of Science

Mathematical Science, M.S.

The graduate plan in Mathematical Science leads to the Master of Science degree. Successful applicants to the graduate program will typically have a bachelor's degree in mathematics.

Without an undergraduate degree in mathematics, an applicant will be considered if their preparation includes a substantial number of advanced mathematics credits. Depending on prior coursework, applicants may be accepted as graduate students with the condition that they successfully complete additional preparatory courses. In

that case, the credits from some 4000-level courses may count toward the graduate degree.

Undergraduate foundation courses for the Master of Science in Mathematics Degree

- MATH2318 Linear Algebra
- MATH2320 Ordinary Differential Equations
- MATH3331 Advanced Calculus

Course selections will be arranged in consultation with a faculty adviser while preparing the CPS.

Degree Requirements (33 hours)

Mathematics Core Requirements (9 hours)

- MATH 5132 - Real Analysis **Credit Hours:** 3
- MATH 5136 - Ordinary Differential Equations and Dynamical Systems **Credit Hours:** 3
- MATH 5333 - Numerical Analysis **Credit Hours:** 3

Electives (18 hours)

Students will pursue the general degree option, the computational and applied specialization, or the mathematics education sub-plan.

General Degree Option

Electives in Pure Mathematics (6 hours)

Students will select an additional two courses from the list below.

- MATH 5131 - Abstract Algebra **Credit Hours:** 3
- MATH 5133 - Complex Analysis **Credit Hours:** 3
- MATH 5137 - Topology and Geometry **Credit Hours:** 3
- MATH 5231 - Linear Algebra **Credit Hours:** 3
- MATH 5232 - Number Theory **Credit Hours:** 3

General Mathematics (12 hours)

•Students will take two 5000/6000-level courses (6 hours) with the MATH prefix.

•Students will take two 5000/6000-level courses (6 hours) with the MATH and STAT prefix.*

*Note: Students (not math education sub-plan students) may take at most one course from the rubric MATH 50XX and MATH 60XX combined.

*Note: It is expected that students will need to take various prerequisite undergraduate courses (or their equivalent) to the electives they choose in their program.

4000-level Course Exceptions

If taken as a graduate student at UHCL, and with the faculty adviser's prior approval, a maximum of two 4000-level mathematics electives from the following list may apply toward the general mathematics elective requirement:

- MATH 4315 - Numerical Analysis and its Applications **Credit Hours:** 3
- MATH 4341 - Introduction to Analysis **Credit Hours:** 3
- MATH 4322 - Introduction to Abstract Algebra **Credit Hours:** 3
- MATH 4313 - Introduction to Topology **Credit Hours:** 3

Additional Information

Other 4000-level mathematics courses (not in the list above) may satisfy the 4000-level course exception, if prior approval is granted by the program chair.

Computational and Applied Mathematics Specialization

Electives in Computational and Applied Math Specialization (9 hours)

Students will select an additional three courses from the list below.

- MATH 5133 - Complex Analysis **Credit Hours:** 3
- MATH 5231 - Linear Algebra **Credit Hours:** 3
- MATH 5330 - Mathematical Software and Modeling Simulation **Credit Hours:** 3
- MATH 5431 - Mathematical Biology in Applied Sciences **Credit Hours:** 3
- MATH 5432 - Optimization **Credit Hours:** 3
- MATH 5433 - Spectral Theory and its Applications **Credit Hours:** 3

General Mathematics Electives (9 hours)

Students will take two additional 5000/6000-level courses (6 hours) with the MATH prefix*.

•Students will take one additional 5000/6000-level courses (3 hours) with the MATH and STAT prefix.*

*Note: Students (not math education sub-plan students) may take at most one course from the rubric MATH 50XX and MATH 60XX combined.

*Note: Some 4000-level courses may apply toward the general mathematics elective requirements; see 4000-level exception below.

4000-level Course Exceptions

If taken as a graduate student at UHCL, and with the faculty adviser's prior approval, a maximum of two 4000-level electives from the following list may apply toward the general mathematics elective requirement:

- MATH 4313 - Introduction to Topology **Credit Hours:** 3
- MATH 4315 - Numerical Analysis and its Applications **Credit Hours:** 3
- MATH 4322 - Introduction to Abstract Algebra **Credit Hours:** 3
- MATH 4341 - Introduction to Analysis **Credit Hours:** 3
- MATH 4346 - Introduction to Probability for Actuarial Exam P1 **Credit Hours:** 3
- STAT 4346 - Introduction to Probability for Actuarial Exam P1 **Credit Hours:** 3
- MATH 4348 - Introduction to Financial Mathematics for Exam FM **Credit Hours:** 3
- STAT 4348 - Introduction to Financial Mathematics for Exam FM **Credit Hours:** 3

Additional Information

Other 4000-level mathematics courses (not in the list above) may satisfy the 4000-level course exception, if prior approval is granted by the program chair.

Mathematics Education Sub-Plan

Elective in Pure or Applied Mathematics (3 hours)

Students will select an additional course from the list below.

- MATH 5133 - Complex Analysis **Credit Hours:** 3
- MATH 5231 - Linear Algebra **Credit Hours:** 3
- MATH 5330 - Mathematical Software and Modeling Simulation **Credit Hours:** 3
- MATH 5431 - Mathematical Biology in Applied Sciences **Credit Hours:** 3
- MATH 5432 - Optimization **Credit Hours:** 3
- MATH 5433 - Spectral Theory and its Applications **Credit Hours:** 3

Additional Information

A graduate mathematics course other than the ones listed above may satisfy the pure or applied mathematics elective requirement if prior approval is granted by both the faculty adviser and the program chair.

Mathematics Education Electives (15 hours)

All students must take EDUC 6033 - Research Design and Analysis. Then, students may select any four courses from the list (below).

- MATH 5030 - Current Issues in Mathematics Education **Credit Hours:** 3
- MATH 5031 - Problem-Solving Strategies **Credit Hours:** 3
- MATH 6031 - Problem Solving Strategies **Credit Hours:** 3
- MATH 5033 - Instructional Applications of Algebra **Credit Hours:** 3
- MATH 6033 - Instructional Applications of Algebra **Credit Hours:** 3
- MATH 5034 - Geometry Seminar **Credit Hours:** 3
- MATH 6034 - Geometry Seminar **Credit Hours:** 3
- MATH 5035 - Precalculus Courses for Mathematics Teachers of Grades 10-14 **Credit Hours:** 3
- MATH 6035 - Precalculus Courses for Mathematics Teachers of Grades 10-14 **Credit Hours:** 3
- MATH 5036 - Calculus for Mathematics Teachers of Grades 10-14 **Credit Hours:** 3
- MATH 6036 - Calculus for Mathematics Teachers of Grades 10-14 **Credit Hours:** 3
- MATH 5037 - Technology for Mathematics Curriculum **Credit Hours:** 3
- MATH 6037 - Technology for Mathematics Curriculum **Credit Hours:** 3
- MATH 4341 - Introduction to Analysis **Credit Hours:** 3
- MATH 4315 - Numerical Analysis and its Applications **Credit Hours:** 3

Research Requirements (6 hours)

Students will choose the thesis option or the research project option.

Thesis Option

Students will take 6 hours of thesis:

- MATH 6939 - Master's Thesis Research **Credit Hours:** 3

Research Project Option

Students selecting the research project option must complete MATH 6837 - Research Project I and MATH 6838 - Research Project II. The first research project course may be taken after successfully completing nine hours of required core courses or during the last 15-18 hours of graduate mathematics coursework. MATH 6837 and MATH 6838 may not be taken concurrently. Students may enroll in MATH 6838 with prior approval from their faculty adviser, only after the project adviser determines that the student has made significant progress toward the completion of their project in MATH 6837. Students who change their research project topic must begin again with MATH 6837.

Students will take the following:

- MATH 6837 - Research Project I **Credit Hours:** 3
- MATH 6838 - Research Project II **Credit Hours:** 3

Mathematics M.S./Statistics M.S.

Dual Master's Degrees

The graduate plan in Mathematics and Statistics leads to a Master of Science degree in Mathematics and a Master of Science 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.

Degree Requirements

Math/Stat Core Requirements (33 hours)

The following courses or their approved substitutes are required:

- MATH 5132 - Real Analysis **Credit Hours:** 3
- MATH 5136 - Ordinary Differential Equations and Dynamical Systems **Credit Hours:** 3
- MATH 5333 - Numerical Analysis **Credit Hours:** 3
- STAT 5432 - Principles of Statistical Inference **Credit Hours:** 3
- STAT 5531 - Multivariate Statistical Analysis **Credit Hours:** 3
- STAT 5532 - Linear Models and Regression Analysis **Credit Hours:** 3
- STAT 5533 - Statistical Computing **Credit Hours:** 3
- STAT 5535 - Experimental Designs and Analysis **Credit Hours:** 3
- STAT 5538 - Categorical Data Analysis **Credit Hours:** 3

Students will select two courses from the following four courses:

- MATH 5133 - Complex Analysis **Credit Hours:** 3
- MATH 5431 - Mathematical Biology in Applied Sciences **Credit Hours:** 3
- MATH 5433 - Spectral Theory and its Applications **Credit Hours:** 3
- MATH 5432 - Optimization **Credit Hours:** 3

Math/Stat Thesis Option (21 hours)

9 hours of MATH/STAT courses 5000-6000 level and Students will take 12 hours of thesis:

- MATH 6939 - Master's Thesis Research **Credit Hours:** 3

- STAT 6939 - Master's Thesis Research **Credit Hours:** 3

MATH/STAT Capstone Project Option (21 hours)

9 hours of approved 5000-6000 level MATH/STAT courses

- MATH 6837 - Research Project I **Credit Hours:** 3
- MATH 6838 - Research Project II **Credit Hours:** 3
- STAT 6837 - Statistics Research and Consulting I **Credit Hours:** 3
- STAT 6838 - Statistics Research and Consulting II **Credit Hours:** 3

Statistics, M.S.

The plan in Statistics leads to a Master of Science degree. This plan emphasizes statistical methods, statistical computing and data-analytic skills in two specializations: Applied Statistics and Big Data Analytics. It is suitable for students with an undergraduate background in mathematics, engineering, sciences or any background with solid mathematics and who wants to pursue a career as a statistician or a data scientist. Applicants will be considered if their preparation includes an adequate number of mathematics credits. In some cases, additional preparatory courses may be required.

Degree Requirements

Basic Preparation

- MATH 2318 - Linear Algebra **Credit Hours:** 3
- MATH 2413 - Calculus I **Credit Hours:** 4
- MATH 2414 - Calculus II **Credit Hours:** 4
- STAT 4344 - Introduction to Probability **Credit Hours:** 3
- STAT 4345 - Introduction to Statistics **Credit Hours:** 3

Core Requirements (15 hours)

Statistics Core Requirements (15 hours)

The following five courses or their approved substitutes are required:

- STAT 5432 - Principles of Statistical Inference **Credit Hours:** 3
- STAT 5531 - Multivariate Statistical Analysis **Credit Hours:** 3
- STAT 5532 - Linear Models and Regression Analysis **Credit Hours:** 3
- STAT 5533 - Statistical Computing **Credit Hours:** 3
- STAT 5535 - Experimental Designs and Analysis **Credit Hours:** 3

Applied Statistics Specialization (15 hours)

Thesis Option (15 hours)

- STAT 6939 - Master's Thesis Research **Credit Hours:** 3
- STAT 5538 - Categorical Data Analysis **Credit Hours:** 3

Additional Information

Students take STAT 6939 for 6 credit hours, and 6 credit hours of 5000-6000 level approved electives.

Capstone Project (15 hours)

6 credit hours of 5000 - 6000 level of approved electives.

- STAT 5538 - Categorical Data Analysis **Credit Hours:** 3
- STAT 6837 - Statistics Research and Consulting I **Credit Hours:** 3
- STAT 6838 - Statistics Research and Consulting II **Credit Hours:** 3

Additional Information

Students take STAT 6837/STAT 6838 for 6 credit hours during the last 15 hours of course work.

Big Data Analytics Specialization (15 hours)

Capstone Project (15 hours)

3 credit hours of STAT 6838, 3 credit hours of STAT 5537 or STAT 5634, and 9 credit hours from the following list.

- DASC 5031 - Python for Data Science **Credit Hours:** 3
- DASC 5032 - Data Structures for Data Science **Credit Hours:** 3
- DASC 5133 - Introduction to Data Science **Credit Hours:** 3
- DASC 5333 - Database Systems for Data Science **Credit Hours:** 3
- DASC 5335 - Deep Learning **Credit Hours:** 3
- DASC 5433 - Big Data Analytics **Credit Hours:** 3
- CSCI 5532 - Pattern Recognition and Image Processing **Credit Hours:** 3
- CSCI 5833 - Data Mining: Tools and Techniques **Credit Hours:** 3
- CSCI 5832 - Financial Data Mining **Credit Hours:** 3
- CSCI 5933 - Computational Bioinformatics **Credit Hours:** 3

Additional Information

This specialization requires knowledge of Python programming and a database course such as CSCI 4333 - Design of Database Systems. Please note: CSCI 4333 has prerequisites that must also be completed.

Department of Physical and Applied Sciences

Students desiring to study in the physical and applied sciences department may choose from the graduate plans below. The department of physical and applied sciences also include the Environmental Science plans of Chemistry, Occupational Safety and Health, and Geology. Students should consult the chair of the division for additional information.

Certificate

Physics Candidacy Certificate

Certificate Requirements

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 master's degree program at any time during his/her enrollment in the certificate program and can apply all physics coursework taken towards the certificate to the master's degree. Qualified students pursuing the Physics master's degree have the option of applying for the certificate once the candidacy requirements are satisfied. This certificate does not imply any acceptance into the UH doctoral program or the successful completion of all doctoral candidacy requirements and is used primarily at UHCL to monitor the progress of students working towards the Physics doctorate through our Collaborative Physics Ph.D. program.

Doctor of Philosophy

Physics Ph.D. Collaborative UHCL/UH Program

The first program of its kind, the Collaborative UHCL/UH Physics doctoral 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 master's degree to the Ph.D. program. In addition, a joint committee helps advise students on their transition.

Degree Requirements

UHCL Physics course requirements:

- PHYS 5331 - Electrodynamics **Credit Hours:** 3

- PHYS 5311 - Recitation for Electrodynamics **Credit Hours:** 1
- PHYS 5431 - Classical Mechanics **Credit Hours:** 3
- PHYS 5411 - Recitation for Classical Mechanics **Credit Hours:** 1
- PHYS 5531 - Mathematical Methods I **Credit Hours:** 3
- PHYS 5511 - Recitation for Mathematical Methods in Physics I **Credit Hours:** 1
- PHYS 5631 - Quantum Mechanics I **Credit Hours:** 3
- PHYS 5611 - Recitation for Quantum Mechanics I **Credit Hours:** 1
- PHYS 5632 - Quantum Mechanics II **Credit Hours:** 3
- PHYS 5612 - Recitation for Quantum Mechanics II **Credit Hours:** 1
- PHYS 5731 - Statistical Mechanics **Credit Hours:** 3
- PHYS 5711 - Recitation for Statistical Mechanics **Credit Hours:** 1

Additional Information

A candidate must earn a grade of B or better in the class and on the final exam. Students exploring this option must be accepted into the Graduate Physics program at UH for core courses to count toward candidacy. Therefore, interested students should apply for admissions to both the UHCL and UH physics programs before signing up for Ph.D. candidacy courses. Students accepted into the collaborative Ph.D. program will be subject to the same requirements as other Ph.D. candidates in the UH Physics program. They will complete their Ph.D. thesis under the advisement of a UH and UHCL faculty committee. More information on the program can be found at https://www.uhcl.edu/academics/degrees/physics-phd-collaborative.

Master of Science

Chemistry, M.S.

The plan in Chemistry leads to the Master of Science degree. Graduate students enrolled in the chemistry plan may choose from 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. Students may pursue either a thesis option or a non-thesis (extended coursework) option.

The thesis option is strongly recommended for improving the competitiveness of our graduates in the current job market and in admission to the Ph.D. school. Students in the thesis option will undertake thesis research. The non-thesis option substitutes thesis research with additional coursework.

It should be noted that the chemistry plan has received a Chemistry Departmental Research Grant from the Welch Foundation. This fund has been expended in support of the research efforts carried out by the plan's faculty during the training of students. The chemistry plan also has endowments from the Zeon Chemicals Company and Petrotex.

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. The GRE score (verbal + quantitative) should be a minimum of 290 points, with a minimum quantitative score of 150 and an essay of 3.0 or above. Further information on the Master of Science in Chemistry plan is available from the University's website.

Requirements

Chemistry Admission Requirements

Students seeking the Master of Science degree in Chemistry must have completed, at minimum, the following courses with grades of C- or better.

Students who do not fully meet the admission requirements may be admitted provisionally. They will be required to take missing undergraduate courses during their first year with grades of C or better; such remedial courses will not count toward the graduate coursework.

Chemistry Basic Requirements

8 hours of General (Freshman) Chemistry I and II with laboratory11 hours of Organic Chemistry I and II with laboratory and Advanced Organic Chemistry12 hours of upper-level Chemistry courses in any of the following areas: inorganic chemistry, analytical chemistry, instrumental analysis, physical chemistry, and organic chemistry.

Chemistry Core Requirements

Students must successfully complete 36 hours of graduate career chemistry courses, including15 hours of core courses and 6 hours of Research Project & Seminars or 9 hours in thesis option. All core requirements and chemistry electives must be completed with a grade of C or better.

Chemistry Core Requirements areas

(A minimum of three hours must come from each of the following)

Organic Chemistry

- CHEM 5337 - Physical Organic Chemistry **Credit Hours:** 3

Analytical Chemistry

- CHEM 5636 - Advanced Analytical Chemistry **Credit Hours:** 3

Physical Chemistry

- CHEM 5235 - Kinetics and Thermodynamics **Credit Hours:** 3
- CHEM 5637 - Modern Spectroscopy **Credit Hours:** 3

Inorganic Chemistry

- CHEM 5335 - Advanced Inorganic Chemistry **Credit Hours:** 3

Chemistry Extended Course Work Option

Under the extended course work option, a minimum of 36 hours of formal coursework must be completed: 15 hours of core requirements, 15 hours of approved electives listed below, and 6 hours of the two research courses (CHEM 6837 and CHEM 6838).

Chemistry Thesis Option

Under the thesis option, a minimum of 36 hours of formal course work must be completed: 15 hours of core requirements, 9 hours of approved electives, 6 hours in the two research courses (CHEM 6837 and CHEM 6838), and a minimum of 6 hours of master's thesis research (CHEM 6939).

Specialization Requirements

Chemistry Program currently has specialization in: Petrochemical & Process Chemistry. Students in the specialization area must complete the required courses with a grade of C or better.

Specialization in Petrochemical and Process Chemistry

Required courses for Specialization in Petrochemical & Process Chemistry

In addition to the Master of Science Chemistry core requirements, the following courses must be selected

- CHEM 5332 - Advanced Instrumental Analysis **Credit Hours:** 3
- CHEM 5635 - Advanced Polymer Chemistry **Credit Hours:** 3
- CHEM 5132 - Principles of Chemical Engineering **Credit Hours:** 3

Elective Requirements (9-15 hours)

Students pursuing extended coursework option need 15 hours of approved or specialization electives. Students pursuing thesis option need 12 hours of approved or specialization electives.

- CHEM 5130 - Mathematical Methods and Physical Concepts in Chemistry **Credit Hours:** 3
- CHEM 5132 - Principles of Chemical Engineering **Credit Hours:** 3
- CHEM 5133 - Spectroscopic Identification of Organic Compounds **Credit Hours:** 3
- CHEM 5134 - Synthetic Organic Chemistry **Credit Hours:** 3
- CHEM 5332 - Advanced Instrumental Analysis **Credit Hours:** 3
- CHEM 5336 - Organometallic Chemistry **Credit Hours:** 3
- CHEM 5633 - Astrobiochemistry I **Credit Hours:** 3
- CHEM 5634 - Astrobiochemistry II **Credit Hours:** 3
- CHEM 5635 - Advanced Polymer Chemistry **Credit Hours:** 3
- CHEM 5639 - Symmetry in Chemistry **Credit Hours:** 3

Occupational Safety and Health, M.S.

The graduate plan in Occupational Safety and Health leads to the Master of Science degree. The plan seeks, through an interdisciplinary and applied science approach, to prepare students for opportunities in government and the private sector. Graduates of the plan will also be prepared to pursue further academic training in occupational safety and industrial hygiene. Students must specialize in one of the following areas:

- Industrial Hygiene
- Occupational Safety and Health (Online)
- Process Safety Management
- Safety

All graduate students are required to produce a major paper and present a public seminar. Prior to enrolling in OSHE 5530, students must have a faculty adviser and an approved research topic. Following completion of OSHE 5530, the student will be advised into OSHE 6731 (seminar), OSHE 6838 (research project) or OSHE 6939 (thesis).

Students pursuing the seminar or research project options may be advised to complete hours in independent study, additional coursework related to the degree, or internship in addition to OSHE 6731 or OSHE 6838. Before enrolling in a thesis, students must have a faculty thesis adviser and an approved research proposal.

Degree Requirements

Occupational Safety and Health Basic Requirements

Students seeking a master's degree must have a baccalaureate degree from a regionally accredited university or college and foundation course work preparation appropriate to the major. Candidates should have a B average (GPA) 3.0. All students applying for the graduate program are required to provide GRE scores, however, exceptions are provided. The college's admissions committee will evaluate GRE scores according to the requirements below.

GRE Requirements for Admission:

- Recommended GRE Quantitative ≥ 150 and GRE Total ≥ 290
- GRE requirement will be waived if at least one of the following conditions is met:
    - The applicant has a GPA of 3.25 or above.
    - The applicant received his/her baccalaureate degree from an ABET- accredited or ACS- approved program with a minimum GPA of 3.0.
    - The applicant has a minimum GPA of 3.0 and at least two years of full-time professional experience in occupational safety and health or a related field. (A resume and one recommendation letter from a supervisor or an employment verification letter is needed to verify the work experience).
    - The applicant has another master's degree or doctorate from a regionally accredited university.

The current university policy applies to admissions for international students requiring proof of English language proficiency.

Students are encouraged to submit a written statement to the College of Science and Engineering Academic Advising Office (cseadvising@uhcl.edu) specifying their educational goals and objectives as well as their intended area of specialization, i.e., Industrial Hygiene, Occupational Safety and Health (Online), Process Safety Management or Safety. Applicants are also encouraged to submit letter(s) of recommendation as supporting documents.

Required Foundation Courses

Required foundation courses for admission into the program do not count toward the degree. The following foundation courses must be completed prior to admission into the graduate plan:

- College Algebra or Pre-Calculus
- General Chemistry I and II with labs
- General Physics I and II with labs

The following foundation course must be completed prior to or within the first year of study:

- Organic Chemistry I

The master's degree requires completion of a minimum of 36 hours.

Occupational Safety and Health Thesis Option (36 hours)

Designated electives 24 hours (maximum of 6 hours of 4000-level credit) and 6 hours of thesis. Online students are not eligible for the thesis option.

- OSHE 5135 - Statistical Analysis **Credit Hours:** 3
- OSHE 5530 - Research Methods: Occupational Safety and Health **Credit Hours:** 3
- OSHE 6939 - Master's Thesis Research **Credit Hours:** 3

- STAT 5135 - Applied Statistical Methods **Credit Hours:** 3

Additional Information

- Students select between OSHE 5135 or STAT 5135
- Specialization electives are selected in consultation with the faculty adviser.

Occupational Safety and Health Capstone Option (36 hours)

Designated electives 27 hours (maximum of 6 hours of 4000-level credit)

- OSHE 5135 - Statistical Analysis **Credit Hours:** 3
- OSHE 5530 - Research Methods: Occupational Safety and Health **Credit Hours:** 3
- OSHE 6731 - Graduate Seminar **Credit Hours:** 3
- OSHE 6838 - Research Project **Credit Hours:** 3
- EDUC 6032 - Applied Statistics **Credit Hours:** 3
- STAT 5135 - Applied Statistical Methods **Credit Hours:** 3

Additional Information

- Students select between OSHE 5135 or STAT 5135 or EDUC 6032 (for online students)
- In consultation with faculty adviser, students select between OSHE 6731 or OSHE 6838.
- Specialization electives are selected in consultation with the faculty adviser.

Occupational Safety and Health Specializations

Industrial Hygiene Specialization Electives

- ENSC 5332 - Toxicology **Credit Hours:** 3
- OSHE 4411 - Noise and Hearing Conservation **Credit Hours:** 4
- OSHE 4413 - Industrial Ventilation **Credit Hours:** 4
- OSHE 5131 - Control of Occupational and Environmental Hazards **Credit Hours:** 3
- OSHE 5233 - Recognition of Occupational Diseases **Credit Hours:** 3
- OSHE 5234 - Hazardous Materials Management **Credit Hours:** 3
- OSHE 5333 - Air Pollution **Credit Hours:** 3
- OSHE 5335 - Ergonomic Methods and Analysis Techniques **Credit Hours:** 3
- OSHE 5431 - Practicum in Industrial Hygiene and Safety **Credit Hours:** 3
- OSHE 6135 - Radiation Protection **Credit Hours:** 3
- OSHE 6332 - Safety Engineering **Credit Hours:** 3
- OSHE 6242 - Analytical Methods for Evaluation of Health Hazards **Credit Hours:** 4

- OSHE 6333 - OSHA Standards for the Construction & General Industries **Credit Hours:** 3

Additional Information

- The following courses are required for the specialization: ENSC 5332 and OSHE 5131, OSHE 5233, OSHE 5234, and OSHE 5335.
- OSHE 6242 is a required course, if not previously taken or covered in an undergraduate degree program (e.g., OSHE 4422 is an equivalent course, but cannot be applied towards the degree).
- The following courses are recommended, if not previously taken in an undergraduate or graduate degree program, OSHE 4411, OSHE 4413 or OSHE 6135.
- Courses must be approved in advance by the faculty adviser.
- A maximum of 3 hours of environmental management (ENVR) or environmental science (ENSC) courses may be included.

Occupational Safety and Health Online Course Electives

- ENSC 5332 - Toxicology **Credit Hours:** 3
- ENVR 5332 - Environmental Law **Credit Hours:** 3
- ENSC 5535 - Sampling and Analysis of Environmental Contaminants **Credit Hours:** 3
- OSHE 4316 - System Safety and Accident Investigation **Credit Hours:** 3
- OSHE 5131 - Control of Occupational and Environmental Hazards **Credit Hours:** 3
- OSHE 5233 - Recognition of Occupational Diseases **Credit Hours:** 3
- OSHE 5234 - Hazardous Materials Management **Credit Hours:** 3
- OSHE 5333 - Air Pollution **Credit Hours:** 3
- OSHE 5334 - Human Factors Engineering **Credit Hours:** 3
- OSHE 5336 - Safety, Health and Environmental Issues **Credit Hours:** 3
- OSHE 6135 - Radiation Protection **Credit Hours:** 3
- OSHE 6333 - OSHA Standards for the Construction & General Industries **Credit Hours:** 3
- OSHE 6242 - Analytical Methods for Evaluation of Health Hazards **Credit Hours:** 4

Additional Information

- The following courses are required for the specialization: ENSC 5535 or OSHE 6242,OSHE 5131, OSHE 5233, and OSHE 5334.
- The following courses are required, if not previously taken and covered in an undergraduate or graduate degree program: OSHE 4316 or OSHE 5336 (or equivalent OSHE 4336), and OSHE 6333 (or equivalent OSHE 4333).

- Electives are selected in consultation with the faculty adviser. Other online electives may be taken after approval of faculty adviser.
- Any additional Environmental Management(ENVR) courses must be approved by the faculty advisor.
- A maximum of six hours of environmental management (ENVR) courses may be included.

Process Safety Management Specialization Electives

- CHEM 5132 - Principles of Chemical Engineering **Credit Hours:** 3
- ENVR 5134 - Oil and Hazardous Materials Spills **Credit Hours:** 3
- ENSC 5333 - Fundamentals of Environmental Engineering **Credit Hours:** 3
- OSHE 4334 - Chemical Processing and Petroleum Refining **Credit Hours:** 3
- OSHE 4335 - Process Safety and Chemical Risk Management **Credit Hours:** 3
- OSHE 5131 - Control of Occupational and Environmental Hazards **Credit Hours:** 3
- OSHE 5234 - Hazardous Materials Management **Credit Hours:** 3
- OSHE 5235 - Fire Safety Engineering **Credit Hours:** 3
- OSHE 5236 - Advanced Process Hazard Analysis and Consequence Assessment **Credit Hours:** 3
- OSHE 5333 - Air Pollution **Credit Hours:** 3
- OSHE 5334 - Human Factors Engineering **Credit Hours:** 3
- OSHE 5431 - Practicum in Industrial Hygiene and Safety **Credit Hours:** 3
- OSHE 6332 - Safety Engineering **Credit Hours:** 3

Additional Information

- The following seven courses are required for the specialization: OSHE 4334, OSHE 4335, OSHE 5234, OSHE 5235,OSHE 5236, OSHE 5333 and OSHE 6332.
- Additional elective courses must be approved in advance by the faculty adviser from the list of electives.
- A maximum of six hours of environmental management (ENVR) courses may be included.

Safety Specialization Electives

- OSHE 4316 - System Safety and Accident Investigation **Credit Hours:** 3
- OSHE 5131 - Control of Occupational and Environmental Hazards **Credit Hours:** 3
- OSHE 5233 - Recognition of Occupational Diseases **Credit Hours:** 3
- OSHE 5234 - Hazardous Materials Management **Credit Hours:** 3
- OSHE 5235 - Fire Safety Engineering **Credit Hours:** 3
- OSHE 5334 - Human Factors Engineering **Credit Hours:** 3
- OSHE 5335 - Ergonomic Methods and Analysis Techniques **Credit Hours:** 3

- OSHE 5431 - Practicum in Industrial Hygiene and Safety **Credit Hours:** 3
- OSHE 6135 - Radiation Protection **Credit Hours:** 3
- OSHE 6332 - Safety Engineering **Credit Hours:** 3
- OSHE 6333 - OSHA Standards for the Construction & General Industries **Credit Hours:** 3
- OSHE 6242 - Analytical Methods for Evaluation of Health Hazards **Credit Hours:** 4
- OSHE 4324 - Fire Safety Engineering **Credit Hours:** 3

Additional Information

- The following courses are required for the specialization: OSHE 5131, OSHE 5233, OSHE 5334, OSHE 5335 and OSHE 6332.
- The following courses are required, if not previously taken and covered in an undergraduate or graduate degree program: OSHE 4316, OSHE 6333 (or equivalent OSHE 4333.
- Courses must be approved in advance by the faculty adviser.

Physics, M.S.

The graduate plan in Physics leads to the master of science degree at UHCL. The goal of this program is to prepare students for doctoral-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.

Degree Requirements

Physics Basic Preparation

Applicants for candidacy should have a Bachelor of Science 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 appropriate 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 3311 and PHYS 3312 satisfy many of these requirements):

- University Physics I and II with Laboratory
- Modern Physics with Laboratory
- Calculus I, II and III
- Differential Equations
- Complex Variables

- Linear Algebra
- Probability and Statistics
- Intermediate Electromagnetism
- Intermediate Mechanics
- Quantum Theory
- Thermodynamics and Statistical Mechanics

Degree Requirements

Physics Core Requirements

The following 24 hours of graduate physics courses are required for both the thesis and extended coursework options.

- PHYS 5331 - Electrodynamics **Credit Hours:** 3
- PHYS 5311 - Recitation for Electrodynamics **Credit Hours:** 1
- PHYS 5431 - Classical Mechanics **Credit Hours:** 3
- PHYS 5411 - Recitation for Classical Mechanics **Credit Hours:** 1
- PHYS 5531 - Mathematical Methods I **Credit Hours:** 3
- PHYS 5511 - Recitation for Mathematical Methods in Physics I **Credit Hours:** 1
- PHYS 5631 - Quantum Mechanics I **Credit Hours:** 3
- PHYS 5611 - Recitation for Quantum Mechanics I **Credit Hours:** 1
- PHYS 5632 - Quantum Mechanics II **Credit Hours:** 3
- PHYS 5612 - Recitation for Quantum Mechanics II **Credit Hours:** 1
- PHYS 5731 - Statistical Mechanics **Credit Hours:** 3
- PHYS 5711 - Recitation for Statistical Mechanics **Credit Hours:** 1

Additional Information

PHYS 5632, PHYS 5612: (Not required for students completing the sub-plan in technical management

Physics Advanced Electives

Advanced SCE courses that meet the needs of students' professional goals may be selected in consultation with a faculty adviser.

Physics Thesis Option

Under the thesis option, a minimum of 24 hours of formal coursework must be completed. In addition, students must complete PHYS 6837 and a minimum of six hours of PHYS 6939, Master's Thesis Research. A maximum of 12 hours of PHYS 6939 can be applied toward graduation requirements. Remaining coursework for a total of 36 hours may come from additional formal courses.

Physics Non-Thesis Option

Under the non-thesis option, a minimum of 30 hours of formal coursework must be completed. In addition, students must choose a faculty research adviser and complete six hours of independent research and seminar (PHYS 5739 or PHYS 6837, and PHYS 6838). Students completing the specialization in Technical Management should take either PHYS 5739 or PHYS 6837.

Specialization Requirements

Technical Management Specialization

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 complemented by a combination of systems engineering, engineering management 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 students in this specialization are not required to take PHYS 5632/PHYS 5612. Students enrolled in the Technical Management Specialization should choose 4 courses from those shown below.

Engineering Management

- EMGT 5130 - New Business Development **Credit Hours:** 3
- EMGT 5131 - Legal Issues in Engineering Management **Credit Hours:** 3
- EMGT 5231 - Engineering Management Planning **Credit Hours:** 3
- EMGT 5430 - Professional Project Management **Credit Hours:** 3
- EMGT 5530 - Organizational Analysis and Management **Credit Hours:** 3
- EMGT 5531 - Technology Planning and Management **Credit Hours:** 3

Systems Engineering

- SENG 5130 - Systems Engineering Processes **Credit Hours:** 3
- SENG 5230 - Systems Engineering Economics **Credit Hours:** 3
- SENG 5231 - Concurrent Engineering **Credit Hours:** 3
- SENG 5330 - Risk Management **Credit Hours:** 3
- SENG 5332 - Decision Analysis for Systems Engineering **Credit Hours:** 3
- SENG 5532 - Advanced Decision Analysis for Systems Engineering **Credit Hours:** 3

Management

- MGMT 5032 - Human Behavior in Organizations **Credit Hours:** 3
- MGMT 5133 - Teamwork and Leadership Skills: Theory in Practice **Credit Hours:** 3
- MGMT 5233 - Entrepreneurship and Corporate Venturing **Credit Hours:** 3
- MGMT 5636 - Management of Technology **Credit Hours:** 3
- MGMT 5638 - Leading Technology **Credit Hours:** 3

Admission Requirements

Admission Deadline

Standard graduate admission deadline

Application

A standard university application is required.

Requirements

3.0 GPA

GRE Total Score of 290 (140 Verbal + 150 Quantitative)

GRE Essay of 3.5

GRE waived for an undergraduate GPA above 3.2, or if the applicant has another graduate degree (master's degree or higher).

Additional Requirements - Undergraduate degree in physical sciences discipline, mathematics and/or engineering; Other degrees may apply if the coursework meets the preparation requirements in the catalog.

Course Roster (A-Z)

Accounting

ACCT 2301 - Principles of Accounting I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Accounting concepts and their application in transaction analysis and financial statement preparation; analysis of financial statements; and asset and equity accounting in proprietorships, partnerships and corporations.

ACCT 4346 - Business Ethics for Accountants

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The objective of this course is to provide the student with an educational background into 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.
Prerequisites: *ACCT 3341 and ACCT 3342 OR ACCT 5133 and ACCT 5134*.

ACCT 5131 - Accounting for Administrative Control

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: ACCT 2301 *or equivalent*.

ACCT 5134 - Financial Accounting II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Continuation of Financial Accounting I. Emphasis is placed on valuation and measurement problems associated with financial statement preparation. May not be taken by accounting majors for graduate elective credit.
Prerequisites:
ACCT 5133 or equivalent.

ACCT 5137 - Principles of Auditing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: Prerequisite or corequisite: ACCT 5332 or equivalent.
Corequisites:

ACCT 5231 - Individual Income Tax

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Principles of federal income tax as applied to individuals; tax consequences of business decisions and accounting procedures.
Prerequisites: Principles of Accounting or equivalent

ACCT 5234 - Corporate and Pass-Through Entity Taxation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course addresses entity-level taxation including corporations, partnerships, limited liability companies, limited liability partnerships, S corporations, and fiduciaries. The course examines the link between the accounting information reported for financial statement purposes and the information reported on business tax returns.
Prerequisites: ACCT 2301 or equivalent

ACCT 5331 - Accounting Analysis for Management Decisions

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The role of cost systems in aiding short-run and strategic management decisions in manufacturing and service organizations.
Prerequisites: ACCT 5131 and FINC 5231 or equivalents

ACCT 5332 - Accounting Information Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 45
This course discusses the conceptual aspects of accounting systems and how they are used in the managerial decision-making process; it includes discussion and applications of basic business processes and documentation of those processes in the context of internal controls (e.g., identifying risks and controls in information systems). The course includes hands-on experience in flowcharting software, spreadsheets, accounting software, database software and generalized auditing software (IDEA).
Prerequisites: ACCT 2301 *and ISAM 5330 or equivalents.*

ACCT 5333 - Fundamentals of Databases and Business Intelligence

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 60
The topics covered include (1)database concepts such as

database models, modeling techniques and normalization; design, development and maintenance of a relational database; formulation of commands to insert and update data, retrieve information, generate reports from a database; and (2)business intelligence concepts, such as business intelligence architecture; schema of a data warehouse; online analytical processing; bigdata; and NoSQL databases. Includes numerous hands-on assignments. **Cross-listed:** ISAM 5331.
Prerequisites: *ISAM 3034, or ISAM 5030, or 6 hours of college-level programming*

ACCT 5334 - Advanced Database Applications Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 60
The course covers advanced commands and techniques to design, develop and maintain a database; insert and update data in a database, retrieve information, generate reports and develop and implement database objects to manage, control and administer database processing. Includes numerous hands-on assignments. The coursework requirements also include Oracle SQL and Oracle PL/SQL certifications.
Cross-listed: ISAM 5632.
Prerequisites: *ACCT 5333 or equivalent.*

ACCT 5335 - Information Systems Audit and Security

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 45
Discussion of the audit process, internal controls as they relate to technology and business process documentation. Study of business processes, deployment, and management of technology resources, risk assessment and change management IT networks, and IT governance. Extensive hands-on experience detecting fraud using generalized audit software (IDEA). Discussion of computer forensics and other current topics related to IT security. Written communication skills are emphasized through the preparation of audit reports based on findings from fraud detection assignments. Covers topics tested in the Certified Information Systems Auditor (CISA) exam **Cross-listed:** ISAM 5731.
Prerequisites: *ISAM 5330 or equivalent.*

ACCT 5336 - Systems Analysis and Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 45
This course provides a step-by-step approach to developing computer-based information systems. It covers topics such as: systems development life cycle; systems development methodologies; system requirements determination and analysis; user-interface design; programs design and system architecture. The course includes a comprehensive group project. **Cross-listed:** ISAM 5635.
Prerequisites: *ISAM 3034, ISAM*

5030, or 6 hours of programming courses and ACCT 5333 or equivalent.

ACCT 5337 - ERP System Concepts and Practices

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
This course examines the integrated nature of business processes and how ERP systems can be configured to handle those processes. Students receive hands-on experience using SAP's current enterprise software.
Cross-listed: ISAM 5431
Prerequisites: *ACCT 5333 or equivalent.*

ACCT 5431 - Advanced Accounting

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Accounting and reporting of domestic and foreign consolidated corporations and branches, governmental and other not-for-profit entities.
Prerequisites: *ACCT 5134 or equivalent.*

ACCT 5432 - Acct for Government and Not-For-Profit Organizations

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course covers the governmental and not-for-profit environment, fund accounting, budgeting, revenue and expenditure recognition, financial reporting requirements and current issues.
Prerequisites:
Prerequisite: ACCT 5134 or equivalent.

ACCT 5436 - Principles of Internal Auditing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is meant to provide students with an introduction to the internal auditing process and profession. Topics include definitions, frameworks, risk identification/analysis, governance/control issues and conducting internal audit engagements (to include writing audit reports).
Prerequisites: *ACCT 3432 Intermediate Accounting II or ACCT 5134 equivalent.*

ACCT 5437 - Principles of Business Evaluation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Principles of Business Valuation teaches the theory and methods in evaluating the value of a closely held business or ownership interest. The course will teach the theories and standards in business valuation, analysis of financial statements to estimate future income and cash flows and all of the three commonly used approaches of business valuation. Through this course, students will acquire the basic skills and work on real world style projects in valuing private businesses and equity investments.
Prerequisites: *ACCT 5134 or equivalent*

ACCT 5438 - Fundamentals of Data Analytics in Accounting

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
Fee Type: Special

Fee ($): 65
This course provides students with the fundamentals of data analytics with a focus on the area of accounting. Students will learn and practice analytical methods used in accounting, become proficient in understanding and presenting data, develop an ability to evaluate the integrity of data and gain proficiency in using computer applications for data analyses. Students will also be required to complete a written case analysis relating to data analytics.
Prerequisites: ACCT 2301 *or equivalent, FINC 5231 or equivalent, ISAM 5330 or equivalent*.

ACCT 5531 - International Accounting

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
This course addresses the current status of the international financial reporting standards (IFRS) and is designed to examine both managerial and financial reporting issues that arise when multinational enterprises report under IFRS or other national financial reporting regimes. The approach is from the user's perspective. Multinational challenges encountered in analyzing financial statements, such as currency translation issues, are addressed.
Prerequisites: ACCT 2301 *or equivalent*.

ACCT 5631 - Data Warehousing and Data Mining

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course provides the knowledge and skills to design and develop a data warehouse as well as extract strategic business intelligence through the application of data mining tools and techniques. It examines phases of the data warehouse design process, and data aggregation. Includes numerous hands-on assignments **Cross-listed:** ISAM 5332
Prerequisites: ISAM 5332

ACCT 5632 - Advanced Data Analytics in ERP System

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
This course covers topics such as data visualization, data analysis, reporting and predictive analytics. Special attention will be given to discovering trends and other patterns from data. A significant portion of this course will deal with the use of SAP's current enterprise software systems. Data will be analyzed using existing software packages and currently accepted analytical models. **Cross-listed:** ISAM 5734
Prerequisites:
ISAM 5330 or equivalent.

ACCT 5633 - Data Analytics Application Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
The course provides students with a foundation of developing data analytics applications by using the most in-demand programming language and business intelligence tools. The course also includes a significant number of hands-on computational projects to help the students gain a thorough

understanding of the practice of dealing with real-world big data, as well as prepare the students for different roles of data analytics application developers.
Cross-listed: (Cross-listed with ISAM 5735).
Prerequisites: Prerequisites: ISAM 5330 and ACCT 5333 or equivalents

ACCT 5931 - Research Topics in Accounting

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.

ACCT 5939 - Independent Studies in Accounting

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Independent directed study in Accounting.
Prerequisites: *Approval of Instructor, Faculty Chair and Associate Dean required*.

ACCT 6731 - Seminar in Financial Statement and Accounting Information Quality Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course is designed to provide students with a theoretical and practical framework to analyze financial accounting information provided by management and to understand how various financial reporting strategies affect the quality of accounting information and the value of firms using a variety of analytical tools.
Prerequisites: *ACCT 5134 or equivalent.*

ACCT 6732 - Seminar in Fraud Examination and Audit Risk (Capstone)

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Principles, analysis and application of concepts related to fraud examination, fraud detection and fraud deterrence. Current issues related to audit risk assessment and planning are also included.
Prerequisites: *Other degree requirements and LAST SEMESTER, or permission from the instructor.*

ACCT 6735 - Oil and Gas Accounting

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: Prerequisite: ACCT 5133 or equivalent

ACCT 6739 - Internship in Accounting

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Supervised work experiences each week in an approved accounting firm, governmental agency or business. Written work as required by sponsoring faculty member.
Prerequisites: Completion of all graduate foundation courses or equivalents; 12 hours of 3XXX level, 4XXX level, or graduate accounting coursework; 9 hours at UHCL; cumulative graduate GPA of 3.0 or above; approval of associate dean and sponsoring faculty member.

ACCT 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Master's degree candidacy and approval of adviser and dean*.

ACCT 6969 - Master's Thesis Research

Credit Hours: 6 **Lecture:** 6 **Lab:** 0
Prerequisites: *Master's degree candidacy and approval of adviser and dean.*

Administration and Supervision

ADSU 5010 - Professional Preparation Seminar

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 15
This course is designed to assist students in the principal certification program to understand the state certification standards for successful entry into their chosen educational field. This course may be waived if the candidate has earned a passing score on the TExES. Completion of the course is dependent upon candidates passing all state assessments required for their degree/certification plan.
Prerequisites: *An approved, signed degree or certification plan on file in the COE*.

ADSU 5931 - Research Topics in Educational Leadership

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.

ADSU 5939 - Independent Study in educational leadership

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: Approval of instructor and associate dean.

ADSU 6030 - Introduction to Educational Leadership

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 125
The course content has been approved by the Texas Education Agency and meets the guidelines for Instructional Leadership Development required for administrators and supervisors. This course focuses on principles and skills of educational leadership necessary to facilitate continuous campus improvement, including data-driven decision-making, curriculum, instruction, assessment, developmental supervision, professional development, community partnerships, communication, organizational management and evaluation.

ADSU 6130 - Administrative Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on technological applications for school administrative systems focusing on communication, presentation, and management systems.

ADSU 6132 - Curriculum

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed to prepare building-level leaders to understand national and State of Texas practices and theory related to legal curricula issues as well as the design and alignment implementation, analysis and methods of evaluation of school curriculum, and school curricular programs.

ADSU 6233 - Principalship

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the application of interpersonal, technical, human and conceptual skills required of building-level administrators to engage in organizational vision-building, decision-making, problem-solving and effective leadership in learning environments; study of leadership approaches for use with various school constituencies.

ADSU 6235 - Administration of Special Programs

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course concentrates on program planning, implementation, evaluation and improvement through study and development of special programs that meet local, state and national needs and requirements.

ADSU 6237 - Student Legal Matters

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course addresses school law as it relates to student issues as well as legal requirements related to the implementation and maintenance of special programs that meet local, state and national needs and requirements.

ADSU 6333 - Instructional Leadership

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed to prepare building-level administrators to advocate, nurture and sustain an instructional program and a campus culture that are conducive to student learning and staff professional growth. Students are required to conduct in-depth research on professional growth and/or development as it relates to formative evaluation.

ADSU 6432 - Management Theory

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on adaptations of the fundamentals of management to program development, personnel and fiscal resources.

ADSU 6434 - Administration of School Personnel

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course follows the official guidelines for training appraisers as required for the Texas Professional Development and Appraisal System. It is designed to apply legal requirements for all aspects of personnel management as well as prepare building-level administrators for legal issues related to teachers and employees.
Prerequisites: *ADSU 6030.*

ADSU 6436 - School Resource Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course explores the fundamentals of planning, cost accounting, quantitative evaluation of needs and resources and application of prudent business practices to school finance.

ADSU 6437 - School Law

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course addresses state and federal school law and court decisions affecting the authority, responsibilities, liabilities and appeals related to the operations of public school systems and student issues as well as legal requirements related to the implementation and maintenance of special programs that meet local, state and national needs and requirements.

ADSU 6533 - Appraisal of Teaching

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 125
This 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.
Prerequisites: *ADSU 6030.*

ADSU 6537 - Interpersonal Communication

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is a study of local, state and national policy and politics as instruments of program change, development, control and reform. Emphasis is given to the role of the principal in school policy matters.

ADSU 6638 - The Principal and School Community Relations

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This is a supervised internship with a focus on the application of interpersonal skills in campus leadership and study of leadership approaches for use with various school constituencies in an approved educational environment. Course content and requirements also address successfully passing the TExESPASL examination. Written and oral reports required.
Prerequisites: *Submitted application, ADSU 6030,ADSU 6132, ADSU 6233, and ADSU 6533 (or appropriate substitutes), approval of Associate Dean, and a passing score on the Principal (268) TExES*.

ADSU 6735 - Leadership Research Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course provides a 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.
Prerequisites: *Completion of all ADSU coursework in plan of study*.

ADSU 6739 - Graduate Practicum

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
This is a supervised internship in an approved educational environment. Written and oral reports required.
Prerequisites: *Completed application, approval of Associate Dean, successful completion of ADSU 6638*.

Anthropology

ANTH 5333 - Cultures of Mexico and Central America

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Survey of anthropological approaches to regions of Mexico, Central America and the U.S.-Mexico border. Students will be exposed to methods, theories and case studies and will gain skills required to conduct future research on this topic.

ANTH 5334 - Native American Cultures

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of social and cultural diversity of indigenous peoples of North America from anthropological and historical perspectives.

ANTH 5531 - Families, Communities, and Globalization

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of ideas of family, race, gender and relatedness in transnational and cross-cultural perspectives. Draws on case studies from anthropology and other fields.

ANTH 5535 - Cultures of Asia

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Survey of anthropological approaches to Asian societies.

ANTH 5537 - Topics in African Studies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Investigation of cultural diversity of African societies and African diaspora. Students will engage with methods, theories and case studies and gain skills required to conduct research on the topic. Topics vary may be repeated for credit with permission of instructor.
Cross-listed: *CRCL 5537*.

ANTH 5538 - Cultures of the Middle East

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
Survey of anthropological and other approaches to understanding societies

of the Middle East. Students will be exposed to methods, theories and case studies and will gain skills required to conduct future research on the topic.

ANTH 5931 - Research Topics in Anthropology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered. Topics vary may be repeated for credit with permission of instructor.

ANTH 5939 - Independent Study in Anthropology

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Permission of instructor required.

Arts

ARTS 2379 - Arts and the Child

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
Fee Type: Special
Fee ($): 65
Prepares individuals to teach three art forms - visual art, music, theatre - to young children through elementary ages.

ARTS 5037 - Studies in Art History

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 75
Understanding and interpreting art history. Topics vary may be repeated for credit with permission of instructor.

ARTS 5038 - Crafts Design and History

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
Fee Type: Special
Fee ($): 75
Supervised projects in crafts history, design and techniques. Topics vary may be repeated for credit.

ARTS 5231 - Sculpture and Ceramics Studio

Credit Hours: 3 **Lecture:** 0 **Lab:** 3
Fee Type: Special
Fee ($): 75
Supervised projects. Investigation of three-dimensional artwork, approaches and processes. Topics vary may be repeated for credit with permission of instructor.

ARTS 5233 - Art of Ancient Iraq and the Near East

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 75
The art, history, and culture of Ancient Iraq and the Near East. Topics include prehistoric art, state formation, ideology and empire. **Cross-listed:** HUMN 5233.

ARTS 5234 - Art of the Ancient Greek World

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 75
An introduction to art history and culture of ancient Greece from the Bronze Age through the Hellenistic period. **Cross-listed:** HUMN 5234.

ARTS 5236 - Roman Art and Architecture

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 75
The art, history and culture of the ancient Roman world from the foundation of Rome (753 B.C.E.) through Constantine (337 C.E). An investigation of architecture, sculpture, painting and other arts, especially as they relate to the social and political developments of ancient Italy and the Mediterranean region.

ARTS 5331 - Painting-Drawing-Printmaking

Credit Hours: 3 **Lecture:** 0 **Lab:** 3
Fee Type: Special
Fee ($): 75
Supervised projects. Topics vary may be repeated for credit with permission of instructor.

ARTS 5931 - Research Topics in Art

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
Fee Type: Special
Fee ($): 75
Identified by specific title each time course is offered. Topics vary may be repeated for credit with permission of instructor.

ARTS 5939 - Independent Study in Art

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Fee Type: Special
Fee ($): 75
Permission of instructor required.

Astronomy and Space Science

ASTR 5131 - Graduate Astronomy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 45
Quantitative introduction to physics of the stars, interstellar medium, cosmochemistry, the galaxy and the Universe as determined from a variety of astronomical observations and models.

ASTR 5231 - Stellar Structure and Evolution

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Principal concepts, equations, methods and results of the theories of stellar atmosphere and interiors and their relation to observations.
Prerequisites: *Core Physics courses or instructor approval*.

ASTR 5331 - Remote Sensing Instrumentation and Techniques

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *Core physics courses or instructor approval.*

ASTR 5431 - Fundamentals of Astrodynamics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *Core physics courses or instructor approval*.

ASTR 5432 - Perturbation Methods in Astrodynamics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
A study of the methods of the solution to the perturbed two-body problem with applications to the motion of satellites.
Prerequisites: *ASTR 5431 or instructor approval*.

ASTR 5531 - Planetary Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Planetary dynamics, planetary interiors, atmospheres and surfaces; magnetism; models of solar system origin.
Prerequisites: *Physical geology or equivalent*.

ASTR 5631 - Astrobiophysics I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Origin of the universe, stars and planetary systems. Origin and evolution of Earth as a habitable planet and origin and evolution of life.
Prerequisites: *PHYS 4342, PHYS 4351, PHYS 5531*.

ASTR 5632 - Astrobiophysics II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The search for life in the universe, including possibilities for finding life on Mars and other solar system bodies and on extra-solar planets and the Search for Extra-Terrestrial Intelligence (SETI).
Prerequisites: *ASTR 5631.*

ASTR 5931 - Research Topics in Space Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.

ASTR 5939 - Independent Study in Space Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of instructor, chair and associate dean required.*

Biology

BIOL 1106 - Laboratory for Biology for Science Majors I

Credit Hours: 1 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 60
Laboratory exercises in basic biochemistry, cell biology, cell metabolism and energetics, photosynthesis, genetics, evolution, taxonomy, bacteria and viruses. Credit may not be received for both BIOL

1106 and BIOL 1108.
Corequisites: *BIOL 1306*.

BIOL 1107 - Laboratory for Biology for Science Majors II

Credit Hours: 1 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 60
Laboratory exercises relating to fungi, protists, plants, plant function, animals, animal physiology and ecology. Credit may not be received for both BIOL 1107 and BIOL 1109.
Corequisites: *BIOL 1307*.

BIOL 1306 - Biology for Science Majors I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
A general biology course including basic biochemistry, cell biology, cell metabolism and energetics, photosynthesis, genetics, evolution, taxonomy, bacteria and viruses.

BIOL 1307 - Biology for Science Majors II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
A continuation of Biology for Science Majors I with emphasis on fungi, protists, plants, plant function, animals, animal physiology and ecology. Credit may not be received for both BIOL 1307 and BIOL 1309.
Corequisites: *BIOL 1107*.

BIOL 2321 - Microbiology for Science Majors

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of the morphology, physiology and taxonomy of representative groups of pathogenic and non-pathogenic microorganisms.
Prerequisites: *BIOL 1306, BIOL 1307, CHEM 1311,CHEM 1312*
Corequisites: *BIOL 2121*

BIOL 3311 - Marine Biology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 80
Study of marine organisms and their environment. One or more weekend or weekday field trips and limited laboratory exercises are required.
Prerequisites: BIOL 1306, BIOL 1307

BIOL 3333 - Environmental Biology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
The impacts of pollution, anthropogenic activities and other stresses on ecosystem structure and function. Course designed for science majors.

BIOL 3341 - Molecular Genetics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of the molecular basis of genetics, including transmission genetics and population genetics. BIOL 3141 must be taken concurrently or following BIOL 3341.
Prerequisites: *BIOL 1306*, *BIOL 1307*.

BIOL 4305 - Ecology of the Amazon

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
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 4311 - Ecology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Theoretical study of organisms, populations and communities related to their environments.
Prerequisites: *BIOL 1306*, *BIOL 1307*.

BIOL 4332 - Histology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of microscopic structure of animal and human tissues, including theories of fixation and staining of clinical samples.
Prerequisites: *BIOL 3373*.

BIOL 4334 - Environmental Microbiology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 100
Study of activity and mechanisms of microbial contribution to global ecosystems with emphasis on geochemical cycling, bioremediation, wastewater treatment, metagenomics and laboratory investigations.
Prerequisites: *BIOL 2321*.

BIOL 4341 - Biochemistry I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of cellular biochemical components and metabolism.
Prerequisites: *BIOL 1306*, *BIOL 1307* and *CHEM 2323*.

BIOL 4342 - Biochemistry II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Regulation and control of intermediary metabolism. Introduction to biochemical genetics.
Prerequisites: *BIOL 4341*.

BIOL 4343 - Plant Physiology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Metabolic and physiological processes involved in plant growth.
Prerequisites: *BIOL 1306*, *BIOL 1307*.

BIOL 4344 - Comparative Animal Physiology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Survey of bodily functions in both vertebrates and invertebrates. Emphasis will be on the use of the comparative approach in understanding how animals physiologically respond to and adapt to environmental challenges.
Prerequisites: *BIOL 1306*, *BIOL 1307*.

BIOL 4345 - Human Physiology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *BIOL 1306*, *BIOL 1307*.

BIOL 4347 - Cellular Physiology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Cell structure and function; emphasis on cytological, biochemical, genetical and developmental perspectives.
Prerequisites: *BIOL 4341*

BIOL 4348 - Developmental Biology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *BIOL 3341 and either BIOL 4347 or BIOL 3307*

BIOL 4351 - Molecular Biology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of how the cell functions at the molecular level, structures of the genome in prokaryotes and eukaryotes and basic elements involved in the regulation of gene expression.
Prerequisites: BIOL 3341 *or BIOL 4341*.

BIOL 4371 - Cancer Biology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Cancer, genetics and heredity: prevention, detection and treatment of cancer.
Prerequisites: *BIOL 3341 or BIOL 4351 or equivalent.*

BIOL 5131 - Membrane Biology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of synthesis and function of cellular membranes.
Prerequisites: *Biochemistry*.

BIOL 5132 - Cell Signaling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *BIOL 4341 and BIOL 4347 or equivalent*.

BIOL 5215 - Laboratory for Ichthyology

Credit Hours: 1 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 80
Advanced laboratory course on identification, anatomy and ecology of fish. Fisheries methods also emphasized. Weekend or weekday field trips and collections required.

BIOL 5233 - Ecotoxicology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 45
Study of environmental pollutants and effects on ecosystems.

Prerequisites: *BIOL 4325 or BIOL 5332 or equivalent*.

BIOL 5234 - Population and Community Dynamics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 120
Application of basic population modeling and analysis methods used in the management of animal populations. Emphasis placed on harvested populations and fisheries.
Prerequisites: *Coursework in Ecology and Genetics*.

BIOL 5235 - Ichthyology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Advanced study of biology, ecology and evolution of marine and freshwater fishes.
Corequisites: *BIOL 5215*

BIOL 5332 - Toxicology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Evaluation of the mechanisms of action, risks and effects of exposure to toxic substances.
Prerequisites: *BIOL 4325 or BIOL 4341 or BIOL 4344 or BIOL 4345 or equivalent*.

BIOL 5333 - Microbial Ecology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of the interactions of microorganisms and their environments, including biotic and abiotic components. Topics include metabolic diversity, biogeochemistry, microbial diversity and modern methodologies are discussed with current research articles.
Prerequisites: *BIOL 2321*

BIOL 5334 - Microbial Ecology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of the interactions of microorganisms and their environments, including biotic and abiotic components. Topics include metabolic diversity, biogeochemistry, microbial diversity and modern methodologies are discussed with current research articles.
Prerequisites: *BIOL 2321*

BIOL 5336 - Neuropsychology Practicum

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Laboratory investigation of drug/brain/behavior relationships in the rat. Readings from primary research literature, laboratory experiments and research report.
Prerequisites: *Permission of instructor (HSH) and BIOL faculty adviser*.

BIOL 5417 - Lab for Human Gross Anatomy

Credit Hours: 1 **Lecture:** 0 **Lab:** 1
This course will cover human gross anatomy in both lecture and lab format. The course will be taught at Texas Chiropractic College. Prosected cadavers will be utilized in the lab. The course will focus on musculoskeletal system.

BIOL 5432 - Principles of Pharmacology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Emphasis on principles for evaluating the effects of drugs.
Prerequisites: *BIOL 4341*, *BIOL 4344*, or *BIOL 4345*.

BIOL 5433 - Enzymology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *BIOL 4341*.

BIOL 5435 - Advanced Immunology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Course 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.
Prerequisites: *BIOL 4361 or equivalent*.

BIOL 5436 - Physiological Basis of Disease

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The effects of diseases on normal physiologic functions and the physiologic basis of medical treatments for these diseases will be discussed.
Prerequisites: *BIOL 4345*

BIOL 5437 - Human Gross Anatomy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will cover human gross anatomy in both lecture and lab format. The course will be taught at Texas Chiropractic College. Prosected cadavers will be utilized in the lab. The course will focus on musculoskeletal system.
Corequisites: *BIOL 5417*

BIOL 5512 - Laboratory for Coastal and Estuarine Ecology

Credit Hours: 1 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 80
Laboratory study of estuarine and marine organisms and multiple weekday and/or weekend field trips to study sites off campus.

BIOL 5517 - Limnology and Aquatic Biology

Credit Hours: 1 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 80
Laboratory study of freshwater organisms and multiple weekend and/or weekday field trips to study sites off campus.

BIOL 5530 - Research Methods in Biology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 60
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.
Prerequisites: *Graduate standing*.

BIOL 5531 - Aquatic Toxicity Testing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 80
Theory of toxicity testing, statistical analysis procedures and laboratory practice in standard aquatic toxicity tests.
Prerequisites: *BIOL 4325 or equivalent*.

BIOL 5532 - Coastal and Estuarine Ecology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of physical, chemical and biological nature of estuarine ecosystems.
Prerequisites: *BIOL 4311*.

BIOL 5533 - Ecological Methods

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 45
Field methods for analysis of ecological systems. Field work and laboratory are required.
Prerequisites: *BIOL 4311*

BIOL 5534 - Conservation Biology

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Analysis of biological factors that shape species diversity of the earth's ecosystems and the environmental and sociopolitical issues faced in the conservation of biodiversity.
Prerequisites: *BIOL 4311 or equivalent*.

BIOL 5535 - Neotropical Rainforest Ecology

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 10
Study of neotropical rain forests, including their physical, chemical and geological characteristics and plant /animal ecology. Students completing the course qualify for a discounted optional ecology study trip to the Amazon flooded forest areas of Brazil.

BIOL 5537 - Limnology and Aquatic Biology

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 80
The study of physical, chemical, and biological nature of freshwater systems including lakes, ponds, rivers and streams.
Prerequisites: *BIOL 4311 or equivalent*.

BIOL 5634 - Apoptosis

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Students in this course will study the stimuli and pathways involved in programmed cellular death.
Prerequisites: *BIOL 4347*

BIOL 5635 - Neuroscience

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
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.
Prerequisites: *Anatomy, Physiology*.

BIOL 5731 - Advanced Cancer Biology

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Cancer, genetics and heredity; prevention, detection and treatment of cancer. Literature research and presentation on molecular basis of various cancers required.
Prerequisites: *BIOL 3341 or BIOL 4351 or equivalent*.

BIOL 5732 - Advances in Molecular Biology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of genetic activity at the molecular level, how gene expression is regulated by cis- and trans-elements, RNA slicing, non-coding RNA, riboswitch, telomerase function and regulation, etc.
Prerequisites: *BIOL 3341 or BIOL 4351*.

BIOL 5733 - Epigenetics and miRNA

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of epigenetic modifications that can influence gene expression and of microRNAs that can influence protein expression.
Prerequisites: *Biochemistry, Genetics, and either Cellular Physiology or Molecular Biology*

BIOL 5734 - Oncogenes

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of cancer at the level of the gene.
Prerequisites: *Molecular biology.*

BIOL 5735 - Cell Cycle Regulation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of controls that regulate the cell cycle.
Prerequisites: *Biochemistry I*

BIOL 5736 - Bioethics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of complex situations in biology and medicine that require moral reflection, judgment or decisions.

BIOL 5738 - Gene Therapy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Gene technologies with applications to disease, cancer, neurological and genetic disorders, cardiovascular and infectious diseases.
Prerequisites: *BIOL 3341* or *BIOL 4351*.

BIOL 5739 - Biology of Aging

Credit Hours: 3 **Lecture:** 3
The course will survey the molecular and cellular processes that occur during aging. The various hallmarks of aging and conserved genetic and environmental interventions that can influence lifespan.

BIOL 5915 - Cooperative Education Work Term

Credit Hours: 1 **Lecture:** 1 **Lab:** 0

Fee Type: Co-op
Fee ($): 100
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.
Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education.*

BIOL 5919 - Independent Study in Biological Science

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 60
Prerequisites: *Approval of instructor, chair and associate dean*.

BIOL 5929 - Independent Study in Biological Science

Credit Hours: 2 **Lecture:** 2 **Lab:** 0
Fee Type: Special
Fee ($): 90
Prerequisites: *Approval of instructor, chair and associate dean*.

BIOL 5931 - Research Topics in Biology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.

BIOL 5939 - Independent Study in Biological Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 120
Prerequisites: *Approval of instructor, chair and associate dean*.

BIOL 6838 - Research Project and Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *24 hours completed in approved graduate program*.

BIOL 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 130
Prerequisites: *Approval of adviser, master's committee, and dean*.

BIOL 6969 - Master's Thesis Research

Credit Hours: 6 **Lecture:** 6 **Lab:** 0
Prerequisites: Approval of adviser, master's committee, and dean

Biotechnology

BIOT 5011 - Methods of Biotechnology Discussions

Credit Hours: 1 **Lecture:** 2
Lectures for Methods of Biotechnology Laboratory, discussion of laboratory protocols and techniques.

BIOT 5021 - Methods of Biotechnology

Credit Hours: 2 **Lecture:** 0 **Lab:** 4
Fee Type: Teaching
Fee ($): 130
Required for all students entering the Biotechnology program. Designed to provide training in laboratory skills and analysis. Students will be trained in basic laboratory skills associated with biochemistry, molecular cell biology, prokaryotic, eukaryotic cell culture, microscopy, data analysis, etc.

BIOT 5031 - Applied Biotechnology

Credit Hours: 3 **Lecture:** 3
Focus on how recombinant DNA technology can be used to create various useful products, e.g., recombinant proteins, therapeutics, vaccines and antibiotics, using experimental results and actual methodological strategies to illustrate basic concepts. In addition, the basics and manipulation of gene expression in various host systems with the latest advancements will be discussed in detail. The course is designed for students with backgrounds in biochemistry, molecular genetics or microbiology.
Prerequisites: *BIOL 4351*.

BIOT 5111 - Advanced Methods of Biotechnology I Discussions

Credit Hours: 1 **Lecture:** 2 **Lab:** 0
Lectures for Methods of Biotechnology Laboratory, discussion of laboratory protocols and techniques.
Prerequisites: *BIOT 5021, BIOT 5011*

BIOT 5112 - Advanced Methods of Biotechnology II Discussions

Credit Hours: 1 **Lecture:** 2 **Lab:** 0
Lectures for Methods of Biotechnology Laboratory, discussion of laboratory protocols and techniques.
Prerequisites: *BIOT 5021*, *BIOT 5011*

BIOT 5121 - Advanced Methods of Biotechnology I

Credit Hours: 2 **Lecture:** 2 **Lab:** 0
Fee Type: Teaching
Fee ($): 150
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, fluorescence microscopy, etc.
Prerequisites: *BIOT 5021, BIOT 5011*
Corequisites: *BIOT 5111*

BIOT 5122 - Advanced Methods of Biotechnology II

Credit Hours: 2 **Lecture:** 0 **Lab:** 4
Fee Type: Teaching
Fee ($): 150
Will focus on describing latest techniques of molecular biology and proteomics, including chromatographic separations of proteins, His-tagged

protein an Ni-column purification, design and analysis of dual expression plasmids, RTPCR, 2-D gel electrophoresis, and mass spectrometry analysis of proteins, yeast two-hybrid assay.
Prerequisites: *BIOT 5021*

BIOT 5231 - Advanced Mammalian Tissue Culture

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 130
Advanced training in the culture of mammalian cells. Students will perform laboratories in co-immunoprecipitation assays, western blots, mammalian two-hybrid assays, etc.
Prerequisites: *BIOL 4355 or Mammalian Tissue Culture experience*.

BIOT 5235 - Bacterial Taxonomy and Biotechnology Laboratory

Credit Hours: 3 **Lecture:** 2 **Lab:** 2
Fee Type: Teaching
Fee ($): 150
This is an advanced laboratory intensive course that will emphasize methods on the isolation of quality bacterial DNA, PCR amplification, cloning and transformation, restriction fragment length polymorphism (RFLP) analysis, degrading gradient gel electrophoresis (DGGE), big dye sequencing and bioinformatics data analysis. Graduate level data reporting, analysis and laboratory reports will be required.
Prerequisites: BIOT 5011 *and BIOT 5021*.

BIOT 5331 - Stem Cell Biotechnology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed to provide students with a thorough introduction to the current knowledge in stem cell biology. Current state of embryonic and adult stem cells research, disease treatment and the future research trends. Students will generate a NIH based mini-based proposal that stimulates their ability to make a hypothesis and generate specific aims that address this hypothesis. Students will learn how to evaluate a journal paper in stem biology and discuss the pros and cons of that paper.

BIOT 5431 - Genomic Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 75
Students will acquire a knowledge of genomic structure and methods to perform analysis of genetic variation in different organisms. Sub-topics will include marker development that includes AFLP, RFLP, RAPD, SSCP and CAPS. Students will learn how these types of markers are used to genotype different organisms. Assignments will include lectures, laboratory marker analysis, research proposal and oral presentation.
Prerequisites: *BIOL 4341, Molecular Biology, or Genetics.*

BIOT 5433 - Marine Biotechnology Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Students will focus on acquiring

scientific literacy skills on the topic of marine biotechnology. Sub-topics will include marine natural products, seafood forensics, biofuels, biomaterials, biosensors and aquaculture. Assignments will include journal clubs, laboratory demonstrations, research proposal and oral presentation.

BIOT 5438 - Transgenesis: Mammalian Genome Editing

Credit Hours: 3
This course will provide a comprehensive overview and current status of mammalian genome engineering, using the mouse as the primary model system, with discussions that also encompass genetic modification of large animals, fish and crops for commercial and retail applications. Students will learn the distinction between global and conditional knockouts, transgenics, reporters and lineage-tracers; the various applications of each type of genetic manipulation; and the techniques used for their generation such as embryonic stem cell manipulation, pronuclear microinjection and the more recent use of CRISPR/Cas9 technology for site-directed mutagenesis, deletion or DNA insertion. The course will also focus on systematic evaluation of new genetically modified model organisms, with particular attention to such topics as experimental design, validation of models and identification of novel phenotypes. Research techniques such as histology, immunohistochemistry, and intravital microscopy will also be discussed.

BIOT 5530 - Research Methods in Biotechnology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 5535 - Environmental Biotechnology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 90
This course introduces the variety of biotechnology used to improve our environment. Topics include biological wastewater treatment processes, biological stoichiometry, nutrients control, composting processes, biological energy production, biodegradation and phytoremediation of toxic pollutants. The primary focus will be on biological degradation of organic compounds. Emerging technologies will be also discussed.

BIOT 5733 - Bioinformatics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of the tools and sequence databases for genomic and transcriptomic data.
Prerequisites: *BIOL 4351 or equivalent*.

BIOT 5736 - Bioethics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of complex situations in biology, biotechnology and medicine that require moral reflection, judgment or

decisions.
Prerequisites: *General Biology*.

BIOT 5833 - Proteomics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 45
Analysis of gene function of mRNA expression profiling with cDNA arrays, protein interactions by genome-side two hybrid screening and more direct analysis of protein expression, sequence and structure.
Prerequisites: *Molecular Biology*.

BIOT 5915 - Cooperative Education Work Term

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Co-op
Fee ($): 100
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.
Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education.*

BIOT 5919 - Independent Study in Biotechnology

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Practicum
Fee ($): 80
Prerequisites: *Approval of instructor, chair and associate dean*.

BIOT 5921 - Laboratory Topics in Biotechnology

Credit Hours: 2 **Lecture:** 1 **Lab:** 2
Fee Type: Teaching
Fee ($): 150
Identified by specific title each time laboratory is offered.

BIOT 5929 - Independent Study in Biotechnology

Credit Hours: 2 **Lecture:** 2 **Lab:** 0
Fee Type: Practicum
Fee ($): 110
Prerequisites: *Approval of instructor, chair and associate dean*.

BIOT 5931 - Research Topics in Biotechnology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 45
Identified by specific title each time course is offered.

BIOT 5933 - Laboratory Topics in Biotechnology

Credit Hours: 3 **Lecture:** 2 **Lab:** 2
Fee Type: Special
Fee ($): 130
Identified by specific title each time laboratory is offered.

BIOT 5939 - Independent Study in Biotechnology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 150
Prerequisites: *Approval of instructor, chair and associate dean.*

BIOT 6011 - Biotechnology Practicum

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Practical experience at an off-campus facility such as a biotechnology company or research lab. Requires pre-acceptance interview and offer letter from employer, minimum of 10, 20 or 30 hours per week and instructor approval.

BIOT 6021 - Biotechnology Practicum

Credit Hours: 2 **Lecture:** 2 **Lab:** 0
Practical experience at an off-campus facility such as a biotechnology company or research lab. Requires pre-acceptance interview and offer letter from employer, minimum of 10, 20 or 30 hours per week and instructor approval.

BIOT 6031 - Biotechnology Practicum

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Practical experience at an off-campus facility such as a biotechnology company or research lab. Requires pre-acceptance interview and offer letter from employer, minimum of 10, 20 or 30 hours per week and instructor approval.

BIOT 6838 - Research Project and Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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
Prerequisites: *24 hours completed in approved graduate program*.

BIOT 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 150
Prerequisites: Approval of adviser, master's committee and dean

BIOT 6969 - Master's Thesis Research

Credit Hours: 6 **Lecture:** 6 **Lab:** 0
Fee Type: Practicum
Fee ($): 150
Prerequisites: *Approval of adviser, master's committee and dean*.

CSCI 2305 - Data Structures for Science and Engineering

Credit Hours: 3 **Lecture:** yes

Behavioral Sciences

BSCI 5931 - Research Topics in Behavioral Sciences

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered. Topics vary may be repeated for credit with permission of instructor.

BSCI 5939 - Independent Study in Behavioral Sciences

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Permission of instructor required.

BSCI 6739 - Graduate Internship

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Internship as a capstone experience for graduate students.
Prerequisites: 24 hours of graduate-level coursework and approval of internship coordinator. Students seeking an internship must have completed PSYC 5135 and if in a Human Services internship, must have completed PSYC 5134. Arrangements for internships should be completed by the beginning of the prior semester.

BSCI 6839 - Master's Project Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Capstone project for Behavioral Science students. Approval of adviser, project director, and department chair required.

BSCI 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Capstone thesis for Behavioral Science students. Approval of adviser, thesis director, and department chair required.

Computer Engineering

CENG 2112 - Laboratory for Digital Circuits

Credit Hours: 1 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Laboratory experiments using digital logic and small-scale integrated circuits.
Corequisites: *CENG 2312*

CENG 2312 - Digital Circuits

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Applications of point set theory and boolean algebra to the analysis and design of asynchronous and synchronous digital circuits.
Prerequisites: *MATH 2414, PHYS 2326, PHYS 2126*
Corequisites: *CENG 2112*

CENG 2371 - Microcontroller Programming

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Microcontroller, assembly language programming and embedded system applications.
Prerequisites: *CSCI 1320 or equivalent*.

CENG 3151 - Laboratory for Computer Architecture

Credit Hours: 1 **Lecture:** 0 **Lab:** 3
Fee Type: Special
Fee ($): 40
Laboratory experiments for Computer Architecture Design and Interfacing.
Prerequisites: *CENG 2312, CENG 2112*
Corequisites: *CENG 3351*

CENG 3316 - Electronics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course is a study of the physical behavior of electronic devices. Emphasis is on analysis and application of electronic circuits utilizing semiconductor diodes, operational amplifiers, BJT and FET transistors. EDA tools are used to

reinforce the theory through electronic analysis simulations.
Prerequisites: *CENG 3313*
Corequisites: *CENG 3116*

CENG 3351 - Computer Architecture

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Course involves control logic, addressing, registers, instructions, memory units, arithmetic elements, interrupts and input-output structures.
Prerequisites: *CENG 2371 or CSCI 2331*.
Corequisites: *CENG 3151*

CENG 4313 - Microprocessor Interfacing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Techniques for interfacing microcomputers to peripherals, memory and other devices.
Prerequisites: *CENG 3351, CENG 2371*
Corequisites: *CENG 4113*

CENG 4331 - Analysis and Design of Linear Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Continuous and discrete time systems. Fourier, Laplace and z-transforms and transfer functions. Introduction to digital signal processing and digital filter design using conventional and convolutional techniques, applications from communications, and control theory. Computer solutions using MATLAB.
Prerequisites: *CENG 3313 and CENG 3316*

CENG 4354 - Digital System Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Combinational and sequential circuit design of digital systems using a hardware description language. Laboratory instruction.
Prerequisites: CENG 2312 *or equivalent*.

CENG 5131 - Engineering Applications

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Study of modern engineering techniques emphasizing mathematical methods currently used in industry. The MATLAB software package will be used for problem-solving.
Prerequisites: *CENG 4331 or equivalent*.

CENG 5133 - Computer Architecture Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Study of combinational and sequential digital circuit design techniques, digital building blocks, software and hardware aspects of computer architecture and memory systems.
Prerequisites: *CENG 2312 or equivalent.*

CENG 5331 - Theory of Information and Coding

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Fee Type: Special
Fee ($): 40
Shannon's theory of information and coding applied to discrete communications channels; theory of finite fields applied to error detection and correction codes.

Prerequisites: *Background in digital logic, statistics, and linear systems analysis*.

CENG 5332 - Wireless Communications and Networks

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Fee Type: Special
Fee ($): 40
Wireless digital communication/network fundamentals, design approaches, system architectures, applications, performance assessment and security for radio frequency communication technologies.

Prerequisites: *CENG 4311 or equivalent*.

CENG 5334 - Fault Tolerant Computing

Credit Hours: 3 **Lecture:** 3

Fee Type: Special
Fee ($): 40
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 techniques.
Prerequisites: *Background in probability, computer hardware and computer software.*

CENG 5335 - Digital Systems Testing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Digital system fault modeling and diagnosis; test synthesis, design for test, functional testing, built-in self-test; discussions of real-world practical applications, cost-effective techniques and industry standards.
Prerequisites: *CENG 4354 or equivalent.*

CENG 5336 - Functional Verification of Digital Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
The course discusses the concepts and practice of functional verification of digital systems using a hardware description language. Topics covered include behavioral models, checker implementation, testbench generation report generation, and functional coverage.
Prerequisites: *CENG 4354 and CENG 3351 or their equivalents*.

CENG 5337 - Low-Power System Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Design of low-power digital circuits, processors and systems; analysis of real-world low-power RISC processors; discussion of next-generation power management and energy generation techniques.
Prerequisites: *CENG 3351 or equivalent*.

CENG 5338 - VLSI Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
The course trains students to design and analyze digital circuits incorporating into a VLSI chip. Students study design concepts and constraints such as functionality, performance, power, area and cost; students work in small groups to bring design components together into a full custom chip.
Prerequisites: *CENG 3351, CENG 4354, CENG 3316, or their equivalents*.

CENG 5431 - Digital Signal Processing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Sampling, Fourier analysis, FFTs, and digital filtering. Laboratory instruction.
Prerequisites: *CENG 5131 or equivalent*.

CENG 5432 - Digital Control Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Analysis and synthesis of digital control systems and a comparison of continuous and discrete control systems. Laboratory instructions.
Prerequisites: *CENG 5131 or equivalent.*

CENG 5433 - Principles of Digital Communications Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
The course covers information theory, data compression, scalar and vector quantization, sampling, channel coding, modeling and system design for wireless communication.
Prerequisites: *CENG 4331 and STAT 3334 or equivalent*.

CENG 5434 - Microcomputer Systems Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
System design and use of the latest microcomputers, microcontrollers, specialty controller chips and single-board computers as used in modern computer systems and products. A project assignment allows students to explore designs in their areas of interest.
Prerequisites: *CENG 3351 and CENG 2371*.

CENG 5435 - Robotics and ROS

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
This class will teach the most modern techniques for design of robotic applications using the Robot Operating System (ROS) with examples such as Baxter, a two-arm manipulator robot and Turtle Bot the mobile robot. Students will have hands-on experience with a number or robots and their simulators.

CENG 5436 - Computer Vision and Applications

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
This course provides an introduction to computer vision including fundamentals of image formation, camera imaging geometry, feature detection and matching, multi-view geometry including stereo, motion estimation, and tracking and classification. Basic methods are developed that include finding known models in images, depth recovery from stereo, camera calibration, image stabilization, automated alignment, tracking and action recognition. Problem sets and projects include robotic applications.
Prerequisites: *CENG 5131*.

CENG 5437 - Mobile Robots

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
The course presents a study of techniques applied to the design and application of mobile robots. The purpose is to introduce the students to the use of robots and the techniques necessary to design and develop or specify hardware and software for applications. Students will have hands-on experience with several examples of mobile robots including flying robots.

CENG 5531 - Machine Learning and Applications

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Fundamentals of machine learning and pattern recognition. Topics covered include neural networks, Bayesian inference and non-parametric techniques.
Prerequisites: *STAT 3334*.

CENG 5532 - Tele-Medicine

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
This course focuses on the transmission of medical data over wireless networks and addresses different techniques to process medical data. The course introduces various topics such as medical informatics, electronic health records, personal health record, healthcare information system that need to be considered for supporting healthcare services with current technology.
Prerequisites: *CENG 5131*.
Knowledge of wireless communications and signal processing.

CENG 5533 - Quantum Computing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Quantum computing, theory and annealing techniques for complex problem-solving and optimization.
Prerequisites: *CENG 3351, MATH 2305, MATH 2315, MATH 2318, and STAT 3334*.

CENG 5534 - Advanced Digital System Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Behavioral and structural design methods and examples using hardware description languages, including control, arithmetic, bus systems, memory systems and logic synthesis from hardware descriptions.
Prerequisites: *CENG 5133*.

CENG 5535 - Wireless Sensor Networks

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
The course discusses the theory and practice of today's wireless sensor networks and systems that consist of many tiny, low-power devices with sensing, computing and wireless communication capabilities. The course covers sensor hardware, WSN operating system, wireless communication, networking protocols, WSN security and intelligent algorithms.
Prerequisites: *CENG 3331 or equivalent*.

CENG 5536 - Applications of Parallel Computing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Efficient and productive parallel programming techniques for parallel multicore and cluster computers.
Prerequisites: *CENG 3351 and MATH 2318*.

CENG 5537 - Scalable Many-Core Computing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Algorithm/modeling techniques and computational thinking skills (using OpenCL/CUDA/OpenMP4.x/OpenACC) for scalable, many-core/many-thread processor accelerator (MIC/GPU/DSP/FPGA) programming.
Prerequisites: *CENG 3351 and MATH 2318*.

CENG 5631 - Digital Image Processing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
This course introduces the fundamental of digital images and emphasizes general principles of image processing. The course covers image acquisition, image sampling and quantization, intensity transformations and spatial filtering, filtering in the frequency domain, image restoration and reconstruction, color image processing, wavelet, and multiresolution processing, image compression, morphological image

processing, segmentation, image representation, and object recognition.
Prerequisites: *Knowledge of probability, linear algebra, and linear systems*.

CENG 5634 - Artificial Neural Networks

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Artificial neural network (ANN) models and computing techniques, emphasizing on rationale, theory, modeling, analysis, methodology, evaluation, capabilities, limitations and applications of ANN.
Prerequisites: *CENG 3351, MATH 2318, MATH 2305 and STAT 3334.*

CENG 5719 - Internship in Computer Engineering

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 20
Supervised work experience in an approved industrial firm or government agency. Written and oral report required.
Prerequisites: *Approval by adviser and associate dean*.

CENG 5729 - Internship in Computer Engineering

Credit Hours: 2 **Lecture:** 2 **Lab:** 0
Fee Type: Special
Fee ($): 30
Supervised work experience in an approved industrial firm or government agency. Written and oral report required.
Prerequisites: *Approval by adviser and associate dean*.

CENG 5739 - Internship in Computer Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Supervised work experience in an approved industrial firm or government agency. Written and oral report required.
Prerequisites: *Approval by adviser and associate dean*.

CENG 5915 - Cooperative Education Work Term

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Co-op
Fee ($): 100
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.)
Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education*.

CENG 5919 - Independent Study in Computer Engineering

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 20
Prerequisites: *Approval of instructor, chair and associate dean*.

CENG 5929 - Independent Study in Computer Engineering

Credit Hours: 2 **Lecture:** 2 **Lab:** 0
Fee Type: Special
Fee ($): 30
Prerequisites: *Approval of instructor, chair and associate dean*.

CENG 5931 - Research Topics in Computer Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Identified by specific title each time course is offered.

CENG 5939 - Independent Study in Computer Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Prerequisites: *Approval of instructor, chair and associate dean*.

CENG 6332 - High Performance Computer Architecture

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Processor microarchitecture, memory systems, and consistency, multiprocessor systems, interconnection networks, chip multiprocessors.
Prerequisites: *CENG 5133*

CENG 6431 - DSP Implementations

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Implementation techniques of digital signal processing applications, emphasizing digital signal processors.
Prerequisites: *CENG 5431*.

CENG 6432 - Bio-Medical Signal Processing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
This course covers fundamental concepts of biomedical signal processing. Various detection and estimation techniques and filtering are covered. Harmonic process, linear discrimination, linear mixtures, PCA, ICA and hidden markov model are emphasized.
Prerequisites: *CENG 5131 Knowledge of probability and signal processing*.

CENG 6532 - Parallel Processing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Integrated discussion of the software and hardware design issues involved in parallel processing. Laboratory instruction.
Prerequisites: *Background in computer architecture and programming*.

CENG 6533 - Robotics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Topics of current interest in robotics applied to the study of mechanical systems for robots, robotics control and sensors for robotics. Laboratory instruction.

CENG 6534 - Digital Systems Synthesis and Optimization

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 40
Digital circuits and models; scheduling algorithms, resource sharing and binding; logic level synthesis and optimization; discussions of latest trends in digital systems using recent research findings.
Prerequisites: *CENG 4354 or equivalent.*

CENG 6535 - Bio-Inspired Computing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Novel problem solving and optimization research projects that require integrating nature, bio-inspired computing knowledge to design, adapt and implement solutions for complex real-life problems.
Prerequisites: *CENG 3351, MATH 2318, MATH 2305 and STAT 3334.*

CENG 6838 - Research Project and Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *24 hours completed in graduate program*.

CENG 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Prerequisites: *Approval of adviser, master's committee, and dean*.

Chemistry

CHEM 1111 - Laboratory for General Chemistry I

Credit Hours: 1 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 90
Basic laboratory experiments supporting theoretical principles presented in CHEM 1311; introduction of the scientific method, experimental design, data collection and analysis and preparation of laboratory reports. Credit may not be received for both CHEM 1105 and CHEM 1111.
Corequisites: *CHEM 1311*.

CHEM 1112 - Laboratory for General Chemistry II

Credit Hours: 1 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 90
Basic laboratory experiments supporting theoretical principles presented in CHEM 1312; introduction

of the scientific method, experimental design, chemical instrumentation, data collection and analysis and preparation of laboratory reports.
Corequisites: *CHEM 1312*

CHEM 1311 - General Chemistry I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fundamental principles of chemistry for majors in sciences, health sciences and engineering; topics include inorganic, organic, biochemistry, chemical reactions, states of matter and properties, chemical bonding, structure and descriptive chemistry.

CHEM 1312 - General Chemistry II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Chemical equilibrium; phase diagrams and spectrometry; acid-base concepts; thermodynamics; kinetics; electrochemistry; nuclear chemistry; an introduction to organic chemistry and descriptive inorganic chemistry.
Prerequisites: *CHEM 1311*

CHEM 2123 - Laboratory for Organic Chemistry I

Credit Hours: 1 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 120
Basic techniques and procedures in isolation, purification and characterization of organic compounds and simple reactions used in the organic chemistry lab.
Prerequisites: *CHEM 1311*, *CHEM 1312*.

CHEM 2125 - Laboratory for Organic Chemistry II

Credit Hours: 1 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 120
Extension of CHEM 2123; building from basic procedures and lab techniques to a more advanced level.
Prerequisites: *CHEM 1311*, *CHEM 2123*

CHEM 2323 - Organic Chemistry I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of properties and behavior of hydrocarbon compounds and their derivatives. Designed for students in science or pre-professional programs.
Prerequisites: *CHEM 1311*, *CHEM 1312*

CHEM 2325 - Organic Chemistry II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Continuation of properties and behavior of hydrocarbon compounds and their derivatives. Designed for students in science or pre-professional programs.
Prerequisites: *CHEM 1311*, *CHEM 2323*

CHEM 4115 - Chemistry Practicum

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Practical training in teaching an undergraduate chemistry lab, assisting a teaching assistant. Requires pre-acceptance interview, minimum of 6

hours of work per week, and approval of instructor.

CHEM 4251 - Laboratory for Environmental Analysis

Credit Hours: 2 **Lecture:** 1 **Lab:** 3
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.
Prerequisites: *CHEM 3333 or corequisite*

CHEM 4356 - Soil & Groundwater Remediation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Chemical, biological, geological principles and applications of various remediation techniques commonly used to clean up contaminated soils and groundwater.
Prerequisites: *CHEM 3333.*

CHEM 4363 - Forensic Chemistry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Provides students training in drug chemistry, chemistry of addiction, arson investigation, chemistry of explosives, poisons, estimating the time of death.
Prerequisites: *CHEM 1311, CHEM 1312, or equivalent*.

CHEM 5130 - Mathematical Methods and Physical Concepts in Chemistry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prepares chemistry graduate students for math and physics concepts they will encounter in graduate physical chemistry courses.
Prerequisites: CHEM4321 & CHEM4322 or equivalent, or instructor's permission

CHEM 5132 - Principles of Chemical Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will provide students with a clear overview of the field of chemical engineering in which chemical engineers and chemists work cooperatively to bring laboratory discoveries into new products and technologies in various industries such as petroleum refining and petrochemical production, plastics, synthetic fibers and textiles, and pharmaceuticals etc.

CHEM 5133 - Spectroscopic Identification of Organic Compounds

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Theory and practice of structure determination using IR, UV-VIS, NMR and MS techniques.
Prerequisites: CHEM2325, or equivalent.

CHEM 5134 - Synthetic Organic Chemistry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Modern synthetic methods used in organic chemical synthesis. A mechanistic approach is used.
Prerequisites: CHEM2325, or equivalent

CHEM 5235 - Kinetics and Thermodynamics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Studies of modern chemical kinetics and reaction dynamics.
Prerequisites: CHEM4321, CHEM4322 or equivalent

CHEM 5332 - Advanced Instrumental Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Advanced discussion of instrumental analytical techniques, such as optical (UV-Vis, fluorescence, circular dichroism, IR, Raman) spectroscopy, chromatography (GC, HPLC), mass spectrometry and materials characterization techniques.
Prerequisites: *CHEM 4367 or instructor's consent*.

CHEM 5335 - Advanced Inorganic Chemistry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The comprehensive study of the theory and properties of compounds containing the main groups of elements in the periodic table.
Prerequisites: *CHEM 4335 or equivalent*.

CHEM 5336 - Organometallic Chemistry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *CHEM 2323*, *CHEM 2325*.

CHEM 5337 - Physical Organic Chemistry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Advanced study of the relationships between structure and reactivity of mechanisms operating during organic chemical transformations.
Prerequisites: CHEM2325, or equivalent

CHEM 5431 - Contaminant Fate and Transport

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *CHEM 3333 or equivalent*.

CHEM 5535 - Sampling and Analysis of Environmental Contaminants

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *STAT 3308*.

CHEM 5536 - Environmental Remediation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Soil and groundwater pollutant sources, types, migration; chemical and hydrogeological site characterization; chemical/biological/thermal technologies (pump-and-treat, vapor extraction, bioremediation and incineration) for the remediation of contaminated sites such as Superfund sites, landfills, brownfields, leaking storage tanks and oil spills.
Prerequisites: *CHEM 3333 or equivalent*.

CHEM 5631 - Environmental Chemodynamics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 the movement of chemicals in the air, water, sediment and soil; information vital to performing human and ecological risk assessments.
Prerequisites: *CHEM 3333*.

CHEM 5633 - Astrobiochemistry I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Origin of the universe, the chemical elements, Earth and life, including pre-biotic chemistry. The nature of the first replicators, the origin of the genetic code and the origin of biomolecular chirality.
Prerequisites: CHEM1312 and PHYS1302 or PHYS2326

CHEM 5634 - Astrobiochemistry II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The search for life in the universe, including the chemistry of habitable planets, chemical signatures of life on other planets in the solar system and beyond and the search for extra-terrestrial intelligence.
Prerequisites: CHEM 1312 and PHYS 1302 or PHYS 2326.

CHEM 5635 - Advanced Polymer Chemistry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Introduction to the chemistry, structure and properties of polymers.
Prerequisites: *CHEM 2323*, *CHEM 2325*.

CHEM 5636 - Advanced Analytical Chemistry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Advanced discussion of instrumental analytical techniques, such as optical (UV-Vis, fluorescence, circular dichroism, IR, Raman) spectroscopy, chromatography (GC, HPLC), mass-spectrometry and materials characterization techniques.
Prerequisites: *CHEM 4367 or approval of instructor*.

CHEM 5637 - Modern Spectroscopy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Theory and application of spectroscopy

including modern laser techniques.
Prerequisites: CHEM2325, CHEM4322 or instructor's approval

CHEM 5638 - Total Synthesis of Natural Products

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
A mechanistic-based approach to the total synthesis of organic natural products.
Prerequisites: *Approval of instructor*.

CHEM 5639 - Symmetry in Chemistry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Applications of group theory in physical, inorganic and organic chemistry.
Prerequisites: *CHEM 2323, CHEM 2325; CHEM 4321, CHEM 4322, CHEM 4335, and CHEM 5130 or approval of instructor*.

CHEM 5731 - Environmental Organic Chemistry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examine fundamental molecular processes of environmental organic contaminants in natural and engineered systems. Topics include equilibrium partitioning (air-water-soil-biota), sorption to soils and sediments and transformation processes (oxidation, reduction, hydrolysis, photolysis, biodegradation).
Prerequisites: *CHEM 3333, CHEM 3320.*

CHEM 5739 - Internship in Chemistry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Supervised work experience in an approved industrial firm or government agency. Written and oral report required.
Prerequisites: *Approval by adviser and associate dean.*

CHEM 5915 - Cooperative Education Work Term

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Co-op
Fee ($): 100
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.)
Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education*.

CHEM 5919 - Independent Study in Chemistry

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 60
Prerequisites: *Approval of instructor, chair and associate dean required*.

CHEM 5931 - Research Topics in Chemistry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 120
Identified by specific title each time course is offered.

CHEM 5939 - Independent Study in Chemistry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 120
Prerequisites: Approval of instructor, chair and associate dean required

CHEM 6731 - Graduate Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Advanced seminar undertaking an in-depth perusal of a chemical topic and a research proposal and formal presentation shall be completed.

CHEM 6837 - Research Project and Seminar I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Hands-on research in the field of chemistry. A written report and presentation will be required.
Prerequisites: *Admission to graduate program in chemistry*.

CHEM 6838 - Research Project and Seminar II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Hands-on research in the field of chemistry. A written report and presentation will be required.
Prerequisites: *CHEM 6837 and written agreement between the student and supervisor*.

CHEM 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *CHEM 6838 and approval of faculty adviser, master's committee and dean*.

Computer Information Systems

CINF 3331 - Business Data Communications

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Introduction to business data communications. WANs, LANs, and internet concepts. A survey of data communications with an emphasis on the impact of digital technology on the operation, management and economics of computer information systems.
Prerequisites: *Junior or Senior standing*.

CINF 4324 - Modern System Analysis and Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Key concepts and principles of system analysis and design within the context of information system development. Emphasis on the application of tools and techniques along with the role and responsibilities of the systems analyst as well as the systems project manager.
Prerequisites: *CINF 3321*.

CINF 5231 - Strategic Information Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special

Fee ($): 45
Key concepts, theories and frameworks in strategic utilization of information systems solutions to help businesses compete in the global economy. Focus on the organizational, social, ethical and legal issues associated with information technologies.

CINF 5234 - Advanced Systems Analysis and Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 45
Key concepts and principles of advanced systems analysis and design. Techniques, methods and tools of the systems analysis and design. Current issues of modern systems analysis and design in business areas.

CINF 5432 - Data Warehousing and Business Intelligence

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
This course focuses on giving students a broad overview of managerial, strategic and technical issues associated with data warehousing and business intelligence. Topics will cover data warehouse design, implementation and utilization, including the principles of dimensional data modeling, techniques for ETL, data staging and quality, data warehouse architecture and infrastructure and the various methods for information delivery. The course will also introduce students to the development and use of business intelligence solutions that provide useful information to organization decision makers.
Prerequisites: *CSCI 4333 or equivalent*.

CINF 5915 - Cooperative Education Work Term

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Co-op
Fee ($): 100
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.)
Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education*.

CINF 5919 - Independent Study in Computer Information Systems

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Prerequisites: *Approval of instructor, division chair and associate dean*.

CINF 5929 - Independent Study in Computer Information Systems

Credit Hours: 2 **Lecture:** 2 **Lab:** 0
Prerequisites: *Approval of instructor, division chair and associate dean*.

CINF 5931 - Research Topics in Computer Information Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Identified by specific title each time course is offered.

CINF 5939 - Independent Study in Computer Information Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of instructor, division chair and associate dean.*

CINF 6838 - Research Project and Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Attendance at the orientation meeting on the first day of class is 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.
Prerequisites: *24 hours completed in graduate program*.

CINF 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of faculty adviser, master's committee, and dean*.

Communication

COMM 4322 - Public Relations Writing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Professional approach to crafting messages that build mutually beneficial relationships between organizations and their constituents. Includes press releases, public service announcements, newsletters, brochures, speeches and social media.
Prerequisites: *COMM 3320 and COMM 3321 or equivalent*.

COMM 4354 - Video Production I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Fee Type: Special
Fee ($): 65
This course is an introduction to the basics of video production, including camera work, capturing video and sound using DSLR and traditional video cameras, working with lights, fundamental storytelling and interview skills, as well as basic non-linear editing skills using either Premiere Pro or Final Cut X. A portion of the course, will also be dedicated to the basics of studio-based video production. **Cross-listed:** DMST 5534.

COMM 4355 - Video Production 2

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
This class requires basic video production skills. The students will hone their production skills and work towards a worthwhile video portfolio. The class will partly be taught in a production studio, giving ample opportunity to work on studio-based video projects. **Cross-listed:** DMST 5535

COMM 4391 - Selected Topics in Communication

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 60
Identified by a specific title each time course is offered. Topics vary may be repeated for credit with permission of instructor.

Counseling

COUN 5010 - Professional Preparation Seminar

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 15
This course is designed to assist students in the school counselor certification program to understand the state certification standards for successful entry into their chosen educational fields. Completion of this course is dependent upon candidates passing all state assessments required for their degree/certification plans.
Prerequisites: Admission to the Counseling program.

COUN 5131 - Counseling for Lifespan Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course addresses topics of lifespan development within a cultural framework, including biological, neurological, physiological and environmental factors of human development; theories of learning and resilience; effects of addiction on lifespan; and differential interventions.
Prerequisites: Admission to the Counseling program.

COUN 5231 - Professional Orientation to Counseling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course includes an exploration of the history, philosophy, trends, education, licensure/certification and practice of clinical mental health counselor and school counselor including the impact of technology, clinical supervision, advocacy efforts and self-care on counseling; and other related professional issues.
Prerequisites: *Admission to the Counseling program*.

COUN 5234 - Career Development and Counseling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is a review of career development theories and strategies for ethically, culturally and developmentally appropriate career development and assessment throughout the lifespan.
Prerequisites: Admission to the Counseling program.

COUN 5334 - Counseling and Spirituality

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is an experiential and didactic investigation of the body of knowledge and practice that reflects fully the integrity, uniqueness and wholeness of a person. The content of the course is designed to foster the connection between the professional literature and the self as spiritual journeyer and clinician. The processes

of the course will facilitate integrating spiritual and clinical orientations.
Prerequisites: Admission to the Counseling program.

COUN 5335 - Stress and Wellness

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will explore the interaction of stress and environment on individual and group wellbeing using a multi-faceted model of stress that incorporates an understanding of the interplay of physiology, psychology, culture and environment in producing states of health and its counterpart: dis-ease.
Prerequisites: Admission to the Counseling program

COUN 5432 - Theories of Counseling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course pertains to current theories of counseling and their applications to practice.
Prerequisites: Admission to the Counseling program.

COUN 5433 - Counseling Ethics and Consultation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

This class covers ethical, legal and professional issues in counseling including consultation, peer intervention programs, court-referred clients, third party reimbursement and record keeping.
Prerequisites: Admission to the Counseling program.

COUN 5534 - Child and Adolescent Counseling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will include major theories and interventions in counseling children and adolescents in schools and community settings. Topics include expressive, behavioral and cognitive models of counseling for children and adolescents under regular and crisis conditions, parent and other significant adult involvement through consultation, and issues in multicultural counseling for this population.
Prerequisites: Admission to the Counseling Program.

COUN 5535 - Systems Counseling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will offer students in the counseling field the opportunity to study the various theoretical approaches to couples and family counseling. Satisfactory completion of this course will provide students with the fundamental understanding of the various issues and dynamics involved in working with families and extended family systems in the counseling environment. Cultural issues will be incorporated into the course as well.
Prerequisites: Admission to the Counseling program.

COUN 5536 - Addictions Counseling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course includes the neurobiological and medical foundation and etiology of addiction and co-

occurring disorders; addictions counseling including but not limited to gambling, sex, food, alcohol or drug; and basic concepts of terminology, models, ethical issues, substance classifications, effects and associated dangers, assessment, diagnosis and treatment planning with both adults and children.
Prerequisites: Admission to the Counseling program.

COUN 5630 - Abnormal Human Behavior

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will include principles of understanding dysfunction in human behavior and social disorganization.
Prerequisites: Admission to the Counseling Program.

COUN 5931 - Topics in Counseling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.
Prerequisites: Admission to the Counseling program.

COUN 5939 - Independent Study in Counseling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: Approval of instructor and Associate Dean.

COUN 6030 - Multicultural Foundations for Counselors

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will review the social, cultural and legal issues related to counseling diverse populations in the United States.
Prerequisites: Admission to the Counseling program.

COUN 6032 - Statistics and Measurement for Counselors

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will examine both formal and informal procedures for collecting and analyzing data, principles of measurement and descriptive statistics.
Prerequisites: Admission to the Counseling program.

COUN 6033 - Research Design and Analysis for Counselors

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will enable the counselor to design, analyze and apply counseling research techniques, both qualitative and quantitative.
Prerequisites: Admission to the Counseling program.

COUN 6232 - Assessment Issues for Counselors

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 45
This course provides the historical perspective of assessment; basic statistical concepts of testing; culturally and ethically relevant assessment strategies for selecting, administering, and interpreting assessment, and report writing.
Prerequisites: Admission to the Counseling program.

COUN 6435 - Pre-Practicum in Counseling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This is a pre-practicum development of advanced counseling skills and case management documents in a supervised setting.
Prerequisites: Admission to the Counseling program.

COUN 6531 - Mental Health and Psychopathology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course covers the etiology, nomenclature, treatment, referral and prevention of mental and emotional disorders. This includes the diagnostic process and classifications from the Diagnostic and Statistical Manual of Mental Disorders (DSM) and the International Classification of Diseases (ICD), indications and contradictions of commonly prescribed psychopharmacological medications for appropriate medical referral and consultation.
Prerequisites: Admission to the Counseling program.

COUN 6532 - Group Counseling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines the basic principles of group dynamics, processes, theoretical applications, techniques and leadership skills in an experiential setting.
Prerequisites: Admission to the Counseling program.

COUN 6533 - Crisis Intervention

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the theory and methodology of crisis prevention and intervention, incident debriefing, violence prevention and development of crisis intervention teams.
Prerequisites: Admission to the Counseling program.

COUN 6534 - Developmental School Counseling Programs

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 35
This course 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.
Prerequisites: Admission to the Counseling program.

COUN 6537 - Bilingual Counseling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Students will gain an understanding of the psycho-social issues associated with counseling recent immigrants and first-generation Spanish-English bilingual clients and become prepared to counsel this population using their native language, Spanish. The course is taught in Spanish and English.
Prerequisites: Admission to the Counseling program.

COUN 6538 - Social Justice Counseling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed to provide candidates with theoretical and practical foundations for understanding the counselor-as-advocate role in social justice counseling, especially related to issues surrounding marginalized populations.
Prerequisites: Admission to the Counseling program.

COUN 6638 - CMHC Counseling Practicum I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is restricted to students with degree or certification plans in counseling. Students will counsel bona fide clients in a supervised setting. Application to the Counseling Program for field experience is required.
Prerequisites: Admission to the Counseling program.

COUN 6639 - SC Counseling Practicum I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
This course is restricted to students with degree or certification plans in counseling. Students will counsel bona fide clients in a supervised setting. Application to the Counseling Program for field experience is required.
Prerequisites: Admission to the Counseling program.

COUN 6738 - CMHC Practicum II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
This course is restricted to students with degree or certification plans in counseling. Practicum II is a field experience under supervision in an approved clinical counseling setting. Students are required to earn a minimum of 300 clock hours of supervised counseling experience in a role and setting with clients relevant to clinical mental health counseling, including 120 hours of direct service with clients and 180 hours of indirect service. Audio/video recordings and/or live supervision of students' interactions with clients are required.
Prerequisites: Admission to the Counseling program.

COUN 6739 - School Counseling Practicum II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
This course is restricted to students with degree or certification plans in counseling. It is a supervised internship in an approved counseling environment. Written and oral reports are required. Application to the counseling program for field experience is required.
Prerequisites: Admission to the counseling program.

COUN 6838 - CMHC Practicum III

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
Practicum Ill is an advanced field

experience under supervision in an approved clinical counseling setting. Students are required to earn a minimum of 300 clock hours of supervised counseling experience in a role and setting with clients relevant to clinical mental health counseling, including 120 hours of direct service with clients and 180 hours of indirect service. Audio/video recordings and/or live supervision of students' interactions with clients are required. **Prerequisites:** Admission to the Counseling program.

COUN 6839 - School Counseling Practicum III

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
This course is a continuation of COUN 6739. It is a supervised internship in an approved counseling environment. Written and oral reports are required. Restricted to students with degree or certification plans in counseling. Application to the counseling program for field experience is required. **Prerequisites:** Admission to the counseling program.

Cross-Cultural Studies

CRCL 5031 - Theories of Cultural Diversity

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 5033 - Religion and Community

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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. **Cross-listed:** SOCI5236

CRCL 5035 - Health and Human Rights

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examines methods, theories, debates and case studies related to human rights in the U.S. and globally; students will gain skills required to conduct future research on the topic.

CRCL 5037 - Theories and Practices of Mediation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Application of mediation techniques to the needs of community groups, churches, businesses and non-governmental agencies.

CRCL 5131 - Gender, Culture, and Power

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Exploration of the many ways gender is constructed cross-culturally. Examination of how different societies conceptualize genders and assign them social, economic and political significance. Analysis of the relationship between and among

gender and class, race, ethnicity and nationality.

CRCL 5132 - Women of Color

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of the experiences of women of color in the United States and globally using race, class and sexuality as analytical tools to explore these experiences.

CRCL 5232 - Cultures of Mexico and Central America

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Survey of anthropological approaches to societies of Mexico, Central America and the U.S.-Mexico border. Students will be exposed to methods, theories and case studies and will gain skills required to conduct future research on the topic.

CRCL 5330 - Cultural Study Abroad

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Students will be exposed to theories, methods and case studies of a foreign nation; students will conduct research on a specific topic. Topics vary course may be repeated with permission of instructor.

CRCL 5332 - Diversity in Urban America

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of classical theories of urban life and urban development; exploration of urban issues such as ethnic diversity, transportation and policy.

CRCL 5333 - Minorities and Majorities

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The pattern of interaction among race, ethnic and gender groups; personality and structural effects of prejudice and discrimination. Includes both U.S. and cross-cultural perspectives.

CRCL 5531 - Families, Communities, and Diversity

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of ideas of family, race, gender and relatedness in transnational and cross-cultural perspectives. Draws on case studies from anthropology and other fields.

CRCL 5533 - Community Health in Cross-Cultural Perspective

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Explores the history and status of community health as well as the cultural and social determinants of health in a cross-cultural perspective.

CRCL 5535 - Cultures of Asia

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Anthropological approaches to Asian societies

CRCL 5538 - Cultures of the Middle East

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Survey of anthropological and other approaches to understanding societies of the Middle East. Students will be exposed to methods, theories and case

studies and will gain skills required to conduct future research on the topic.

CRCL 5631 - Qualitative Research Methods

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of methods used in a variety of disciplines to study differences based on culture, race, ethnicity, gender, class and nationality.

CRCL 5732 - U.S. Social Movements

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 5733 - Program Seminar: Contemporary Issues in Cross-Cultural Studies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
In-depth exploration of a specific topic in Cross-Cultural Studies. Students will engage in research as part of the course. Topics vary may be repeated for credit with permission of instructor.

CRCL 5734 - Cross-Cultural Texts in Dialogue

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 the perspective of the colonized (e.g. Things Fall Apart, Midnight's Children, Lucy); includes postcolonial poetry and theory.

CRCL 5931 - Research Topics in Cross-Cultural Studies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered. Topics vary may be repeated for credit with permission of instructor.

CRCL 5939 - Independent Study in Cross-Cultural Studies

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Permission of instructor required.

CRCL 6739 - Graduate Internship

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Fee Type: Practicum
Fee ($): 50
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.
Prerequisites: *24 hours of graduate-level coursework and approval of internship coordinator*.

CRCL 6839 - Master's Project Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Approval of adviser, project

director and department chair required.

CRCL 6909 - Cross-Cultural Studies Comprehensive Exam

Credit Hours: 0 **Lecture:** 0 **Lab:** 0
Comprehensive exam for students following coursework option resulting in a research proposal or a written examination.
Prerequisites: *30 hours of coursework*.

CRCL 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Approval of adviser, thesis director and department chair required.

Criminology

CRIM 5036 - Criminological Research and Statistics I

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
Fee Type: Special
Fee ($): 30
Design, analysis and application of criminological research techniques and methods of measurement.

CRIM 5037 - Criminological Research and Statistics II

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
Fee Type: Special
Fee ($): 30
Further examination of procedures involved in designing and analyzing criminological research.
Prerequisites: *CRIM 5036*.

CRIM 5133 - Advanced Juvenile Delinquency

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
In-depth analysis of delinquency theories, issues and policies in the U.S. and abroad. Topics include measurement and research, serious violent offenders, gangs and treatment by justice agencies. **Cross-listed:** SOCI 5133.

CRIM 5135 - The Death Penalty

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
History and development of capital punishment as a criminal justice remedy. Focuses on processes and issues such as deterrence and discrimination as related to the execution of violent offenders. **Cross-listed:** SOCI 5135.

CRIM 5136 - Race and Crime

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 5138 - Homeland Security

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of events before, during and after September 11, 2001, in order to prepare for future manmade and natural catastrophic threats to homeland security.

CRIM 5139 - Correctional Institutions

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An advanced, theoretical examination of both prisons and jails as total institutions. Includes history of prisons, various philosophies of incarceration, organizational structure, institutional subcultures and problems encountered in the classification and supervision of incarcerated offenders.

CRIM 5331 - Advanced Criminology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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. **Cross-listed:** SOCI 5331.

CRIM 5335 - Criminal Justice and the Mass Media

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of collision between two powerful sets of social institutions: the criminal justice system and the mass media. **Cross-listed:** SOCI 5335.

CRIM 5336 - Law and Society

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Survey of problematic issues in contemporary American society from the perspectives of sociological, philosophical and legal theories. Course examines the controversial ways the U.S. political system seeks to reconcile individual liberties with collective obligations of the social contract. **Cross-listed:** SOCI 5336.

CRIM 5338 - Criminal Law

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of structure and rationale for criminal law; focus on criminal liability, criminal defenses and types of offenses. **Cross-listed:** CRIM4334, SOCI 4334, and SOCI 5338.

CRIM 5339 - Comparative Criminology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Comparative study of criminology and institutions of social control in selected Western and non-Western countries.

CRIM 5431 - Domestic Violence

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of historical and contextual foundations, theories of causation and victimization, legal and enforcement responsibility, and potential solutions to abuse and violence in domestic relationships.

CRIM 5432 - Culture of Law Enforcement

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Critical analysis of the culture of U.S. policing as it relates to the roles, functions and family.

CRIM 5433 - Serial Murder

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of the phenomenon of serial murder on national and international bases. Discussions include current and historical serial

killers and why they kill as well as case studies and their investigation.

CRIM 5531 - Victimology

Lecture: 3
This course is designed to provide a historical overview of the study of the victimization in addition to existing theories, specific types of victimization, and criminal justice/social service responses to crime victimization. Furthermore, this course will examine interagency collaboration efforts and policies to effectively respond to survivors of multiple forms of crime victims.

CRIM 5532 - Criminal Justice Leadership and Management

Lecture: 3
The Criminal Justice field operates in the private, government and non-profit sectors. Critical thinking skills and tools in leadership and management are necessary to prepare students move theory to practice in policing, courts, corrections and/or juvenile justice.

CRIM 5533 - Issues in Policing

Lecture: 3
Examination of critical issues in policing. Includes a review of contemporary research on current issues in policing, as well as police strategies and practices to prevent and address crime.

CRIM 5931 - Research Topics in Criminology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by a specific title each time course is offered. Topics vary may be repeated for credit with permission of instructor.

CRIM 5939 - Independent Study in Criminology

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Permission of instructor required.

CRIM 6734 - Future of Crime and Justice

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Behavioral perspective on possible and probable futures and their impact on U.S. society and the criminal justice system. Emphasis on socioeconomic and technological factors and trends currently shaping crime in America.

CRIM 6735 - Seminar in Criminology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fulfills coursework option requirement in graduate criminology. Students apply the substantive knowledge and research skills they have acquired to topic selected by instructor.
Prerequisites: CRIM 5036*, CRIM 5037, 24 hours of graduate-level coursework*.

CRIM 6739 - Graduate Internship

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Fee Type: Special
Fee ($): 50
Minimum of two days a week in approved internship setting. Written

report required. Arrangements for internship should be completed by beginning of prior semester.
Prerequisites: *24 hours of graduate-level coursework and approval of internship coordinator*.

CRIM 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Approval of adviser, thesis director and department chair required.

Computer Science

CSCI 1320 - C Programming

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.

CSCI 1370 - Software Development with Java

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Programming with an object-oriented programming language, Java. Uses iteration, selection, recursion, exception handling, data structures and file I/O. Introduction of Object-oriented programming concepts such as reuse, data abstraction, classes, inheritance, polymorphism, exception handling and UML to build robust code and enhance problem-solving methodology. May be used in the place of CS2.
Prerequisites: *CSCI 1320 or CSCI 1470*.

CSCI 1470 - Computer Science I

Credit Hours: 4 **Lecture:** 4 **Lab:** 0
Fee Type: Special
Fee ($): 50
Introduction to computer programming using python. Topics include design tools (flowcharts, pseudocode) control flow statements (if, while, for), simple arithmetic expressions, input and output statements, functions, data structures including strings and lists, text files. Introduction to software development lifecycle and testing. The course is programming-intensive with in-class assignments and weekly homework and a final project. Introduction to Arduino and number systems.

CSCI 1471 - Computer Science II

Credit Hours: 4 **Lecture:** 4 **Lab:** 0
Fee Type: Special
Fee ($): 50
Build upon basic programming concepts using Java constructs such as iteration, selection, recursion, exception handling, data structures and file I/O. Introduce object-oriented programming concepts including reuse principles, data abstraction, classes, inheritance,

polymorphism, exception handling and UML to build robust code and enhance problem-solving methodology.
Prerequisites: *CSCI 1320 or CSCI 1470 or ITEC 3312*

CSCI 2315 - Data Structures

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Advanced programming techniques and data structures including arrays, linked lists, queues, and stacks; abstract data types, recursion, searching and sorting, binary trees, hashing techniques, elementary algorithm design and analysis, and more.
Prerequisites: *(CSCI 1320 and CSCI 1370) or CSCI 1471*.

CSCI 2331 - Computer Organization & Assembly Language

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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 3303 - Fundamentals of Programming

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
This course will build on basic script programming knowledge. Topics will include problem-solving using built-in functions and lambdas; data structures such as lists, tuples, sets, and dictionaries; comprehensions and generators; visualization and processing data using databases and files including binary, text, and CSV files, etc. Students will work with Python. Laboratory instruction. Open to non-CS majors only.
Prerequisites: *ITEC 2313, CSCI 1470, or instructor approval*.

CSCI 3311 - Programming With Visual Basic

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Programming with Visual Basic with emphasis on object-oriented programming and the use of integrated development environments. Data types, control structures, functions and subroutines, files, classes, controls. Development using the .NET framework. Laboratory instruction. Open to non-majors only.

CSCI 3321 - Numerical Methods

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *MATH 2318, MATH 2320, CSCI 1471, or both CSCI 1320 and CSCI 1370*.

CSCI 3352 - Advanced Data Structures and Algorithms

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *CSCI 2315, MATH 2305, MATH 2414, PHYS 2325, and PHYS 2326*.

CSCI 4320 - Web Application Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Survey of languages, tools, and techniques for web application development, HTML, XHTML, CSS, JavaScript, dynamic HTML, server-side web development using .Net Framework withASP.NET and C#, Perl, CGI programming with Perl, XML. Laboratory instruction.
Prerequisites: *CSCI 2315*.

CSCI 4333 - Design of Database Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *CSCI 2315*.

CSCI 4354 - Operating Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: CSCI 2315*, CSCI 1331, MATH 2305, MATH 2414, PHYS 2325, and PHYS 2326 and senior standing.*
Corequisites: *CENG 3351*

CSCI 5037 - Topics in Computer Science for Non-Majors

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Identified by topics each time the course is offered. Not to be taken by majors in computing programs. Laboratory instruction.

CSCI 5130 - Human Computer Interface

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
This course provides students with the methods for creating and refining interfaces between humans and systems. The course explores new design methodologies, experimenting with new hardware devices, prototyping new software systems and defining new paradigms for interaction and developing models and theories of interaction.
Prerequisites: *Computer language proficiency, numerical methods, and probability; linear systems analysis recommended.*

CSCI 5131 - Simulation Techniques

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Modern software techniques in continuous and discrete model construction for industrial and scientific applications. Laboratory instruction.
Prerequisites: Computer language proficiency, numerical methods, and probability; linear systems analysis recommended

CSCI 5132 - Internet Protocols

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
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 on the internet.
Prerequisites: CSCI 1370 *or CSCI 1471 and CSCI 2315.*

CSCI 5134 - Concurrent Programming and Software Modeling

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Principles of issues related to concurrent programming and software modeling. Detailed study of Unix, Java, and .NET APIs for multiprocessing, multi-threading and synchronization. Introduction to Software Modeling using UML, analysis of requirements documents to produce UML models, and automatic code generation using IDE plug-ins or built-in tools. Other software development issues like unit testing and version control will also be explored. Laboratory instruction.
Prerequisites: *An OOP Language (C, Java, or C#).*

CSCI 5232 - Concepts of Programming Languages

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *CSCI 2315*.

CSCI 5233 - Computer Security and Cryptography

Credit Hours: 3 **Lecture:** 3
Fee Type: Special
Fee ($): 40
Introduction to encryption and decryption; security mechanisms in computer architectures, operating systems, databases, networks and introduction to security.
Prerequisites: *CSCI 2315*.

CSCI 5234 - Web Security

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
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.
Prerequisites: *CSCI 5233 and CSCI 4320 or instructor's approval.*

CSCI 5235 - Network Security

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
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.
Prerequisites: CSCI 5233 *or CSCI 4323 and CSCI 5132 or CSCI 4312*.

CSCI 5331 - Computer Graphics

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Interactive graphics techniques, three-dimensional graphics including 3-D projections, hidden line elimination and shading. Stereographic, Virtual Reality and Animation. Laboratory instruction.
Prerequisites: *CSCI 3352, CSCI 4350 or equivalent, linear algebra, and analytic geometry*.

CSCI 5333 - Database Management Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Database management systems (DBMS), relational DBMS, object-oriented DBMS, knowledge base management systems, database language, query optimization, security and integrity, concurrency control and recovery, design theory of databases. Laboratory instruction.
Prerequisites: *CSCI 4333*.

CSCI 5335 - Artificial Intelligence

Credit Hours: 3 **Lecture:** 3
Fee Type: Special
Fee ($): 40
Exploring the major concepts of artificial intelligence: foundations of artificial intelligence, intelligent agents, searching, constraint satisfaction, planning, knowledge representation, uncertain knowledge and reasoning, learning and understanding of artificial

intelligence programming languages. Students who receive credit for CSCI 4335 will not receive credit for this course.

CSCI 5336 - Machine Learning

Credit Hours: 3
Exploring advanced concepts of machine learning: elements of probability distribution and linear algebra, supervised and unsupervised learning, linear and nonlinear regression, classification, neural networks, support vector machines, sampling methods, K-Means clustering, Bayesian networks and reinforcement learning. Theory and applicability of each technique will be covered. Students who receive credit for CSCI 4336 will not receive credit for this course.

CSCI 5355 - Internet of Things (IoT)

Credit Hours: 3 **Lecture:** 3
Internet of Things is becoming the largest computing platform and the emerging technology is in the process of remodeling the cyber and physical world. This course aims to introduce the current vision of Internet of Things and its impact on the world, to understand the challenges that must be addressed before IoT can be widely deployed, and to develop an appreciation of the technologies that can make IoT to become reality. Students will also get hands-on experience by working on IoT projects.
Prerequisites: *CSCI 5134*

CSCI 5431 - Client-Server-Based Network Programming

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *CSCI 1320, CSCI 4351, or CSCI 4354*.

CSCI 5432 - Design and Analysis of Algorithms

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
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 a survey of parallel analysis and complexity theory.
Prerequisites: *CSCI 3352*.

CSCI 5433 - Object-Oriented Database Systems

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special

Fee ($): 40
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.
Prerequisites: *CSCI 4333; CSCI 4320 recommended*.

CSCI 5530 - Pattern Classification

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Introduction to the basic concepts of pattern classification including Bayes decision theory, parametric and non-parametric techniques, linear discriminant functions and clustering. Laboratory instruction.
Prerequisites: *Calculus, linear algebra, probability, statistics and a compiler language.*

CSCI 5531 - Advanced Operating Systems

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Study of current methodologies used in the design of distributed operating systems including issues related to the design of distributed file systems, inter-process 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.
Prerequisites: *CSCI 4354 and CSCI 5134*.

CSCI 5532 - Pattern Recognition and Image Processing

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
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.
Prerequisites: Calculus, linear algebra, probability, statistics and a compiler language.

CSCI 5533 - Distributed Information Systems

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Distributed transparency, distributed DBMS architecture, distributed database design, semantic data security and integrity control, distributed query processing, database interoperability, mobile databases, distributed concurrency control and recovery, distributed DBMS.

Laboratory instruction.
Prerequisites: *CSCI 5333*.

CSCI 5631 - Foundations for Service Oriented Architectures

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Principles and issues related to the development of interface-based software components as the foundation for developing Service Oriented Architecture (SOA). Topics include interface definition and design, language integration (VB, C#, C and Java), concurrency and threading issues, type libraries, distributed components, callbacks and persistence.
Prerequisites: *CSCI 5431 or CSCI 5531*.

CSCI 5633 - Web Database Development

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *CSCI 4320 and CSCI 4333*.

CSCI 5635 - Parallel Processing

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Integrated discussion of the software and hardware design issues involved in parallel processing. Laboratory instruction.
Prerequisites: *Background in computer architecture and programming*.

CSCI 5733 - XML Application Development

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *CSCI 1370 or CSCI 1471, CSCI 4320*.

CSCI 5737 - Mobile Applications Development

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Mobile application design and development principles-application scoping, usage patterns, reliability requirements, mobile user interface design, accessing hardware features such as camera and GPS, and

performance tuning. Hands-on laboratory instruction provided using one of the popular mobile platforms-iOS, Android, or Windows Phone 7.
Prerequisites: The course assumes knowledge of an object-oriented programming language such as C, Java, C#, etc.

CSCI 5739 - Internship in Computer Science

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Supervised work experience in an approved industrial firm or government agency. Written and oral report required.
Prerequisites: *Approval by adviser and associate dean*.

CSCI 5832 - Financial Data Mining

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Examination of the process of data mining financial data in order to identify potentially successful approaches. Explores different sources of data (e.g. derivatives, stocks) and how to effectively apply various machine learners.
Prerequisites: *At least one high-level programming language or instructor's approval*.

CSCI 5833 - Data Mining: Tools and Techniques

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
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.
Prerequisites: CSCI 2315 *and CSCI 4333 CSCI 5333 recommended*.

CSCI 5838 - Mobile Game Programming

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Mobile games design and development principles-creating game scenes, levels and sprites, collision detection, scrolling background, sounds, leaderboard and incorporating physics in games. Hands-on laboratory instruction provided using one of the popular mobile platforms (iOS, Android, or Windows Phone 7) and gaming engines such as Cocos2D, Box2D, etc.
Prerequisites: *CSCI 1370*.

CSCI 5915 - Cooperative Education Work Term

Credit Hours: 1 **Lecture:** 0 **Lab:** 1
Fee Type: Co-op
Fee ($): 100
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.)
Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education*.

CSCI 5919 - Independent Study in Computer Science

Credit Hours: 1 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 15
Prerequisites: *Approval of instructor, chair and associate dean*.

CSCI 5929 - Independent Study in Computer Science

Credit Hours: 2 **Lecture:** 0 **Lab:** 1
Prerequisites: *Approval of instructor, chair and associate dean*.

CSCI 5931 - Research Topics in Computer Science

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Identified by specific title each time course is offered.

CSCI 5933 - Computational Bioinformatics

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
The course assumes students have little 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.
Prerequisites: *CSCI 5833*.

CSCI 5939 - Independent Study in Computer Science

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Prerequisites: *Approval of instructor, chair and associate dean*.

CSCI 6530 - Research Methods in Computer Science

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
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

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *Background in operating systems*.

CSCI 6838 - Research Project and Seminar

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *24 hours completed in graduate program*.

CSCI 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Prerequisites: *Approval of faculty adviser, master's committee and dean*.

CSCI 6969 - Master's Thesis Research

Credit Hours: 6 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 80
Prerequisites: *Approval of faculty adviser, master's committee and dean*.

Data Science

DASC 5031 - Python for Data Science

Credit Hours: 3 **Lecture:** 3
Fee Type: Special
Fee ($): 40
Python as a practical programming language for problem solving, especially in the area of data science. Introduction to computer programming, object-orientation, software development life-cycle, basic data structures, and basic data manipulation and analysis. Leveling course not counting towards master degree's credits. Laboratory instruction.

DASC 5032 - Data Structures for Data Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Advanced programming techniques and data structures including arrays, linked lists, queues, stacks, hashes, dictionaries, sets, tuples, trees and graphs. Introduction to algorithm design and analysis using data structures. Built in Python's data structures. Data structures from Python library. Leveling course not counting towards master's degree credits. Laboratory instruction. Prerequisites: DASC 5031
Prerequisites: DASC 5031

DASC 5133 - Introduction to Data Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
An introduction to the theory, techniques and tools used in data science using Python and R. Introduction to data preparation, manipulation, transformation and visualization, machine learning, data analysis and other data science topics. Programming libraries and tools for data science. Ethics, professionalism and social implications of data science. Laboratory instruction.
Prerequisites: *DASC 5032 or CSCI 2315*.

DASC 5231 - Visualization in Data Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Study of principles and best practices in effective data visualization using leading tools. Focus on identifying and choosing the proper visualization methods and techniques to be used in various stages of a typical data science project. Laboratory instruction. Prerequisites: CSCI 5833
Prerequisites: *CSCI 5833*.

DASC 5333 - Database Systems for Data Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Design of database systems, data definition and manipulation languages, data models, entity-relationship model, relational model, SQL, relational algebra, normalization theory, DBMS, Internet, database implementation. Focus on applying DB theory and practice to support data science applications. Laboratory instruction. Prerequisites: DASC 5032
Prerequisites: *DASC 5032*.

DASC 5335 - Deep Learning

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Deep learning. Neural Networks (NN), Recurrent Neural Networks (RNN) and Convolutional Neural Network (CNN) and their applications in various domains. Theory, design, implementation and optimizations of different neural networks. Neural networks architecture. Build, train and apply fully connected deep neural networks. Practice in Tensorflow. Laboratory instruction. Prerequisites: CSCI 5833
Prerequisites: *CSCI 5833*.

DASC 5433 - Big Data Analytics

Credit Hours: 3 **Lecture:** 3
Fee Type: Special
Fee ($): 40
This course teaches students about the core technologies to manipulate, store and especially to analyze big data. Students will acquire essential skills required for a typical data science project. In this class, we couple hands-on labs/projects with lectures/readings. The hands-on activities familiarize students with Hadoop for storage (HDFS) and Spark as computing engine. Students will learn to apply typical machine learning techniques (using Spark MLlib) and some other analytics techniques such

as graph processing (using Spark GraphX) to big data. Python is the main programming language for this course. Laboratory instruction.
Prerequisites: CSCI 4333, DASC 5333, or equivalent and knowledge of Python programming.

DASC 5739 - Internship in Data Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Supervised work experience in an approved industrial firm or government agency. Written and oral report required. Prerequisites: Approval by adviser and associate dean.
Prerequisites: *Approval by adviser and associate dean*.

DASC 5915 - Cooperative Education Work Term

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.) Prerequisites: Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education
Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education*.

DASC 5919 - Independent Study in Data Science

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 40
Independent Study in Data Science. Prerequisites: Approval of instructor, chair and associate dean.
Prerequisites: *Approval of instructor, chair, and associate dean*.

DASC 5929 - Independent Study in Data Science

Credit Hours: 2 **Lecture:** 2 **Lab:** 0
Fee Type: Special
Fee ($): 40
Independent Study in Data Science. Prerequisites: Approval of instructor, chair and associate dean.
Prerequisites: *Approval of instructor, chair, and associate dean*.

DASC 5931 - Research Topics in Data Science

Credit Hours: 3 **Lecture:** 3
Fee Type: Special
Fee ($): 40
Identified by specific title each time course is offered.

DASC 5939 - Independent Study in Data Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Independent Study in Data Science. Prerequisites: Approval of instructor, chair and associate dean. May be repeated

Prerequisites: *Approval of instructor, chair, and associate dean*.

DASC 6838 - Research Project and Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
A team-project-based course to summarize data science learning. Attendance at the orientation meeting on the first class day is required. Students will be assigned a research project that requires integrating knowledge and standard procedures in the discipline. A written paper and a presentation will be required. Prerequisites: DASC 5133, 24 hours completed in the graduate program.
Prerequisites: *DASC 5133, 24 hours completed in graduate program*.

DASC 6839 - Master's Thesis Research

Credit Hours: 3
Fee Type: Special
Fee ($): 80
Master's Thesis Research. Prerequisites: Approval of faculty adviser, master's thesis committee and dean. May be repeated

DASC 6869 - Master's Thesis Research

Credit Hours: 6
Master's Thesis Research. Prerequisites: Approval of faculty adviser, master's thesis committee and dean.

DASC 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of faculty adviser, master's thesis committee and dean.*

DASC 6969 - Master's Thesis Research

Credit Hours: 6 **Lecture:** 6 **Lab:** 0
Prerequisites: *Approval of faculty adviser, master's thesis committee and dean*.

Digital Media Studies

DMST 5031 - Graphic Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
Professional approaches to advertising design, theory and practice. Advertising design projects requiring photographic and computer skills. Previous art, design, computer and writing skills are desirable.
Prerequisites: *DMST 5031 or permission of instructor*.

DMST 5034 - Global Issues in a Digital Society

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Exploration of global issues topics articulated from theoretical and/or historical approaches as they relate to digital media (film, video, art, texts, photography and commercial art) and/or social media platforms.

DMST 5039 - Web Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
Students study function of, critically evaluate, and create websites. Students create and publish client-based projects. Topics include HTML, XHTML, CSS, and JavaScript. (INST 5635 may be taken as an alternative.)
Prerequisites: *Proficiency in Photoshop or equivalent experience with instructor approval*.

DMST 5131 - Game Design and Theory

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
A great game is a perfect fusion of science, technology, art, design and more. And unlike other forms of art, games are truly participatory and interactive experiences. When these experiences are done well, game designers are able to create a sense of flow - an intense state of concentration and focus, allowing players to solve complex problems. This course will explore how to leverage the power of this art form to produce "games for good" or "serious games."

DMST 5132 - 3D Modeling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
3D modeling techniques for animation, images and 3D computer sculptures. Covers surface and texture mapping and lighting. Students present research on topics related to 3D technologies.

DMST 5230 - Critical Approaches to Digital Media

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 5
An exploration of visual and mass communication literacy as it relates to digital media production and creative works using the communication process with applicable theories. One cannot separate images and words when discussing digital media. Course topics will include significant scholars and researchers who have impacted the way we think about a variety of digital media.

DMST 5231 - Advanced Digital Media Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
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 - Media and Communication Research Methods

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
Study, apply and evaluate qualitative, quantitative and critical research methods employed in scholarly communication and digital media research.

DMST 5233 - Digital Media Law and Ethics Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
Fundamental principles of animation, both computer and traditional. Emphasis on 3D computer animation, editing and compositing. Storyboarding and animation project planning also covered. Students complete animated shorts and present research on 3D technologies, film-making or storytelling.
Prerequisites: *DMST 5132*.

DMST 5236 - Digital Storytelling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
Introduction in the basic structure of digital narratives such as genres and theory for various forms of digital media storytelling. Students will create their own narratives using visual, script, genre, storyboards and proposals/pitches for a final production.
Prerequisites: *Must have completed any mandated courses for enrollment*.

DMST 5330 - Strategic Campaign Planning

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed to teach you how to think like a public relations professional. To do so, the course emphasizes the preparation of problem-solving campaigns, programs and projects. Students will implement the four-step public relations process in the form of the group and individual proposals. Students will be expected to apply skills in critical thinking, numeracy, writing, reading, research and new technologies. **Cross-listed:** COMM 4323

Prerequisites: *DMST major, COMM 3320 or permission of instructor*

DMST 5332 - Motion Graphics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
Examination of the principles of motion design. Processes, techniques and theories of motion graphics and compositing as they pertain to the integration of typography, imagery, sound, motion and narrative to create an animated product. Includes project planning, production and post-production.

DMST 5333 - Social Media

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Draws from a range of social theory to critically evaluate the impact of social media on news media, relationships, social change, branding and politics.

DMST 5436 - Interactive Animation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
Instruction in 2D animation, Timeline and Objects, Action Script, user interactivity and publishing files. Students study the function of and evaluate animations as communication vehicles.
Prerequisites: *DMST 5031 and COMM 4434 or equivalent experience with instructor approval*.

DMST 5437 - Digital Media and Society

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
To pose and discuss questions, ideas and debates related to digital media technologies and their impact on individuals, society and the culture.

DMST 5534 - Video Production 1

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
This class teaches the basic nuts and bolts of video production, including capturing video and sound using DSLR and traditional video cameras, working with lights, fundamental storytelling and interview skills, as well as basic non-linear editing skills using either Premiere Pro or Final Cut X. Emphasis will also be placed on conceptual and analytical skills. **Cross-listed:** COMM 4354.

DMST 5535 - Narrative Video Production

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
This class requires fundamental knowledge and skills in video production. It gives students ample opportunity to hone their skills and put together a worthwhile video portfolio. The class will also include the opportunity for studio-based video production projects. **Cross-listed:** COMM 4355.

DMST 5536 - Studio-Based Video Production

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special

Fee ($): 65
This course will teach the basics of studio-based TV production, including lighting, set design, camera operation, hosting, directing, switching, audio recording and stage directing. **Cross-listed:** COMM 4359.

DMST 5537 - Documentary Video Production

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
This class teaches documentary video production skills, including the proper use of production equipment, emphasizing the complexity of developing storylines and honing effective interpersonal communication skills. Students will also learn the complex logistical tasks involved in creating a compelling documentary. **Cross-listed:** COMM 4357.

DMST 5538 - Electronic Publishing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
Instruction in design, layout, project management, printing and electronic publication. Principles, techniques and theories of typography, photography, illustration and color to express messages for specific audiences. New trends in publication and automation also included.

DMST 5831 - Project Management

Credit Hours: 3 **Lecture:** 3
Application of knowledge, skills, tools and techniques to activities related to project, such as the creation of a unique product, service or result. The course exposes students to project management practices and tools and imparts the ability to choose between management styles to complete projects and initiatives.

DMST 5931 - Research Topics in Digital Media Studies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 60
Identified by specific title each time course is offered. Topics vary may be repeated for credit with permission of instructor. DMST adviser permission required.

DMST 5939 - Independent Study in Digital Media Studies

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Permission of instructor required.

DMST 6639 - Practicum in Public Relations

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Application of public relations theory and research including in-depth best practices case studies with real-world applications such as PR campaign. This course is suggested as a precursor for the PR internship course.
Prerequisites: *DMST Core (DMST 5031 and DMST 5230) and DMST 5234, DMST 5831.*

DMST 6739 - Graduate Internship

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Development of digital media under supervision of a selected professor and on-site organizational supervisor. 500 on-site hours required. Includes the production of a professional portfolio. Completed over two semesters.

DMST 6769 - Graduate Internship

Credit Hours: 6 **Lecture:** 0 **Lab:** 0
Development of digital media under supervision of selected professor and on-site organizational supervisor. 500 on-site hours required. Includes the production of a professional portfolio. Completed over one semester.

DMST 6839 - Master's Project Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Permission of adviser, project director and department chair required.
Prerequisites: *24 hours of DMST*.

DMST 6909 - Master's Exam Option

Credit Hours: 0 **Lecture:** 0 **Lab:** 0
Capstone exam option. Requires approval of adviser and department chair, with two additional pre-approved advanced courses (6 hours) and testing or additional work to test out of a capstone thesis, project or internship.
Prerequisites: *All previous coursework must be in the process of completion up to the final 6 hours*.

DMST 6939 - Master's Thesis

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Approval of adviser, thesis director and department chair required.
Prerequisites: *24 hours of DMST*.

Decision Sciences

DSCI 3321 - Statistics I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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
Prerequisites: *Finite Math and Business Calculus*

DSCI 5131 - Business Analytics I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course introduces a variety of advanced statistical tools for improved decision making in business analytics. Topics include analysis of experimental designs; advanced multiple regression; logistic regression; discriminant, cluster, and factor analysis; nonparametric statistics; and statistical quality improvement tools. Topics will be explored using data sets, actual business scenarios and statistical computer output.
Prerequisites: *MGMT 5031 or FINC 5231 or equivalent*.

DSCI 5231 - Business Analytics II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on mastering data-driven quantitative modeling techniques for business decision making. Covers the process of formulating business objectives, data preparation and partition to successfully design, build, evaluate, and implement the quantitative models. Applies predictive modeling techniques, deterministic optimization and simulation to a wide range of practical business scenarios in the areas such as finance, HR, healthcare, marketing, supply chain, etc. Requires using Excel software to implement these models.
Prerequisites: *MGMT 5031 or FINC 5231 or equivalent*.

DSCI 5431 - Management Science and Operations

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *MGMT 5031 or FINC 5231 or equivalent*.

DSCI 5531 - Introduction to Supply Chain Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course provides an integrated view of procurement, operations and logistics management. Students will learn how to manage the flow of products through the supply chain.
Prerequisites: *MGMT 5031 or FINC 5231 or equivalent.*

DSCI 5931 - Research Topics in Decision Sciences

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.

DSCI 5939 - Independent Studies in Decision Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Independent directed study in Decision Sciences.
Prerequisites: *Approval of instructor, faculty chair and associate dean required*.

Early Childhood Education

ECED 1303 - Children and Families

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 4302 - Developing Competence in Young Children

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
Focus on the relationship among the content areas, skills, concepts and practices that support early competence in young children. Integration of national and state standards into curriculum planning is featured. Field experiences required.
Prerequisites: *ECED 1354, INST 3313, and TCED 4303*.

ECED 4311 - Reading Development in Young Children

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
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.
Prerequisites: *LLLS 4311 and LLLS 4345*.

ECED 4314 - Observational/Developmental Assessment of Young Children

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
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.
Prerequisites: *ECED 4302*.

ECED 5010 - Teacher Seminar

Credit Hours: 1 **Lecture:** 0 **Lab:** 0
This course is designed to assist EC-3 candidates seeking Early Childhood Education: PreKindergarten - Grade 3 Certification to understand the state and federal rules and standards for EC-3 teachers and students. Completion of the course is required for approval to sit for the TExES exams required for this certification.

ECED 5031 - Teaching Young Children

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Students will explore practices that nurture the intellectual growth and general development of young children. Field experiences required.

ECED 5032 - Community Programs for Young Children

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
This course focuses 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 Management for PK-3

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 5038 - Creative Arts in Early Childhood

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 20
This course explores the theory, content and practice of integrating the performing arts into the curriculum design and early learning environments. Emphasis is placed on aesthetic development of young children through play, visual art, music, movement and creative dramatics.

ECED 5039 - Early Childhood Advocacy: Teachers, Parents, Schools and Community

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the importance of the role of advocacy in Early Childhood Education. The development of advocacy skills, as well as the role of advocacy with stakeholders such as parents, schools, communities, federal, state and local governing agencies will be analyzed. Strategies for developing successful advocacy agendas will be investigated.

ECED 5131 - Curriculum Development for Young Children

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines strategies for developing, implementing and evaluating creative and intellectually stimulating learning environments and curricula for young children. Field experiences required.
Prerequisites: *ECED 5031*

ECED 5132 - Literacy Development in Early Childhood

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on language and emergent literacy development including research and implications for practice. Field experiences required.

ECED 5133 - Mathematics and Science Teaching and Learning in Early Childhood

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 20
This course introduces developmental theories and research about science and mathematics learning in the early years. This course also explores principles, methods and materials for integrating and applying appropriate mathematics and science education into the early childhood curriculum.

ECED 5231 - Play and the Developing Child

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on research,

philosophy and application of developmental play theory, including the influence of play on physical growth, social relationships, emotional well-being, cognitive development and creative expression. Field experience required.

ECED 5331 - Evaluation of Development of Young Children

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
This course is an 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.
Prerequisites: *ECED 5031*

ECED 5332 - Infants and Young Children With Exceptionalities

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 20
This course is 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.
Prerequisites: *SPED 4300 or SPED 5030*

ECED 5333 - Advanced Studies of Infants and Young Children With Special Needs

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 20
This course addresses advanced studies of the education of infants and young children with disabilities to include service coordination, assistive/adaptive technologies and health care issues.
Prerequisites: *ECED 5332 or SPED 5332*

ECED 5335 - Children, Family, and Society

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines the 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 5336 - Administration and Management of Programs for Young Children I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 1100
In this course, students will examine their leadership role in their early childhood programs and will be introduced to a model of facilitative leadership as a way to empower staff to support shared decision making. Students will be introduced to the components of effective management and identify effective employment practices and a comprehensive model for supervising staff and promoting their ongoing professional development. Students will develop and practice the necessary skills to

nurture a positive work climate that promotes peak performance and strategies for promoting and maintaining a positive public image. This course is part of the Early Childhood Leadership Certificate. Only students pursuing this certificate may enroll in this course. This course has an additional course fee that will be applied towards the National Director's Credential.

ECED 5337 - Administration and Management of Programs for Young Children II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 880
In this course students will learn how to support young children's development and learning by understanding the interactive environment, the advantages of different groupings and staffing patterns, continuity of care, how to implement developmentally appropriate early childhood curriculum and the importance of observation and child assessment in achieving program goals. This course will explore the early childhood administrator's role in creating family partnerships, promoting an appreciation of diversity, nurturing open communication, program evaluation and how to implement continuous quality improvement. This course is part of the Early Childhood Leadership Certificate. Only students pursuing this certificate may enroll in this course. This course has an additional course fee that will be applied towards the National Director's Credential.
Prerequisites: *ECED 5336*

ECED 5431 - The Science of Teaching Reading for PK-3

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course explores principles, research, and theories related to the practice of teaching early reading development and reading pedagogy, including best practices, strategies, teacher actions, and teacher judgments, as well as applying knowledge of developmentally appropriate assessment and instructional practices in order to meet the needs of all learners.
Prerequisites: Admission to the Teacher Education Program (TEP), ECED 5132

ECED 5432 - Social Studies Methods for PK-3

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course explores principles, research, and theories related to curriculum development, instructional models and authentic techniques for developing social studies knowledge, citizenship and critical thinking skills in young children; emphasis on sound practice and research-based strategies for teaching social studies for PK-3 students. Field experiences required.
Prerequisites: Admission to Teacher Education Program (TEP) and ECED 5033

ECED 5433 - Science Methods for PK-3

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course explores principles,

research, and theories related to the development of science concepts in PK-3 instruction. Emphasis on curriculum development, authentic assessment, and the process approach as a science teaching method. Field experiences required.
Prerequisites: Admission to the Teacher Education Program (TEP), ECED 5033 and ECED 5133

ECED 5434 - Mathematics Methods for PK-3

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course explores principles, research, and theories related to developing young children's understanding of mathematics; emphasis on problem solving with manipulatives and curriculum materials appropriate for use with PK-3 students. Field experiences required.
Prerequisites: Admission to the Teacher Education Program (TEP), ECED 5033 and ECED 5133

ECED 5737 - Practicum: Infants and Young Children With Disabilities

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
This course consists of fieldwork with infants and/or young children with disabilities not limited to school, agency or privately funded programs.
Prerequisites: *ECED 5332/SPED 5332 and ECED 5333/SPED 5333*

ECED 5931 - Research Topics in Early Childhood Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.

ECED 5939 - Independent Study in Early Childhood Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of instructor and associate dean*.

ECED 6739 - Early Childhood Education Practicum

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
Supervised internship in an early childhood setting.
Prerequisites: *Completion of a minimum of nine hours of the professional education core and 15 ECED hours which include the ECED Core: ECED 5031, ECED 5131, ECED 5132, ECED 5336 and approval of the associate dean*.

Economics

ECON 5136 - Managerial Economics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Application of microeconomics theory to managerial decision making. Topics may include demand analysis, cost analysis, market structure and their relation to pricing, product choice, resource allocation and industrial organization.

ECON 5137 - Economics of Energy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course provides an economic analysis of national and international energy markets, including coal, oil, natural gas and alternatives. Scope includes energy market evolution and current market structures, pricing, capital requirements, consumption and production spillovers and regulation.
Cross-listed: ENVR 5331.

Education in Curriculum and Instruction

EDCI 7031 - Quantitative Research I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This is the first of a two-course sequence (with EDCI 7032) and focuses on quantitative techniques of inquiry that pertain to educational research. Using an integrated approach, students will study statistics; exploratory data analysis; sampling, survey and experimental design; interview and questionnaire design. Topics include inferential, descriptive, comparative, relational and non-parametric statistics.
Prerequisites: *Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course number*.

EDCI 7032 - Quantitative Research II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This is the second of a two-course sequence (with EDCI 7031) and focuses on quantitative techniques of inquiry that pertain to educational research and policy analysis. Using an integrated approach, students may study statistics, exploratory data analysis, sampling, survey and experimental design. Topics include descriptive and inferential (parametric and non-parametric) statistics.
Prerequisites: *Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI)with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor*.

EDCI 7033 - Qualitative Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is an introduction to qualitative methods of research. It serves as an introduction to the terminology, historical development and variety of approaches of qualitative methods. Students will gain practical experience with qualitative methods of data collection and analysis. Students may study many of the same topics discussed in EDCI 7031 and 7032 from a qualitative perspective.
Prerequisites: Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor.

EDCI 7035 - Intercultural Communications

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the understanding of cultural issues that influence communication effectiveness with diverse populations.
Prerequisites: Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor

EDCI 7137 - Advanced Models of Teaching STEM Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
In this course, students examine a variety of teaching models to extend their existing knowledge base of instructional strategies. Focus on the examination will be on the following Models of Teaching: Concept Attainment, Inquiry Training, Synectics, Advanced Organizers, Project-Based Learning, Professional Learning Communities, Non-Directive Teaching, Group Investigation, Role Playing and Simulation.
Prerequisites: Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor.

EDCI 7138 - Curriculum Design: Development, Implementation, Evaluation in STEM Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Students will examine the impact of 21st-Century National Standards on the development, implementation and evaluation of state and local curricula to facilitate STEM integration into classrooms.
Prerequisites: Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor.

EDCI 7139 - Professional Development Principles and Practices

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines current research-based strategies and techniques, e.g., workplace improvement goals development, assessment models, motivational methods and skills transferability, for the effective planning and implementation of professional development programs.
Prerequisites: Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor.

EDCI 7331 - Advanced Qualitative Methods

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on analysis techniques beyond the constant comparative method. Discussion of system-level analysis and means of analyses useful for studies examining micro-and macro-level phenomena. Exposure to several advanced qualitative methodologies, including life history, arts-based research, qualitative evaluation and discourse analysis.
Prerequisites: Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor.

EDCI 7333 - Survey Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Development, construction, and validation of non-cognitive questionnaires, surveys and interview protocols. Item construction, analysis and the development of subscales are discussed. Effects of sampling methodologies are examined. Survey environment selection effects will be discussed. Review recent research on survey design with a focus on response rate improvement.
Prerequisites: Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI)with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor.

EDCI 7430 - Current Issues and Trends in STEM Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is in a seminar format, and exposes students to the current research, issues and trends in STEM education. Students will self-select recent journal articles related to their individual research agendas, identify specific research areas and prepare literature reviews.
Prerequisites: Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor.

EDCI 7431 - Learning and Cognition in STEM Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
In this course, students will review seminal research regarding learning and cognition in STEM education. Students will also examine their own epistemological and ontological perspective as they begin to explore the theoretical framework that will undergird their research.
Prerequisites: *Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor.*

EDCI 7931 - Doctoral Research Topics in Curriculum and Instruction

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific topic each time course is offered.
Prerequisites: *Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor*.

EDCI 7939 - Doctoral Independent Study in Curriculum and Instruction

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of instructor and student's doctoral committee*.

EDCI 8530 - Research Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The main focus is on creating doctoral dissertation proposals which address current real-world problems. The process helps doctoral students develop viable research projects that could serve as relevant dissertation topics.
Prerequisites: *Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor*.

EDCI 8939 - Dissertation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course focuses on the activities necessary for the completion of the dissertation. The program requires continuous enrollment in the dissertation until completion.
Prerequisites: *Admission to candidacy for doctoral degree and consent of Doctoral Program Committee Once admitted to doctoral candidacy, the candidate may register for the dissertation course Six hours of dissertation count toward the program. The instructor of record is the student's dissertation chair.*

EDCI 8969 - Dissertation

Credit Hours: 6 **Lecture:** 6 **Lab:** 0
Prerequisites: *Admission to candidacy for doctoral degree and consent of Doctoral Program Committee. Once admitted to Doctoral Candidacy, the candidate may register for the dissertation course. Six hours of dissertation count toward the program. The instructor of record is the student's dissertation chair The "course" focuses on the activities necessary for the completion of the dissertation. The program requires continuous enrollment in the dissertation until completion*.

Educational Leadership

EDLS 7010 - Superintendent Professional Preparation Seminar

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special

Fee ($): 15
This course is designed to assist students in the superintendent certification program in understanding the state certification standards for successful entry into this educational field. Completion of the course is dependent upon candidates passing all state assessments required for their degree/certification plan.
Prerequisites: *An approved, signed certification plan on file in the COE.*

EDLS 7030 - Dispute Resolution

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is 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.

EDLS 7031 - Quantitative Research I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This is the first of a two-course sequence (with EDLS 7032) 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, experimental design; naturalistic observation and inquiry; 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.

EDLS 7032 - Quantitative Research II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This is the second of a two-course sequence (with EDLS 7031) and focuses on quantitative techniques of inquiry that pertain to educational research and policy analysis. Using an integrated approach, students may study statistics, exploratory data analysis, sampling, survey and experimental design. Topics include descriptive and inferential (parametric and non-parametric) statistics.
Prerequisites: *EDLS 7031*.

EDLS 7033 - Qualitative Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is an introduction to qualitative methods of research. It serves as an introduction to the terminology, historical development and variety of approaches of qualitative methods. Students will gain practical experience with qualitative methods of data collection and analysis. Students may study many of the same topics discussed in EDLS 7031 and 7032 from a qualitative perspective.

EDLS 7034 - Professional Writing and Communications

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course addresses public writing and presentation skills. The course includes the study of creating case

studies; reading, interpreting and discussing case studies; dissertation writing and other textual forms, including press releases, speeches, newsletters and grants; developing skills for speaking and listening effectively with different audiences; the effective use of technology in presentations; and managing interactions with the media, including interviews for print, radio and television.

EDLS 7035 - Race, Gender, and Ability in Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on developing cultural competence by identifying and interrogating underlying individual, social and institutional privilege and oppression that influence educational landscapes.

EDLS 7036 - Special Populations-Early Childhood Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is an overview of programs, trends, issues, policy, legal and ethical aspects, advocacy, assessment, curriculum planning, program development and family and community resources related to early childhood education. Field Experience required

EDLS 7037 - Special Populations-Special Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is an overview of programs, trends, issues, policy, legal and ethical aspects, advocacy, assessment, curriculum planning, program development and evaluation, and family and community resources related to special education.

EDLS 7038 - Special Populations-Bilingual and ESL Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is an overview of programs, trends, issues, policy, legal and ethical aspects, advocacy, assessment, curriculum planning, program development and evaluation and family community resources related to bilingual and ESL education. Field Experience required

EDLS 7039 - Special Populations-Synthesis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will bring together collaborative knowledge and research from all three special population areas: Early Childhood Education, Special Education and Bilingual/ESL Education. Field Experience required
Prerequisites: EDLS 7034.

EDLS 7130 - Program Evaluation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course 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; and 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.
Prerequisites: *EDLS 7033*.

EDLS 7131 - Society, Language and Literacy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines the impact of linguistic, cultural and social variables when learning to read.
Prerequisites: EDLS 7035

EDLS 7132 - Integrating Literacy into the Curriculum

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines current research and practice on integrating reading throughout the content area curriculum.

EDLS 7133 - Professional Writing Workshop

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the identification, exploration, and evaluation of professional writing genres.

EDLS 7134 - Curriculum Writing Workshop in the Classroom II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines research-based instructional strategies for improving writing in grades K-12.
Prerequisites: Concurrent enrollment in *EDLS 7133*.

EDLS 7135 - Literacy Assessment for the Practitioner

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course teaches the assessment and diagnosis of literacy disorders, including dyslexia.
Prerequisites: *Six hours from the following: EDLS 7034, EDLS 7131 , EDLS 7132 , EDLS 7133, EDLS 7134.*

EDLS 7136 - Current Pedagogical Issues

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course, in a seminar format, presents an analysis of current curricula and instructional issues in educational research. Course activities involve extensive review of student-selected research journal articles related to their individual research agendas.

EDLS 7137 - Advanced Models of Teaching

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
In this course, students examine a variety of teaching models to extend their existing knowledge base of instructional strategies. Focus of the examination will be on the following models of teaching: Concept Attainment, Inquiry Training, Synectics, Advance Organizers, Non-Directive Teaching, Group Investigation, Role Playing and Simulation.

EDLS 7138 - Curriculum Design: Development, Implementation, Evaluation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Students will examine the impact of 21st-century national standards on the development, implementation and evaluation of state and local curricula.

EDLS 7139 - Professional Development Principles and Practices

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines current research-based strategies and techniques (e.g., workplace improvement goals development, assessment models, motivational methods and skills transferability) for the effective planning and implementation of professional development programs.

EDLS 7230 - Counseling Supervision

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course includes supervision models; supervisory relationship and counselor development; supervisory methods and techniques; group supervision; counselor evaluation using state and national counseling models; ethical, legal, cultural and professional issues of supervision; executive and administrative tasks of supervision. Field experience is required.
Prerequisites: *Permission of the instructor and two years' experience as Licensed Professional Counselor or Certified School Counselor*.

EDLS 7231 - Advanced Crisis and Disaster Response

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course addresses the creation of school safety plans, preventative/responsive preparation and better prepares the counselor for dealing with a major school-wide crisis as well as ways to cope with parental, community and media response.
Prerequisites: *Permission from instructor and COUN 6533*.

EDLS 7232 - Evaluating Counseling Programs

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on comparing/contrasting a district's current counseling curriculum and suggesting changes that can strengthen the district's counseling-related programs and policies.
Prerequisites: *EDLS 7130*.

EDLS 7233 - Counseling as a Profession

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on advanced work within the profession such as university instruction and supervision; syllabus preparation to meet state and national standards; committee work for local, state and national professional organizations; networking with other doctoral-level counseling students; developing skills for presenting research within a state or national forum.
Prerequisites: *Permission of instructor and certification as a School Counselor or Licensed Professional Counselor*.

EDLS 7238 - Marketing of Educational Services for Nonprofit Organizations

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed to integrate concepts, practices and skills for the effective marketing of services with attention to non-profit organizations (e.g., educational entities). Through the use of readings, case studies and projects, students will analyze environments and marketing mixes and make decisions in the development of viable educational marketing strategies.

EDLS 7330 - Advanced Statistical Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This is an advanced course in statistical methods. Topics may include analysis of variance techniques; planned and post how comparisons and mixed designs; multiple correlation/regression techniques, including polynomials, analysis of interactions, dummy coding and analysis of covariance. Current issues in the field involving the use/misuse of statistical analysis will be discussed.
Prerequisites: *EDLS 7032*.

EDLS 7331 - Advanced Qualitative Methods

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on analysis techniques beyond the constant comparative method. It includes the discussion of system-level analysis and means of analyses useful for studies examining micro- and macro-level phenomena and exposure to several advanced qualitative methodologies, including life history, arts-based research, qualitative evaluation and discourse analysis.
Prerequisites: *EDLS 7033*.

EDLS 7332 - Current Issues in Educational Measurement

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the application of reliability, validity and practicality to the development, selection, use and interpretation of tests and other measuring instruments. It includes the interpretation and use of norms, standard scores, percentiles, quotients and grade equivalents. An understanding of the role of measurement in evaluation, diagnosis, selection, and placement is included.
Prerequisites: *EDLS 7032*.

EDLS 7333 - Survey Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines the development, construction and validation of non-cognitive questionnaires, surveys, and interview protocols. Item construction, analysis and the development of subscales are discussed. Effects of sampling methodologies are examined. Survey environment selection effects will be discussed. Review of recent research on survey design with a focus on response rate improvement are also discussed.
Prerequisites: *EDLS 7033*.

EDLS 7530 - Learning Theory and Instruction

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on salient characteristics that differentiate learning environments designed with prominent contemporary theories of learning and cognitive science.

EDLS 7533 - Systematic Design of Technology-Based Instruction

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the application of systematic procedures for designing training and instruction, based on a combination of practical experience and instructional systems design theory and research. Secondary emphasis is on methods for instructional delivery, including instructor-led print, computer and electronic network-based systems.

EDLS 7535 - Digital Video Production for Educators

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on basic digital video pre-production, production and post-production.

EDLS 7537 - Technology and eLearning

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on how technology-rich learning environments must benefit from a firm grounding in educational psychology and cognitive science. It links current understanding of human cognition with advances in computer technologies.

EDLS 7538 - Interactive Distance Learning

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the systematic design and delivery of interactive distance education programs based on the use of the internet and related telecommunication technologies.

EDLS 7636 - Politics and School Finance

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course 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; and how national and state political forces affect local education policies.

EDLS 7637 - Personnel Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.

EDLS 7638 - The Superintendent and School Community Relations

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is an application of interpersonal skills in educational leadership and study of leadership approaches for use with various school constituencies.

EDLS 7833 - Superintendent Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course addresses contemporary theory and issues in school leadership.

EDLS 7837 - Superintendent Practicum

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
This is a supervised internship in an approved educational environment. Written and oral reports are required.

EDLS 7931 - Doctoral Research Topics in Educational Leadership

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific topic each time the course is offered.

EDLS 7939 - Doctoral Independent Study in Educational Leadership

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of instructor and student's doctoral committee.*

EDLS 8030 - Organizational Leadership

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course 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 required

EDLS 8130 - Strategic Planning and Systems Alignment

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course 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. Field Experience required

EDLS 8131 - Policy, Knowledge Management & Forecasting

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course investigates the use of data systems for organizational management and policy development. It uses techniques of knowledge management systems, data

mining and forecasting tools to effectively integrate diverse data sets such as demographics, facility 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. Field Experience required
Prerequisites: *EDLS 8130*.

EDLS 8132 - Transition and Change Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course 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. Field Experience required

EDLS 8230 - Ethics, Values and Social Responsibility

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course 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.

EDLS 8330 - Human Resources Administration

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course 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; relevant, on-going 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. Field Experience required

EDLS 8430 - Financial Resources Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course addresses financial management practices and problems of non-profit 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. Field Experience required

EDLS 8530 - Research Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will provide an interactive review of research methods and focus on student development of a viable dissertation research proposal.
Prerequisites: *EDLS 7033 Focuses on challenging topics of leadership in educational settings.*

EDLS 8630 - Administration in Higher Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed to provide an overview of leadership and management principles and theories in higher education, (i.e., universities and community colleges). Key topics will include governance structures, personnel roles and functions, communication systems, decision-making processes, interpersonal relationships, curriculum development, funding, accountability, remediation, planning and budgetary operations.

EDLS 8631 - Student Affairs in Higher Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed to provide a basic understanding of the impact of collegiate structures and environments on student development and learning. Key topics will include principles of student development, theories addressing the college student in the postsecondary setting, adult learning strategies, as well as administrative practices pertaining to recruitment, advisement, counseling, financial assistance, residential living, group organizations and campus services.

EDLS 8632 - Law and Policy in Higher Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed to provide legal and policy aspects of administration in higher education. Key topics will include admissions; student rights; personnel recruitment, hiring, supervision, evaluation and career-development; budgeting and control in planning; retrenchment; and property usage.

EDLS 8633 - Contemporary Issues in Higher Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed to identify and analyze critical questions, complex topics and major trends facing higher education and to arrive at alternative solutions in effectively responding to these multifaceted issues, such as accommodating discipline-specific developments, university governance structures, diversity in higher education, state, and federal funding levels, and serving evolving societal needs while preserving the tradition of higher learning.

EDLS 8939 - Dissertation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Six hours of dissertation count toward the program. This course focuses on the activities necessary for the completion of the dissertation.
Prerequisites: *Admission to candidacy for doctoral degree.*

EDLS 8969 - Dissertation

Credit Hours: 6 **Lecture:** 6 **Lab:** 1
Six hours of dissertation count toward the program. This course focuses on the activities necessary for the completion of the dissertation.
Prerequisites: *Admission to candidacy for doctoral degree.*

Education

EDUC 4310 - Theories of Educational Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 and tradition.

EDUC 5931 - Research Topics in Professional Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.

EDUC 5939 - Independent Study in Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of instructor and associate dean.*

EDUC 6032 - Applied Statistics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is an application of descriptive and inferential statistics in education. It 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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the design, analysis and application of educational research techniques, both qualitative and quantitative.
Prerequisites: *EDUC 6032 or equivalent.*

EDUC 6839 - Master's Project Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Applied field research. May be repeated for credit.
Prerequisites: *EDUC 6033 or equivalent, 21 additional hours of approved degree course work, and approval of instructor and associate dean.*

EDUC 6909 - Master's Comprehensive Examination

Credit Hours: 0 **Lecture:** 0 **Lab:** 0
Students approved to take the master's degree comprehensive examination and who have completed their required course work register for this course in order to take the examination.
Prerequisites: *Approval of the instructor and the associate dean.*

EDUC 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
May be repeated for credit.
Prerequisites: *EDUC 6033 or equivalent, 21 additional hours of approved degree course work and approval of instructor and associate dean.*

Engineering Management

EMGT 5035 - Scientific Writing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Written English grammar and scientific writing style; access and critique of primary research literature; scientific-technical report and review paper writing. This course is designed for CSE graduate students who are required to complete a course in technical writing as part of their acceptance requirement into their respective programs.
Prerequisites: *Instructor approval is required*.

EMGT 5130 - New Business Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
The course concentrates on business proposal writing and business feasibility analysis for technology ventures.
Prerequisites: *Foundation courses.*

EMGT 5131 - Legal Issues in Engineering Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *Foundation courses.*

EMGT 5132 - Engineering Leadership and Ethics

Credit Hours: 3 **Lecture:** 3
This course will focus on different leadership styles for solving complex organizational problems. Students will learn the skills and tools necessary to be ethical leaders in the engineering domain. The objectives of the course will be achieved through experiential exercises, cross-cutting case studies and real-world applications.

EMGT 5230 - Negotiation Strategies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *Foundation courses.*

EMGT 5231 - Engineering Management Planning

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
This course is to provide students with the state-of-the-art issues, knowledge and skills of product design and development process in the context of the systems engineering process and management. Topics include the techniques and knowledge for new product design and development processes and their management. These include the product planning, requirements engineering, product specifications, concept generation/selection and testing, product architecture and related design techniques.

EMGT 5330 - Service and Operations Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
This course provides an overview, concepts and methods that are useful in understanding the management of firm's operations. This course will concentrate on operations strategy, process improvement, forecasting, lean and just-in-time and supply chain management.
Prerequisites: *Foundation courses.*

EMGT 5331 - Six-Sigma Quality

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 50
This course will cover the knowledge areas of six-sigma green belt. Topics include six sigma goal, lean principles, theory of constraints, design for six sigma, quality function deployment, process management, data and process analysis and design of experiments.
Prerequisites: *Foundation courses.*

EMGT 5430 - Professional Project Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 40
This course focuses on project management through the critical examination of project defining, planning, implementing, monitoring, controlling and documenting. Includes the nine project management knowledge areas defined in the Project Management Body of Knowledge (PMBOK) issued by the Project Management Institute (PMI), project management software and techniques and skills required for good project management. The course concentrates on the production of a project management plan.
Prerequisites: *Foundation courses*.

EMGT 5431 - Contract Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course provides overall knowledge on the processes and techniques through which goods and services are acquired in the project management environment.
Prerequisites: *Foundation courses.*

EMGT 5530 - Organizational Analysis and Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 40
This course examines the human side of management through the application of behavioral science for technical professionals. This course focuses on decision making, project teams, leadership and organization skills.
Prerequisites: *Foundation courses*.

EMGT 5531 - Technology Planning and Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 40
This course discusses frameworks and analytical processes for analyzing how firms can create, commercialize and capture value from technology-based products and services.
Prerequisites: *Foundation courses*.

EMGT 5630 - Quantitative Decision Making for Engineering Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 50
This course provides a systematic approach to the formulation of problems, alternative research methodologies and decision-making processes. The course is intended to provide students the skills and abilities necessary to integrate research purpose, technique and constraints. Topics include hypothesis formulation and testing survey development, reliability and validity analysis and application of statistical techniques.

EMGT 5631 - Supply Chain Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 40
This course provides overall knowledge and concepts of logistics and supply chain management. The course focuses on facilities, inventory, transportation, information, sourcing and pricing, network design and analysis and performance evaluation of supply chain management using quantitative and quantitative approaches.
Prerequisites: *EMGT foundation courses.*

EMGT 5632 - Logistics Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 40
Logistics management course examines modes of freight transportation and institutional factors that influence transportation decisions; regulation, public policy other governmental variables reviewed in detail. Course concept includes key logistics operations in multinational business using situational analysis, legal issue considerations, and analysis of supply chain, transportation and functional implications. Additionally, distribution aspects of the logistics function within the firm such as warehousing, cross-docking and distribution center management are explored.
Prerequisites: *EMGT foundation courses*.

EMGT 5730 - Fundamentals of Enterprise Resource Planning Software

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 50
This course provides the overall knowledge and concepts on enterprise resource planning (ERP) system. The focus of this course is on illustrating procurement, material requirement planning, production and sales business processes using ERP software. Use of SAP's ERP Business Suite as an example ERP system.

EMGT 5731 - Business Analytics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 50
The course fosters critical thinking about the data, the type of analytics applied on them and teaches students how to identify business opportunities with business analytics. This course will focus on three main foundation areas of business analytics: reporting, visualization and prediction. This course will demonstrate business analytics in practice with the latest technologies using SAP software.
Prerequisites: *EMGT foundation courses.*

EMGT 5732 - Advanced Business Analytics

Credit Hours: 3 **Lecture:** yes
This course will expand on business analytics by using contemporary tools and languages such as Python, R, and other business intelligence software. Advanced predictive techniques such as optimization and heuristic algorithms, forecasting, and multivariate analysis in the engineering and business domain will be used.
Prerequisites: EMGT 5731 Business Analytics (elective) and EMGT 5330 Service and Operations Management (core)

EMGT 5739 - Internship in Engineering Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Supervised work experience in an approved engineering management field. Written and oral report required. Approval of faculty chair and associate dean required.
Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education*.

EMGT 5830 - Modeling and Simulation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 40
The course studies the concepts, theories and application of modeling and simulation. It covers both continuous and discrete-event simulation. The focus of the course is to learn the modeling techniques and use them to solve diverse business decision-making problems as a decision support system. Software will be utilized.
Prerequisites: *EMGT foundation courses*.

EMGT 5915 - Cooperative Education Work Term

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
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).
Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education*.

EMGT 5919 - Independent Study in Engineering Management

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Prerequisites: *Foundation courses, approval of faculty adviser, chair and associate dean*.

EMGT 5931 - Research Topics in Engineering Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Identified by specific title each time course is offered.

EMGT 5939 - Independent Study in Engineering Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 45
Prerequisites: *Foundation courses, approval of a faculty adviser, chair and associate dean*.

EMGT 6837 - Engineering Management Capstone Project

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
This is a project-based course to summarize EMGT learning. The course consists of several projects from diverse EMGT areas and students need to complete group projects utilizing EMGT knowledge and skills.
Prerequisites: *At least 21 hours of graduate work in EMGT*.

EMGT 6838 - Engineering Management Research Project

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This is a project-based course to summarize EMGT learning. The course consists of several projects from diverse EMGT areas and students need to complete group projects utilizing EMGT knowledge and skills.
Prerequisites: *21 hours of graduate work in EMGT.*

EMGT 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Prerequisites: *Approval of faculty adviser, thesis committee and dean*.

Environmental Management

ENVR 5131 - Foundations in Sustainability

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course covers the fundamentals of sustainability, including sustainability definitions and models, triple-bottom-line considerations in business and sustainability concerns in natural resource management and community planning. Students taking this course will obtain an overview of how and where management and environmental management professionals interact with the field of sustainability. **Cross-listed:** MGMT 6131.

ENVR 5132 - Global Sustainability and Strategic Advantage

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course provides a basic understanding of the strategic implications and applications-related to business and institutional sustainability. Using a strategy lens, this course seeks to provide students with an understanding of the key concepts related to the business case of sustainability, tackling topics key to sustainable strategies and social responsibility through a mix of assignments and case analyses.
"cross list MGMT 6334"

Prerequisites: *ENVR 5131*

ENVR 5134 - Oil and Hazardous Materials Spills

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Regulations, contingency planning and spill prevention in the handling of petroleum and hazardous materials.

ENVR 5331 - Environmental Economics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course covers the interaction of environmental problems and the American economy, with a focus on the energy sector. Particular focus examines the compatibility of economic progress with programs of environmental control. **Cross-listed:** ECON 5137

ENVR 5332 - Environmental Law

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Federal and state environmental legislation and case law; concepts of regulation and their application to management decisions.

ENVR 5333 - Air Quality Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Standards for air quality; governmental policies and industrial practices in preventing and controlling atmospheric pollution.

ENVR 5336 - Solid Waste Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Analysis of waste from commercial, institutional and residential sources; emphasis on resource-recovery, control and disposal methods.

ENVR 5437 - Managing Environmental and Ethical Issues

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course addresses a variety of issues related to ethical and environmental matters, and approaches for managing them. It will include an introduction to environmental ethics, and also examine several cases where ethical and/or environmental issues were managed both poorly and well.

ENVR 5532 - Water Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Applied processes in pollution control; emphasis on process selection factors including efficiency, cost, manpower, energy usage and practical utility.
Prerequisites: *Introductory chemistry*.

ENVR 5534 - Permits and Procedures

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Requirements for air, water, solid and hazardous waste and other environmental permits; federal, state and local administrative procedures for obtaining and keeping permits.

ENVR 5537 - Managing Contaminated Sites

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course covers topics related to cleaning up environmental contamination, including pollution prevention; emergency response and reporting; spill containment and cleanup; site assessment; remedial design; working with the public; contractor management; project management and budget; cleanup technologies; and closure and monitoring requirements.

ENVR 5931 - Research Topics in Environmental Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.

ENVR 5939 - Independent Studies in Environmental Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Independent directed study in Environmental Management.
Prerequisites: *Approval of instructor, faculty chair and associate dean required*.

ENVR 6132 - Environmental Impact Assessment

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Practice in and analysis of environmental impact assessment,

environmental auditing and other planning and decision tools.
Prerequisites: *ENVR 5332 and one of ENVR 5333,5337, ENVR 5532, or permission of the instructor*.

ENVR 6133 - Environmental Risk Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
A broad approach to risk management, incorporating risk assessment and communication and concentrating on case studies.

ENVR 6332 - Ecological Issues for the Future

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
The relationship between man and environment in the future; limits to the exploitation of natural resources.

ENVR 6333 - Coastal Resilience

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course introduces the concepts of coastal resilience, including concepts of and management for coastal geomorphology and sea-level rise, coastal erosion, coastal storms, population growth, corporate sustainability, land management, community response and recovery, resilient growth patterns and long-term community planning This course features a number of guest speakers from local organizations, communities and businesses (NASA, Galveston Parks Board, the City of Shoreacres, Texas Center for Beaches and Shores/Institute for Selilient CoastalCommunities at TAMUG, Texas Coastal Watership Programs, Landry's and others) who bring their perspectives on how coastal change influences their particular organizations and how they are responding to those changes.
Prerequisites: *Master's degree candidacy and approval of adviser and dean.*

ENVR 6334 - Sustainability and Strategic Advantage

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course provides a basic understanding of the strategic implications and applications related to business and institutional sustainability. Particular focus is provided involving the use of a strategic lens as related to social responsibility, environmental management, and community and economic development.
Prerequisites: *ENVR 5131 Foundations in Sustainability.*

ENVR 6732 - Environmental Management Practices

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The use of case studies, problems and fieldwork to analyze current practices and situations in environmental management.
Prerequisites: *Approval of instructor and adviser.*

ENVR 6739 - Internship in Environmental Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Supervised internship with a public or private environmental agency; written and oral reports required.
Prerequisites: *Master's degree*

candidacy and approval of adviser and dean.

ENVR 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Master's degree candidacy and approval of adviser and dean*.

Environmental Science

ENSC 1101 - Laboratory for Environmental Science

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 70
Laboratory exercises include water, soil and air testing, field sampling and observations. Optional and required field trips. Not for biology or environmental science majors.
Corequisites: *ENSC 1301*.

ENSC 1301 - Environmental Science I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An introduction to chemical and biological principles relating to ecology, natural resources including animals, plants, water, soil and air. Not for biology or environmental science majors.

ENSC 4336 - Web GIS

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 75
This course provides students with web GIS knowledge needed for managing projects, and teaches students the latest web GIS technologies needed for building modern web GIS apps. This course focuses on Esri's web GIS platform including the following products: ArcGIS Online, ArcGIS Pro, mobile apps, Story Maps, Web App Builder, and 3D web scenes.

ENSC 4337 - Geospatial Technologies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 75
This course focuses on the concepts and applications of Global Positioning Systems (GPS), Satellite imageries, Light Detection and Ranging (LiDAR) and Small Unmanned Aircraft Systems (sUAS). Students will gain the skills needed to acquire and use data from these geospatial technologies in applications such as topographic mapping, flood inundation and vegetation analysis. The course components include lectures, fieldwork and labs.
Prerequisites: ENSC 4307 or equivalent

ENSC 4351 - Hydrogeology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 75
A 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.
Prerequisites: *GEOL 4324.*

ENSC 5135 - Statistical Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fundamental statistical concepts related to the applied industrial and environmental sciences: descriptive statistics; sampling; statistical distributions; confidence intervals, hypothesis-testing; chi-square tests; correlation, simple and multiple linear regression; one-way ANOVA. Use of statistical software packages to analyze and present data.
Prerequisites: *MATH 3308 or equivalent.*

ENSC 5231 - Conservation Biology

Credit Hours: 3 **Lecture:** yes

ENSC 5233 - Ecotoxicology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of environmental pollutants and their effects on natural populations and ecosystems.
Prerequisites: *ENSC 4325 or ENSC 5332 or equivalent.*

ENSC 5234 - Population & Community Dynamics

Credit Hours: 3 **Lecture:** yes

ENSC 5235 - Limnology & Aquatic Biology

Credit Hours: 3 **Lecture:** yes

ENSC 5331 - Wetlands

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Survey of wetland types including coverage of environmental importance of wetlands, interaction of soils, geomorphology and biological community in wetlands formation, wetlands protection and wetlands creation. Field trips are required. Field trips required

ENSC 5332 - Toxicology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Evaluation of the mechanisms of action, risks and effects of exposure to toxic substances.
Prerequisites: CHEM 2323 *and ENSC 4325 or BIOL 4341 or BIOL 4344 or BIOL 4345 or equivalent*.

ENSC 5333 - Fundamentals of Environmental Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 100
The course is designed to provide a broad overview of current environmental problems as well as in-depth discussions on engineering solutions. Includes the fundamentals of mass/energy balance, chemistry, microbiology and physics application to environmental problems. Basic engineering design used in water quality management, water treatment, wastewater treatment, air quality, pollution control and solid/hazardous materials management will be the themes of this course.

Prerequisites: *ENSC 3332 or equivalent.*

ENSC 5431 - Contaminant Fate and Transport

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *CHEM 3332 or equivalent.*

ENSC 5530 - Research Methods: Environmental Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 45
Development of proposal for master's project or thesis research.
Prerequisites: *STAT 5135 or EDUC 6032, adviser approval, and approved research topic*.

ENSC 5531 - Aquatic Toxicity Testing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Theory of toxicity testing, laboratory practice in EPA standard aquatic toxicity tests and statistical analyses.
Prerequisites: *ENSC 4235 or ENSC 5332 or equivalent*.

ENSC 5532 - Hydrology of Surface Water

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *ENSC 3333 or equivalent.*

ENSC 5533 - Environmental Biotechnology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course introduces the concepts and principles of microbiology and plant biology and applications of environmental biotechnology. Topics include stoichiometry, kinetics, mass balance, wastewater treatment, landfill, composting, plant-based phytoremediation, biodegradation and bioremediation of contaminated soils and groundwater.

ENSC 5535 - Sampling and Analysis of Environmental Contaminants

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 70
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.
Prerequisites: *ENSC 3332 or equivalent.*

ENSC 5536 - Environmental Remediation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Soil and groundwater pollutant sources, types, migration; chemical and hydrogeological site characterization; chemical/biological/thermal technologies (pump-and-treat, vapor extraction, bioremediation, and incineration) for the remediation of contaminated sites such as Superfund sites, landfills, brownfields, leaking storage tanks and oil spills.
Prerequisites: *ENSC 3332 or equivalent.*

ENSC 5537 - Hydrology of Groundwater

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Course emphasizes principles of occurrence and movement of groundwater. Factors applying to pollution, estimates of supply, and engineering aspects will be emphasized. Local case studies will be included.
Prerequisites: *ENSC 3333 or equivalent.*

ENSC 5631 - Remote Sensing: Applications in Geology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *ENSC 3333 or equivalent*.

ENSC 5632 - Hazardous Materials in Geological Environment

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *ENSC 5537*.

ENSC 5633 - Environmental Chemodynamics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *ENSC 3332.*

ENSC 5731 - Environmental Organic Chemistry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examine fundamental molecular processes of environmental organic contaminants in natural and engineered systems. Topics include equilibrium partitioning (air-water-soil-biota), sorption to soils and sediments, and transformation processes (oxidation, reduction, hydrolysis, photolysis, biodegradation).

Prerequisites: *CHEM 2323*, *ENSC 3332.*

ENSC 5915 - Cooperative Education Work Term

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Co-op
Fee ($): 100
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.)
Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education*.

ENSC 5919 - Independent Study in Environmental Science

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Prerequisites: *Approval of instructor, chair and associate dean.*

ENSC 5929 - Independent Study in Environmental Science

Credit Hours: 2 **Lecture:** 2 **Lab:** 0
Prerequisites: *Approval of instructor, chair and associate dean*.

ENSC 5931 - Research Topics in Environmental Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
Identified by specific title each time course is offered.

ENSC 5939 - Independent Study in Environmental Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 100
Prerequisites: *Approval of instructor, chair and associate dean.*

ENSC 6731 - Graduate Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
Advanced seminar where an in-depth perusal of an environmental science topic shall be undertaken and a formal paper and presentation shall be completed.
Prerequisites: *ENSC 5530, STAT 5135, and 24 hours completed in an approved graduate program.*

ENSC 6838 - Research Project

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 125
Students complete their research project; write the research paper and present research findings in a public forum.
Prerequisites: *ENSC 5530, 24 hours completed within a CPS and approval of graduate adviser.*

ENSC 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 125
Prerequisites: *Master's degree candidacy as well as approval by adviser, master's committee and dean.*

Exercise and Health Sciences

EXHS 5130 - Epidemiology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Investigation of the cause, transmission, and measurement of disease within a population. Students learn to critically assess and design health research using epidemiological methods.

EXHS 5131 - Applied Exercise Physiology: Neuromuscular

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Neuromuscular function: lecture, discussion and lab experience dealing with the impact of acute and chronic exercise on the neuromuscular and endocrine systems. Emphasis upon physiologic responses to various strength training procedures protocols.

EXHS 5132 - Applied Exercise Physiology: Cardiopulmonary

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Cardiopulmonary function: attention is focused on cardiopulmonary adaptations to acute exercise as well as adaptations associated with regular exercise training. Emphasis on the physiologic responses to metabolic training procedures.

EXHS 5133 - Sports Nutrition

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Study of the effect of nutrition on sports performance and health.
Prerequisites: *HLTH 4303 or other undergraduate nutrition courses.*

EXHS 5134 - Clinical Nutrition

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Exploring the principles and practices of evidence-based clinical nutrition and nutrition interventions in people with chronic diseases.

EXHS 5135 - Social and Behavioral Aspects of Public Health

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Covers the major social and behavioral science theories and models used in health promotion and disease prevention and the development, implementation and evaluation of public health interventions.

EXHS 5136 - Healthcare Management and Policy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course surveys theory and practice in the management and policy sciences applied to the field of public health. Topics include the history of health care delivery and public health, healthcare payment and reimbursement mechanisms, types of health care organizations, the Triple Aim, international health care systems and policy-making decision processes.

EXHS 5137 - Environmental and Occupational Health

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course covers environmental health risks that impact our daily lives, including restaurant inspection and food safety, water and air pollution, bioterrorism, environmentally induced skin cancers, mold and indoor air quality, workplace hazards and environmental control of infectious disease.

EXHS 5138 - Exercise in Chronic Disease: Musculoskeletal and Neurologic

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Exploration of exercise as a preventative, curative and rehabilitative modality in individuals with or at risk for chronic musculoskeletal and neurologic diseases and long-term injuries.

EXHS 5139 - Public Health Communication

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Covers core concepts for planning a communication framework as well as key strategies for educating the public about health issues including understanding and reporting science, communicating for policy and advocacy, health literacy and numeracy, patient-provider communication and emergency communication.

EXHS 5231 - Technology in Human Performance

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Exploring the state-of-the-art concepts, methodologies and equipment utilized in human performance data collection and analysis.

EXHS 5335 - Exercise in Chronic Disease: Cardiopulmonary and Metabolic

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Exploration of exercise as a preventive, curative and rehabilitative modality in individuals with or at risk for chronic cardiopulmonary and metabolic diseases.

EXHS 5931 - Special Topics in Exercise & Health Sciences

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special

Fee ($): 10
Identified by specific title each time course is offered. Topics vary. Course may be repeated for credit with instructor permission. Topics vary may be repeated for credit with permission of instructor.

EXHS 5939 - Independent Study in Health

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Permission of instructor required.

EXHS 6032 - Advanced Seminar in Sports Medicine

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Discussion of current research issues in cardiopulmonary, metabolic, environmental, orthopedic and biomechanical factors related to athletic injuries.

EXHS 6033 - Laboratory Techniques and Research Design

Credit Hours: 3 **Lecture:** 0 **Lab:** 3
Fee Type: Special
Fee ($): 20
Concepts and methodology related to performing exercise science research. Examination of the various statistical methods and testing procedures used in exercise science research and practice.

EXHS 6034 - Screening and Testing in Chronic Disease

Credit Hours: 3 **Lecture:** 2 **Lab:** 1
Screening procedures, exercise tests and other evaluation techniques for people with chronic diseases.

EXHS 6035 - Biostatistics 1

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 20
Overview of the tools for collection, analysis and presentation of data in all areas of public health and biomedical sciences. Topics covered include variable types, the R environment, graphing, assumptions and correlation.

EXHS 6036 - Biomechanics of Sports and Exercise

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Investigation of the kinematics and kinetics of human movement and the way the laws of physics impact sport and exercise. Particular emphasis is placed on laboratory and field measurement techniques used to quantify and evaluate human performance.

EXHS 6037 - Advanced Seminar in Peak Performance

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Examination of the techniques and methodologies to improve performance by enhancing strength, flexibility, speed, power, agility and coordination. Topics vary may be

repeated for credit with permission of instructor.

EXHS 6038 - Biostatistics 2

Credit Hours: 3 **Lecture:** 3
Fee Type: Special
Fee ($): 20
Overview of the tools for collection, analysis and presentation of data in all areas of public health and biomedical sciences. Topics covered include linear and logical regression, t-tests, ANOVA and chi-square.
Prerequisites: EXHS 6035 Biostatistics 1

EXHS 6039 - Research in Human Performance

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Practical experience in research methodologies related to exercise and sports science. Students will participate in ongoing research projects in the Exercise and Nutritional Health Institute including data collection, statistical analysis and presentation. Topics vary may be repeated for credit.

EXHS 6131 - Exercise Pharmacology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will discuss how commonly used medications and supplements can affect exercise performance with chronic disease.

EXHS 6330 - Advanced Seminar in Public Health

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Course is designed to provide a framework for students to integrate a variety of public health topics, issues and skills into a culminating experience. Students must have completed or be concurrently enrolled in Public Health core courses.

EXHS 6639 - Clinical Exercise Practicum

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course provides practical experience in research implementation, testing and exercise prescription for people with chronic diseases, disabilities and long-term injuries.

EXHS 6739 - Graduate Internship

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Fee Type: Special
Fee ($): 30
On-site hours to translate classroom learning to applied settings. Arrangements for internship should be completed by preregistration.
Prerequisites: *24 hours of graduate-level coursework and approval of internship coordinator.*

EXHS 6839 - Master's Project Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Approval of adviser, project director and department chair required.

EXHS 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Approval of adviser, thesis director and department chair required.

Finance

FINC 5131 - The Financial System

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 - Corporate Finance

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Analytical techniques of evaluating real estate investments and exploration of the methods of financing such investments.

FINC 5231 - Quantitative Methods in Finance

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Quantitative methods necessary for the investment generalist including discounted cash flow analysis, statistics and probability, sampling and hypothesis testing, correlation and regression analysis.

FINC 5331 - Treasury Management Practices

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An examination of the general principles and practices used to manage firm liquidity, capital and risk management functions.

FINC 5332 - Financial Statement Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Analyzing, interpreting and forecasting financial statements for credit, investment and internal planning decisions.

FINC 5333 - Personal Wealth Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
A broad approach to major personal finance topics, including investments, insurance, income taxation and auto purchases, retirement and estate planning. Topics will be examined separately and as they relate to one another in financial planning.

FINC 5532 - Budget and Control-Government/ Service Organizations

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Principles and practices of effective budgeting and management control in Government and Service Organizations (GSOs) 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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: Managerial Finance or equivalent

FINC 5931 - Research Topics in Finance

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.

FINC 5939 - Independent Studies in Finance

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Independent directed study in Finance.
Prerequisites: *Approval of instructor, faculty chair and associate dean required*.

FINC 6131 - Commercial Banking

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Structure, management and regulation of the US banking industry from its origins to the present day, present day, including performance measurement, risk management and lending analysis.
Prerequisite: Finance 5133

FINC 6231 - Investment Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Evaluation of capital market theory and rigorous treatment of securities evaluation to determine the probability distribution of expected returns.
Prerequisites: *FINC 5133 or equivalent.*

FINC 6233 - Options and Futures

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *FINC 5133 or equivalent.*

FINC 6234 - Portfolio Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Selection of stock portfolios, measuring returns and performance. Application of concepts acquired in security analysis.
Prerequisites: *FINC 6231 or equivalent.*

FINC 6531 - International Finance

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
International financial operations, including foreign trade financing, risk and credit evaluation and letters of credit.
Prerequisites: *FINC 5133 or equivalent.*

FINC 6533 - Seminar in International Finance

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 (Capstone)

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Investment and financing decisions of individuals and businesses in the presence of taxes and uncertainty--a microeconomic approach.
Prerequisites: *FINC 5133 or equivalent and the last long semester*.

FINC 6739 - Internship in Finance

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Six hours of supervised work experience each week in an approved financial institution or firm.
Prerequisites: *Master's degree candidacy, approval of the associate dean, faculty chair and sponsoring faculty member.*

FINC 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Master's degree candidacy and approval of department chair and dean.*

Serious Games and Simulation

GAME 5436 - Advanced Game Studies

Credit Hours: 3 **Lecture:** 3
Advanced criticism of gaming practices and their impacts on various audiences. Focus on gaming norms, the possible perpetuation of negative trends, the establishment of serious gaming and cultural critique.

GAME 5736 - Character Design

Credit Hours: 3 **Lab:** 3
In this advanced production course, students will learn how to model, rig and animate a 3D character using Autodesk Maya. The course covers 3D techniques used to create environments and character animation. Facial animation will be discussed. May be repeated for credit. Prerequisites: DMST 5132 3D Modeling or COMM 4350 3D Computer Modeling and DMST 5235 Animation or COMM 4351 3D Animation.
Prerequisites: Prerequisites: DMST 5132 or COMM 4350 and DMST 5235 or COMM 4351.

GAME 5936 - Game Development Practicum

Credit Hours: 3
This is a practicum that simulates a professional start-up venture. It provides an environment where students learn through experimentation and feedback from peers and target-marketing sampling. The final will include an investor business plan, game product and product presentation. Prerequisites: 6 graduate credit hours in GAME rubric at UHCL.
Prerequisites: Prerequisites: 6 graduate credit hours in GAME rubric at UHCL.

GAME 6931 - Serious Games and Simulations Capstone

Credit Hours: 3
Students will work on an interdisciplinary team comprised of members with various expertise who will select and create a serious game and generate deliverables typically required in the production of game products in the game industry. Required for two semesters. Prerequisites: At least 24 graduate-level hours in the Games and Simulation program. Yes
Prerequisites: Prerequisites: At least 24 graduate-level hours in the Serious Games and Simulation program at UHCL.

Geography

GEOG 1301 - Modern Physical Geography

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An identification of the geographical dimensions of ecosystems and the earth's physical characteristics as they relate to process, distribution patterns and implications for humans.

GEOG 1302 - Global Geography

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
A broad survey of the world's major culture regions emphasizing basic physical, cultural, economic and political patterns, as well as the processes that have created those patterns. Emphasis on economic development, ethnic conflict and environmental degradation, as well as the changing role of the United States.

GEOG 1303 - World Regional Geography

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of major world regions with emphasis on prevailing conditions and developments, including emerging conditions and trends and the awareness of diversity of ideas and practices found in those regions. Course content may include one or more regions.

GEOG 4314 - Teaching Geography

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
An exploration of best practices for teaching geography in K-12 schools. Topics include: the nature of geographic reasoning; integrating geography in the social studies

curriculum; teaching strategies; assessment.

GEOG 5134 - Introduction to Geographic Information Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
Fee Type: Special
Fee ($): 30
Introduction to Geographic Information Systems theory, capabilities, technology and applications. Topics include GIS data discovery, data structure and management; principles of cartographic visualization; basic spatial analysis and modeling.

GEOG 5135 - Advanced Geographic Information Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
Design and use of geographic information systems to support analytical modeling and geospatial processing for professional development, research and practice. Topics include the automation of geoprocessing and database manipulation, geospatial research, creation of spatial data using remote sensing classification methods, spatial statistics and data mining and geospatial modeling.
Prerequisites: *GEOG 5134*

GEOG 5931 - Research Topics in Geography

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
Identified by specific title each time course is offered. Topics vary may be repeated for credit with permission of instructor.

Geology

GEOL 1103 - Laboratory for Physical Geology

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 75
Hands-on identification of common rocks and minerals; analysis of geological processes associated with different environments.
Corequisites: *GEOL 1303*

GEOL 1303 - Physical Geology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 50
An introduction to physical geology. A study of minerals, rocks, Earth's structures and the geological processes that modify the Earth's surface.

GEOL 3307 - Geographical Information Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course covers the fundamentals of GIS including GIS terminology and architecture, GIS data structures, cartographic principles, data sources and methods of data acquisition, including remote sensing, data manipulation and conversion, query techniques and spatial analysis.

GEOL 4311 - Geology of Texas

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Geological evolution of Texas including physiographic provinces, landforms and subsurface structure. Field trips are required.

GEOL 4323 - Soils in the Environment

Credit Hours: 3 **Lecture:** 3
Study of the environmental aspects of soils including expansive soils, clay minerals, soil contamination and subsurface pathways for pollutants. Laboratory and fieldwork included.
Prerequisites: *Chemistry.*

GEOL 4327 - Natural Disasters

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 35
This course studies the topics of mass wasting, flooding, earthquakes, hurricanes and others, and evaluates various natural disaster data and statistics. It provides a forum to discuss, describe and improve our understanding of human interactions with the physical environment.
Prerequisites: *GEOL 1303 or ENSC 3333.*

GEOL 4356 - Soil and Groundwater Remediation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Chemical, biological, geological principles and applications of various remediation techniques used to clean up contaminated soils and groundwater. **Cross-listed:** CHEM 4356
Prerequisites: *CHEM 3333.*

GEOL 5233 - Environmental Geochemistry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *ENSC 3332 or equivalent.*

GEOL 5331 - Advanced Environmental Geology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Relationships and interactions between pollutants and earth materials, land instability hazards, resource exploitation problems; and other topics of current interest.

GEOL 5531 - Hydrology of Groundwater

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *GEOL 3304, GEOL 4351*

GEOL 5532 - Hydrology of Surface Water

Credit Hours: 3 **Lecture:** 3
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.
Prerequisites: *GEOL 3304 or equivalent.*

GEOL 5631 - Remote Sensing: Applications in Geology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 45
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.
Prerequisites: *GEOL 3304, GEOL 4222, GEOL 4324 or equivalent.*

GEOL 5632 - Hazardous Materials in The Geologic Environment

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *GEOL 5531*.

GEOL 5730 - Planetary Geology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Comparison of the planets and the solid surface satellites with emphasis on the terrestrial planets. Latest space probe data included.
Prerequisites: *GEOL 3304 or equivalent, GEOL 3317, GEOL 4324.*

GEOL 5931 - Research Topics in Geology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.

GEOL 5939 - Independent Study in Geological Sciences

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of instructor, chair and associate dean.*

GEOL 6838 - Research Project and Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *24 hours completed in approved graduate program*.

GEOL 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of adviser, master's committee and dean.*

Health

HLTH 3302 - Health and Physical Education EC-6 Survey

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Overview of the health and physical education information required by core subjects EC-6 teacher. Covers specific material from the Texas State Board for Educator Certification and prepares students for certification exams.

Healthcare Administration

HADM 5032 - Foundations and Management of Healthcare Delivery

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will provide the student with an understanding of the leadership, organization and financing of health services in the United States; will help the student begin to become a healthcare leader; and will identify and discuss current trends in health care delivery, management and operation of hospitals, physician practices and managed care companies.

HADM 5033 - Leadership of Organizations in Healthcare Administration

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Development of leadership potential by strengthening abilities in visioning, interpersonal team skills, negotiation, decision analysis and conflict management. Use of self-assessments and group projects with outside clients. Application of organization theory and concepts to health services organizations. Topics include systems thinking, organization structure and design, organizational effectiveness and change management.

HADM 5131 - Healthcare Human Resources Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Emphasis is placed on financial concepts and practices specific to the healthcare industry, ratio analysis payment methodologies, bundled pricing, healthcare budgeting, cost-volume profit, variance analysis and capital financing in the healthcare industry.
Prerequisites: HADM 5232 *or equivalent.*

HADM 5234 - Healthcare Ethics, Values, and Social Responsibilities

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: HADM 5432*, or equivalents.*

HADM 5331 - Planning Healthcare Services

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 5333 - Healthcare Economics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Students will apply the basic tools of microeconomics to issues in healthcare policy and management. Economic concepts relevant to healthcare managers will be examined such as analyses of the demand and supply of healthcare goods and services, the role of health insurance and healthcare financing, marketing failure and the need for government intervention in healthcare markets, and new initiatives to improve population health.

HADM 5334 - Marketing Healthcare Services

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will provide students with the knowledge and skills needed to effectively market health care products and services. The course will focus on analyzing the health care marketing and management environment, identifying the primary marketing problems facing health care organizations and developing compelling and creative strategies for solving these problems. Fundamental concepts of marketing such as

segmentation, targeting, positioning, customer satisfaction and perceived value will be reviewed in the context of health care marketing. Specific health care marketing tools will be presented to help in identifying problems and developing strategies.

HADM 5335 - Planning and Marketing Healthcare Services

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
This course will provide students with the knowledge and skills needed to effectively plan and market healthcare products and services. The course will focus on identifying and analyzing marketing and planning problems faced by healthcare-related organizations. Topics to be covered: SWOT analysis, marketing mix, market segmentation, marketing research, etc. This comprehensive course is designed to help students in developing compelling and create strategies for solving these problems. Fundamental concepts of marketing and specific health care marketing tools for community health needs assessment and planning as well as analysis of the requisites, demands, processes and methods needed in future health services are studied.

HADM 5391 - Research Topics in Healthcare Administration

Identified by specific title each time course is offered.

HADM 5431 - Healthcare Information Technology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

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 5432 - Healthcare Predictive Analytics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Provides the knowledge and skills necessary to perform successfully in a healthcare leadership role in an increasingly information-dependent environment. Using statistical software, students will learn to manipulate and analyze data to make informed financial, operational and public health decisions. By the end of the course, students will be able to take large datasets and predict various health outcomes using demographic and clinical indicators with the end intent of recommending actions to be taken for clinical, operational and financial gain.

HADM 5433 - Introduction to Public Health

Credit Hours: 3 **Lecture:** 3 **Lab:** 1

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 US 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 5531 - Group Practice Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 patient-centered medical home and physician pay for performance.

HADM 5731 - Healthcare Quality

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
One hour credit special topics in healthcare management to be identified each time the course is offered.

HADM 5939 - Independent Studies in Healthcare Administration

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Independent directed study in Healthcare Administration.
Prerequisites: *Approval of instructor, faculty chair and associate dean required.*

HADM 6132 - Legal Aspects of Healthcare Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
To acquaint the student with the legal issues in health services administration by study of the legal system, licensing, liability and professional ethics.

HADM 6235 - Integrated Delivery Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Acquaints the student with managed care terminology, contracting for providers and payors, ACOs, shared risk contracting, value-based purchasing, clinical integration, government programs, legal issues and provider reimbursement.

Prerequisites: HADM 5032 *or equivalent.*

HADM 6236 - Healthcare Facilities Operations

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Management, clinical professionals 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.
Prerequisites: *One other HADM course, or permission of the HADM Director.*

HADM 6539 - Graduate Residency in Healthcare Administration

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 75
Permission of instructor dependent upon language requirement, Oral TOFEL (if student does not hold a bachelor's 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.
Prerequisites: *Master's degree candidacy, HADM 6519, approval of dean and approval of instructor.*

HADM 6738 - Seminar in Healthcare Policy and Leadership

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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, fieldwork, case presentations and simulation, students will analyze situations and present their findings orally and in written form.
Prerequisites: *Must be taken in the student's last long semester or with permission of the Chair.*

HADM 6739 - Internship in Healthcare Administration

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Must have completed at least one semester in the program. 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.
Prerequisites: *Master's degree candidacy and approval of adviser and dean.*

HADM 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Prerequisites: *Master's degree*

candidacy and approval of adviser and dean.

HADM 6969 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Master's degree candidacy and approval of adviser and dean.*

History

HIST 4325 - Studies in Middle Eastern History

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Surveys important topics in Middle Eastern history. Topics vary may be repeated for credit with permission of instructor.

HIST 5031 - Research and Methods Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 5
Research methods and techniques essential to the craft of history, including historiography, bibliography, modes of analysis and the use of primary and secondary sources. Offered only in the fall semester. This course is required for completion of the master's degree in History.

HIST 5130 - U.S. and the Soviet Union

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Exploration of conflict with the Soviet Union with emphasis on the domestic impact in the United States.

HIST 5131 - Studies in Early American History, 1607-1815

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 5
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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, 1815-1860

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 5
Examination of specific problems and themes in 19th-century American politics, society, and culture. Topics vary. May be repeated for credit with permission of instructor.

HIST 5230 - Reel Europe

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
Examination of the cultural movements and political developments through European cinema. Our filmic analysis will draw on historical

documents, fiction and political manifesto as a way of understanding broad movements such as the rise of modern technology, artistic modernism, and the political movements of communism, fascism and terrorism. Students will develop critical and analytical skills through the use of both primary and secondary sources in order to achieve an understanding of the twentieth-century cultural history.

HIST 5232 - U.S. Social Movements

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 5235 - Studies in Modern U.S. History

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Exploration of a period or theme in U.S. History from the 1870s to the present. Topics vary; may be repeated for credit with permission of instructor.

HIST 5236 - Studies in History and Film

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
Exploration of 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 5237 - Nazi Cinema and the Third Reich

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
Exploration of the Third Reich through film and cultural artifact. Film was a medium which preserved old notions of identity, while offering new instruments of consensus building. Studies themes such as fascism, gender, violence, national identity, anti-Semitism and mass culture.

HIST 5238 - Weimar Cinema and the Great War

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
Study of selected German films from 1918 to 1931 as contributions to debates about rationality, gender, violence, national identity and the human condition shaped by experiences of the first World War. A cross-disciplinary seminar that draws equally on film theory and history, psychoanalysis, philosophy and cultural criticism.

HIST 5239 - The Vietnam War in Film

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
Examination of the Vietnam War in U.S. film and cultural artifact. Traces intersection of fact and fiction, evident in decades following the Vietnam War.

Explores notions of mourning and memory and the way they relate to post-war experience.

HIST 5330 - Memory and Representation in Holocaust Cinema

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
Exploration of Holocaust memory and representation in American and European cinema. Students will use primary and secondary sources, including history, film, art and philosophy.

HIST 5332 - Early American Colonies

Credit Hours: 3 **Lecture:** 3
Comparative exploration of the beginnings of European colonization in the Americas ranging from the late-15th through 17th centuries.

HIST 5333 - British America

Credit Hours: 3 **Lecture:** 3
Examines the evolution of colonial life in North America and the Caribbean from the late-17th century through the end of the Seven Years' War in 1763.

HIST 5334 - Colonies in Revolution

Credit Hours: 3 **Lecture:** 3
Explores the origins, progress, and consequences of the American Revolutionary War, with emphasis on how the conflict transformed the lives of North America's diverse inhabitants.

HIST 5335 - Witchcraft in the Atlantic World

Credit Hours: 3 **Lecture:** 3
Examines witchcraft beliefs and witch-hunting practices in the early modern Atlantic World, including an in-depth case study of 17th century New England.

HIST 5336 - Early American Encounters

Credit Hours: 3 **Lecture:** 3
Explores cross-cultural encounters between American Indians and Europeans in North America from the 15th through 19th centuries.

HIST 5339 - The Human Experience of War

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Focus on a single historical war from the perspective of human experience rather than institutions, leadership and strategy. Topics vary may be repeated for credit with permission of instructor.

HIST 5430 - Studies in Women's History

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 5
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 and Gender Studies course.

HIST 5431 - Biography in European History

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
A seminar which examines the Reformation movement in 16th-century Europe.

HIST 5434 - Studies in Latin American History

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 5
Critical examination of major issues and themes in Latin American history. Topics vary and the course may be repeated for credit with permission of instructor. Topics vary may be repeated for credit with permission of instructor. Offered only in the spring semester.

HIST 5438 - Islamic Empires in World History

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Explores the place of the major Islamic empires from the 7th century to the 20th as the inheritors and interpreters of Persian-Greco-Roman traditions.

HIST 5439 - Studies in Middle Eastern History

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Critical examination of major issues and themes in Middle Eastern and Islamic history. Topics vary and course may be repeated for credit with permission of instructor. Topics vary; may be repeated for credit with permission of instructor.

HIST 5931 - Research Topics in History

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered. Topics vary; may be repeated for credit with permission of instructor.

HIST 5939 - Independent Study in History

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Permission of instructor required.

HIST 6839 - Master's Project Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Approval of adviser, project director and department chair required.

HIST 6909 - History Comprehensive Exam

Credit Hours: 0 **Lecture:** 0 **Lab:** 0
Comprehensive exam for students following Option 3 degree requirements.

HIST 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Approval of adviser, thesis director and department chair required.

Human Resource Management

HMRS 5131 - Human Resource Management Processes

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Theory and processes of effective development and management of human resources in organization.

HMRS 5231 - Legal Environment of Human Resource Management I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 5235 - Project Management for HMRS

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course provides students with the tools for planning, setting budgets, tracking progress, and assessing the results of a human resource management project, including organizing project teams and using human resource metrics. This course has been designed to prepare students to introduce new HR initiatives, implement new development programs, "sell" new HR requirements, and institute new systems. Through basic Project Management skills, students will be able to create a sustained desired change, to learn and apply Intentional Change Theory, and to implement communication strategies developed through an understanding of multi-level complex systems.

HMRS 5433 - Compensation and Benefits

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Review and analysis of traditional and nontraditional compensation benefit systems.

HMRS 5435 - Employee Planning, Staffing and Selection

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *HMRS 5131.*

HMRS 5437 - Human Resource Information Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Principles and procedures used in the development of information systems to aid human resource decision making.

HMRS 5531 - Training and Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An overview of personnel training and development in organizations to include program development.

HMRS 5533 - HR Metrics and Performance Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will provide the HR professional with the tools to become a true strategic partner with upper management. Students will learn how to use quantitative measures and performance management techniques to increase productivity, address problems and opportunities and have a strategic impact on the organization.
Prerequisites: *HMRS 5131.*

HMRS 5931 - Research Topics in Human Resources

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course if offered.

HMRS 5939 - Independent Studies in Human Resources

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Independent directed study in Human Resources.
Prerequisites: *Approval of instructor, faculty chair and associate dean required.*

HMRS 6735 - Seminar in Human Resource Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *Last semester.*

HMRS 6739 - Internship in Human Resources

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Supervised internship with a public or private agency; written and oral reports required.
Prerequisites: *Master's degree candidacy and approval of adviser and dean.*

HMRS 6839 - Master's Project Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Master's degree candidacy and approval of adviser and dean.*

HMRS 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Master's degree candidacy and approval of adviser and dean.*

Humanities

HUMN 5030 - History of Ideas I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
This course is a graduate seminar exploring a major figure or theme in philosophy, literature, religion or science in the period of thought from ancient through medieval.

HUMN 5032 - History of Ideas II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
This course is a graduate seminar exploring a major figure or theme in philosophy, literature, religion or science in the period of thought from modern to recent.

HUMN 5034 - Global Humanities I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
Through an interrogation of epics, poems and philosophical texts, this course enables students to arrive at alternative readings of pre-modern civilizations and worlds.

HUMN 5035 - Texts and Images III

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
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 5036 - Global Humanities II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
This course uses cultural theory and literary/ filmic texts to help students develop a critical understanding of contemporary issues in the geopolitics of identity.

HUMN 5233 - Art of Ancient Iraq and the Near East

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Art History. The art, history, and culture of Ancient Iraq and the Near East. Topics include prehistoric art, state formation, ideology, and empire. **Cross-listed:** ARTS 5233.

HUMN 5234 - Art of the Ancient Greek World

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An introduction to art history and culture of ancient Greece, from the Bronze Age through the Hellenistic period. **Cross-listed:** HUMN 5234.

HUMN 5235 - Museums and the Public

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Art History. This course introduces students to the theory and operations, including strategies of display, collection management, accessions and public relations of fine arts museum. The course will include visits to local gallery and museum spaces. Yes, with approval from the instructor **Cross-listed:** ARTS 4364 and HUMN 4364

HUMN 5236 - Studies in Film

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
In-depth analysis of film texts from a topical, generic, historical perspective. Emphasis on theoretical approaches and individual research. Topics vary. may be repeated for credit with permission of instructor. **Cross-listed:** HUMN 4326

HUMN 5237 - Studies in Art History

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 60
Art History. Studies in art history, art theory and criticism. Topics vary; may be repeated for credit.

HUMN 5238 - World Cinema

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course empowers students to read cinema through the lens of feminist film theory at once addressing the spectacular, global reach and intimate personal experience of movies.

HUMN 5239 - Indian Cinema

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course aims to make its participants sophisticated readers and critics of Indian cinema by bringing into focus the major historical and cultural movements in the genre.

HUMN 5336 - Philosophy in Religion

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
In-depth examination of issues in contemporary philosophy of religion. Emphasis on application of the logical tools of recent analytic philosophy to traditional questions relating to religion.

HUMN 5430 - Issues in Art History I: Ancient to Modern

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
Art History. This course is a graduate-level investigation of the visual culture of the ancient Mediterranean world. Through the study of the artistic works of prior civilizations, students will develop skills in critical thinking, visual analysis, speaking and writing about visual culture and society.

HUMN 5431 - Issues in Art History II: Renaissance to the Present

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Fee Type: Special
Fee ($): 25
Art History. This is a lecture and discussion-based course which will serve as an introduction to critical issues of the discipline of art history. Course content will not be limited by geography or chronology, although the focus will be on the visual arts from the Renaissance to the present; nor will this be a continuous survey. Instead, the course will examine case studies within major themes in order to develop critical modes of thinking, speaking and writing about art.

HUMN 5732 - Seminar in Women's Studies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An advanced course in Women's and Gender Studies. Analysis and application of feminist theory across multiple disciplines. **Cross-listed:** HUMN 4372, PSYC 4372, and PSYC 5732.
Prerequisites: *Any other Women's and Gender Studies course.*

HUMN 5931 - Research Topics in Humanities

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by a specific title each time the course is offered. Topics vary; may be repeated for credit with permission of instructor.

HUMN 5939 - Independent Study in Humanities

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Permission of instructor required.

HUMN 6639 - Exhibition Capstone

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
The exhibition option allows Humanities master's degree students with a focus on studio arts to complete their work in a manner that best suits the plan of study and prepares them for careers in program-related areas. Work in the mode of exhibition follows a traditional, historical understanding of the Humanities experience, encouraging interdisciplinary study and allowing students to demonstrate expertise in their field(s) of interest.

HUMN 6739 - Internship

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Supervised internship in approved internship setting. Comprehensive written report required.

HUMN 6839 - Master's Project Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Approval of adviser, project director and department chair required.

HUMN 6909 - Humanities Comprehensive Exam

Credit Hours: 0 **Lecture:** 0 **Lab:** 0
Comprehensive exam for students following Option 4 degree requirements.

HUMN 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Approval of adviser, thesis director and department chair required.

HSAF-HSH Affiliated Studies

HSAF 5030 - Study Abroad

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
For graduate students who are engaged in a study abroad experience not organized through UHCL. Yes

Information Systems Administration and Management

ISAM 5030 - Fundamentals of Business Programming Applications

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 60
This course introduces fundamental principles in business applications programming using a high-level, business-oriented language. It includes topics in programming logic, design methodologies, graphical user interface programming and handling files. It also covers an introduction to object-oriented programming concepts. Includes numerous hands-on assignments.

ISAM 5330 - Management Information Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 60
Principles and procedures used in the development of information systems. The course includes a survey of hardware, software, network, database, e-commerce, functional information systems, organizational concepts, system analysis techniques and the system development life cycle. Includes a group project. (Previously ISAM 5631.)

ISAM 5331 - Fundamentals of Databases and Business Intelligence

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
The topics covered include the following: (1) database concepts such as database models, modeling techniques and normalization; design, development, and maintenance of a relational database; formulation of commands to insert and update data, retrieve information, generate reports from a database; (2) business intelligence concepts such as business intelligence architecture; schema of a data warehouse; online analytical processing; big data; NoSQL databases. Includes numerous hands-on assignments. **Cross-listed:** ACCT 5333.
Prerequisites: *ISAM 5030 or 6 hours of college-level coursework in programming.*

ISAM 5332 - Data Warehousing and Data Mining

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Fee Type: Special
Fee ($): 65
The course provides the knowledge and skills to design and develop a data warehouse, as well as extract strategic business intelligence through the application of data mining tools and techniques. It examines phases of the data warehouse design process, and data aggregation. Includes numerous hands-on assignments.
Prerequisites: *ISAM 5330 and ISAM 5331 or equivalent.*

ISAM 5335 - Advanced Applications Development with Visual Basic

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 60
The course covers concepts, tools and techniques used in developing Windows-based applications. It also presents structured programming, object-oriented programming and the use of graphical user interfaces. Includes numerous programming assignments. The coursework requirements also include a VB-based Microsoft professional certification.
Prerequisites: *ISAM 5030 or 6 hours of college-level programming courses.*

ISAM 5338 - Internet Applications Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 60
The course focuses on the design and development of business-oriented web applications using modern web technology standards, languages, and tools. Client-side design and development topics include markup languages, style, and front-end frameworks. Server-side development topics cover HTTP request routing, server-side processing, authentication and security, web services and the use of databases. Includes numerous hands-on assignments. Prerequisites: ISAM 5030 or 6 hours of college level programming courses. Prerequisites: ISAM 5030 or 6 hours of College level programming courses.

ISAM 5339 - Fundamentals of Computer Networking

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
The course introduces OSI and TCP/IP layered architectures and provides a detailed coverage of protocols in data link, network, transport and application layers. It gives a thorough coverage of addressing concepts and methodologies in computer networks, provides a detailed discussion of switched Ethernet networks, VLANs and the Spanning Tree Protocol. Includes numerous laboratory experiments using state of-the-art computer networking equipment.
Prerequisites: *ISAM 5030 or 6 hours of college-level course work in computer programming.*

ISAM 5430 - Advanced Applications Development with C#

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
This course covers the following topics: application design and

development using object-oriented techniques, the management of data, memory and other application resources, application communication and presentation concepts and deployment, security and networking issues in applications. Completion of a professional certification exam is a required part of the course. (Formerly ISAM 5334 and ISAM 5340: credit will be given for only one of the courses ISAM 5334, ISAM 5340 or ISAM 5430.)
Prerequisites: *ISAM 5030 or 6 hours of college-level course work in computer programming.*

ISAM 5431 - ERP System Concepts and Practices

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
This course examines the integrated nature of business processes and how ERP systems can be configured to handle those processes. Students receive hands-on experience using SAP's current enterprise software.
Prerequisites: *ISAM 5330 or equivalent.*

ISAM 5437 - Wireless Networks

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
This course covers wireless network technologies used in computer networking. The topics covered includes wireless standards, radio frequency fundamentals, antennas, wireless encoding techniques, wireless LAN topologies, wireless MAC architecture, design, troubleshooting and security of wireless networks. The course includes numerous hands-on experiments using state-of-the-art equipment. The course requires the completion of professional certification.
Prerequisites: *ISAM 5339 or equivalent.*

ISAM 5439 - Computer Network Security

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
The course covers security threats to computers and computer networks and methods to counter security threats including network firewalls; and designing, deploying and administering firewalls in IT organizations. Various firewall concepts such as VPNs, DMZs, NAT and intrusion detection methods are also explained. Includes numerous hands-on laboratory experiments using state-of-the-art firewall systems.
Prerequisites: *ISAM 5339*.

ISAM 5632 - Advanced Database Applications Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
The course covers advanced commands and techniques to design, develop and maintain a database; insert and update data in a database; retrieve information and generate reports; develop and implement database objects to manage, control and administer database processing. Includes numerous hands-on assignments. The coursework

requirements also include Oracle SQL and Oracle PL/SQL certification.
Prerequisites: *ISAM 5030 or 6 hours of college-level course work in computer programming, and ISAM 5331 or equivalent.*

ISAM 5633 - Oracle Database Administration

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
This course introduces students to Oracle Database Administration. The topics covered include architecture of an Oracle database, installing Oracle database management system, creating a database, creating and managing database users and roles, database backup and recovery, database performance tuning and database administration. Includes numerous hands-on assignments.
Prerequisites: *ISAM 5632 or equivalent.*

ISAM 5635 - Systems Analysis and Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 60
This course provides a step-by-step approach to developing computer-based information systems. It covers topics such as systems development life cycle; systems development methodologies; system requirements determination and analysis; user-interface design; programs design; and system architecture. The course includes a comprehensive group project. It should be taken during the final semester of MS/MIS degree curriculum.
Prerequisites: *ISAM 5330, ISAM 5331 or equivalents.*

ISAM 5636 - Advanced Computer Networking

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
The course covers skills to design and administer computer networks. It includes network routing protocols, packet filtering concepts, network and port address translation methods, wireless networks, new generation IP addressing and wide area network protocols. Includes numerous hands-on lab experiments using state-of-the-art equipment. The course requirements include CCNA certification.
Prerequisites: *ISAM 5339 or equivalent.*

ISAM 5637 - Information Systems Project Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
This course covers the concepts, tools and techniques used in managing information systems projects. It includes project integration, scope, time, cost, quality, human resources, communication, risk and procurement management. Includes a comprehensive group project using current information systems software tools.
Prerequisites: *ISAM 5330 or equivalent.*

ISAM 5638 - Advanced Applications Programming With Java

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 60
This course covers object-oriented programming using the Java programming language. It presents topics such as design methodologies, graphical user interface programming, applets, handling exceptions and I/O streams. Includes numerous hands-on programming assignments.
Prerequisites: *ISAM 5030 or at least 6 hours of programming courses.*

ISAM 5639 - SQL Server Database Administration

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 65
This course covers the architecture of a SQL Server database management system, creating a database, creating and managing database users and roles, database backup and recovery, database performance tuning and database administration. Includes numerous hands-on assignments.
Prerequisites: *ISAM 5331 or equivalent.*

ISAM 5731 - Information Systems Audit and Security

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 60
Discussion of the audit process, internal controls as they relate to technology and business process documentation. Study of business processes, deployment and management of technology resources, risk assessment and change management, IT networks and IT governance. Extensive hands-on experience detecting fraud using generalized audit software (IDEA). Discussion of computer forensics and other current topics related to IT security. Written communication skills are emphasized through the preparation of audit reports based on findings from fraud detection assignments. Covers topics tested in the Certified Information Systems Auditor (CISA) exam. **Cross-listed:** ACCT 5335
Prerequisites: *ISAM 5330 or equivalent.*

ISAM 5734 - Advanced Data Analytics in ERP System

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
Fee Type: Special
Fee ($): 65
This course covers topics such as data visualization, data analysis, reporting and predictive analytics. Special attention will be given to discovering trends and other patterns from data. A significant portion of this course will deal with the use of SAP's current enterprise software systems. Data will be analyzed using existing software packages and currently accepted analytical models.
Prerequisites: *ISAM 5330 or equivalent.*

ISAM 5735 - Data Analytics Application Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
Fee Type: Special

Fee ($): 60
The course provides students with a foundation of developing data analytics applications by using the most in-demand programming language and business intelligence tools. The course also includes a significant number of hands-on computational projects to help the students gain a thorough understanding of the practice of dealing with real-world big data, as well as prepare the students for different roles of data analytics application developers.
Prerequisites: *ISAM 5330 and 5331 or equivalents.*

ISAM 5931 - Research Topics in Management Information Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 60
Identified by specific title each time course is offered.

ISAM 5939 - Independent Studies in Management Information Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Independent directed study in Management Information Systems.
Prerequisites: *Approval of instructor, faculty chair and associate dean required.*

ISAM 6739 - Internship in Management Information Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Supervised work experience related to management information systems with an approved business, industrial firm or governmental agency. Written and oral reports as required.
Prerequisites: *Master's degree candidacy, completion of foundation courses and at least 18 hours of M.S. in MIS required courses, and approval of academic adviser, faculty chair and associate dean.*

Instructional Technology

INST 3313 - Survey of Instructional Technologies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
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.
Prerequisites: *Basic computer literacy.*

INST 5031 - Assistive-Adaptive Computer Applications

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course teaches the discipline and laws related to special education. Classroom models and resources will

be created to support the design of instruction for students with disabilities.

INST 5035 - Creating Digital Resources

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
In this introductory course, participants will learn about innovative trends in the field of instructional and communication technologies. Participants will create instructional products.
Prerequisites: *Basic computer literacy.*

INST 5130 - Learning Theory and Instruction

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Participants will identify and describe the salient characteristics of learning theories and cognitive science. Participants apply each theory to one or several learning environments.

INST 5131 - Trends and Issues in Instructional Design and Technology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
In this introductory course, participants will review the history and trajectory of instructional design and technology including media use, diffusion of innovations, principles, policies and regulations affecting implementation. Method: case studies and team projects.
Prerequisites: *Basic computer literacy.*

INST 5135 - Multimedia Design Applications

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Participants will apply systematic design procedures for training or instruction based on a combination of practical experience and instructional systems design theory and research. Participants will evaluate instructional delivery methods including instructor-led, print and diverse electronic delivery systems.

INST 5433 - Project Management for Instructional Projects

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course introduces basic project management processes including project phases and organization, client expectations, communications, time management, cost estimation, quality standards and risk management. Students apply project management principles to instructional projects.

INST 5435 - Grant Writing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course prepares learners to design and develop successful instructional grant proposals. Students will design project development and research plans for a proposed project of their choosing. Students will also create supporting material in order to submit a complete proposal narrative and budget for their proposed project. Students will explore resources for identifying instructional grant opportunities.

INST 5535 - Internet for Instruction

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *Basic computer literacy.*

INST 5635 - Instructional Web Design and Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 webpages.

INST 5735 - Advanced Web Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *INST 5635*.

INST 5835 - Digital Video Production for Educators and Trainers

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course covers basic digital video preproduction, production and post-production. Students will develop and use a final edited video in either a multimedia presentation, on a website or in an instructional video.

INST 5919 - Independent Study in Instructional Design and Technology

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Prerequisites: *Approval of instructor and associate dean.*

INST 5931 - Research Topics in Instructional Design and Technology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by title each time course is offered.

INST 5939 - Independent Study in Instructional Design and Technology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of instructor and associate dean.*

INST 6031 - Applications of Technology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Use interactive, communication, administrative and educational web-based software. Develop blogs, online courses, instructional videos, podcasts, rubrics, online tests, surveys, eportfolios, and organize information. Describe the relationship between educational technology and formal learning environments.
Prerequisites: *Basic computer literacy.*

INST 6037 - Advanced Technology Applications

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
In this course, the student creates a variety of multimedia-related concepts, including desktop publishing, video production, web design, multimedia development and graphic design and animation.
Prerequisites: *Basic computer literacy.*

INST 6137 - Technology and e-Learning

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course links current research on human cognition with technological advances. This course also addresses how technology-rich learning environments must be grounded in educational psychology and cognitive science.

INST 6237 - Advanced Instructional Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course covers a variety of analysis techniques, design theories and design models.
Prerequisites: *INST 5333*.

INST 6337 - Motivational Design of Instruction

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course 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 Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the systematic design and delivery of interactive distance education 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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course covers configuring, maintaining and troubleshooting hardware, software, computer network, and peripheral devices; the availability of emerging technologies and telecommunications; multimedia; 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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This is an 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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course provides 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 - Instructional Technology Practicum

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
This is a supervised practice in educational computing under the guidance of a selected professor.
Prerequisites: *Approval of associate dean, completion of all Professional Education Core courses, Instructional Technology Core courses, and at least one INST elective from the plan.*

INST 7530 - Learning Theory and Instruction

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on salient characteristics that differentiate learning environments designed with prominent contemporary theories of learning and cognitive science.
Prerequisites: Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI)

with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor.

INST 7533 - Systemic Design of Technology-Based Instruction

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the application of systemic procedures for designing training and instruction based on a combination of practical experience and instructional systems design theory and research. Secondary emphasis on methods for instructional delivery, including instructor-led, print, computer and electronic network-based systems.
Prerequisites: Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor.

INST 7535 - Digital Video Production for Educators

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on "Digital Video" pre-production, production, and post-production.
Prerequisites: Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor.

INST 7537 - Technology and eLearning

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on how technology-rich learning environments must benefit from a firm grounding in educational psychology and cognitive science. It links current understanding of human cognition with advances in computer technologies.
Prerequisites: Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor.

INST 7538 - Interactive Distance Learning

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the systemic design and delivery of interactive distance education programs based on the use of the Internet and related telecommunication technologies.
Prerequisites: Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor.

Legal Studies

LEGL 5131 - Legal Concepts for the Business Professional

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.

Literacy Language Arts and Literature Studies

LLLS 4311 - Foundational Literacy Skills

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 4312 - Literacy Issues of Secondary Students

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
Theories and approaches for teaching reading in intermediate and high school. Field Experiences required.

LLLS 4344 - Literacy Methods for EC-6

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
This course examines the application of theories and strategies for teaching the language arts for EC-6. Field Experience is required.
Prerequisites: *Students must complete LLLS 4311 and TCED 4303 prior to taking this course.*

LLLS 4345 - Survey of Children's Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Survey of literature for children focusing on titles appropriate for grades EC-8 students.

LLLS 4346 - Literacy Methods for 4-8

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
This course examines the application of theories and strategies for teaching the language arts for 4-8. Field Experience is required
Prerequisites: *Students must complete LLLS 4311 and TCED 4304 prior to taking this course*.

LLLS 4351 - Content Area Literacy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Survey of current reading and writing development in content subjects.

LLLS 4352 - Middle Grade, Young Adult Literature, and Reading

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Selection and use of literature for adolescents in reading instruction, focusing on titles appropriate for intermediate and high school students.

LLLS 4364 - Methods in Secondary English/ Language Arts

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
Implementation of instructional plans and teaching strategies. Review of current research, theories and exemplary practices of teaching secondary English/Language Arts. Field Experiences required
Prerequisites: *Admission to Teacher Education.*

LLLS 5010 - Professional Preparation Seminar for Reading Specialists

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 15
This course is designed to assist students in the Reading Specialist certification plan to understand the state certification standards for successful entry into their chosen fields. Completion of the course is dependent upon candidates passing all state assessments required for their degree/certification plans.
Prerequisites: *An approved, signed degree plan on file in the COE.*

LLLS 5131 - Integrating the Language Arts

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
This course discusses advanced approaches to literacy instruction in the EC-8 classroom. Field Experience is required

LLLS 5133 - Foundations of Reading

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course discusses the historical, philosophical, physiological and psychological foundations of reading.

LLLS 5134 - Developmental Reading Programs for EC-8

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course discusses the structuring of developmental reading programs, emphasizing alternative approaches.

LLLS 5135 - Developmental Reading Programs for Secondary Schools

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
This course discusses the 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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines current trends and issues in the literature published for children and young adults.

LLLS 5531 - Critical Reading and Thinking

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is about applying higher order thinking skills to reading in literature and the content areas.

LLLS 5534 - Foundations in Secondary Literacy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is about theories and practices of secondary reading and writing, reader response theory and physiological and psychological foundations of secondary reading in grades 4-12.

LLLS 5633 - Teaching Methods for English/ Reading Language Arts for Grades 4-8

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
This course is about the implementation of English/reading/language arts teaching methodologies for grades 4-8, based upon the application of theory and practice. Field experience is required for non-certified students.

LLLS 5634 - Teaching Methods for English/ Reading Language Arts Grades 7-12

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
This course is about the implementation of English/reading/language arts teaching methodologies for grades 7-12, based upon the application of theory and practice. Field Experiences required
Prerequisites: *Admission to Teacher Education Program.*

LLLS 5635 - The Teaching of Writing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
This course is about teaching writing skills and improving student writing in grades K-12, using a process approach; instructional strategies based upon theory and current research.
Prerequisites: Admission to Teacher Preparation Program.

LLLS 5738 - Foundations of Early Literacy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is about the 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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by title each time course is offered.

LLLS 5939 - Independent Study in Literacy, Language and Library Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of instructor and associate dean.*

LLLS 6331 - Sociolinguistic Applications to Reading

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
This course examines sociolinguistic models and concepts, the study of language in educational settings and language differences applied to reading instruction.

LLLS 6332 - Foundations of Early and Secondary Literacy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines theories and practices of literacy development from the early grades through the secondary grades.

LLLS 6333 - Genre Studies in Children's and Young Adult Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the identification, exploration and evaluation of the various genres, reading and writing, in children's and young adult literature and how genre studies can be utilized in reading and writing programs that motivate and engage all readers and writers.

LLLS 6639 - Leadership in Clinical Practices in Assessment of Literacy Tasks

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
This course includes advanced techniques in assessment and strategies for literacy intervention. Includes practice in literacy supervision. Field Experiences required

LLLS 6732 - Assessment and Remediation of Reading and Language Arts Literacy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
This course is practice in assessment and remediation of literacy, including simulated and laboratory practice in administration, interpretation and evaluation of literacy assessment instruments and practice with a multiplicity of reading/language arts strategies for literacy development, including dyslexia and related disorders.
Prerequisites: *Six hours of Reading course work.*

LLLS 6839 - Practicum in School Literacy Practices

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
Supervised field experiences with

literacy teachers in EC-12 accredited schools.
Prerequisites: *12 hours reading coursework including LLLS 6732.*

LLLS 7034 - Professional Writing and Communications

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course addresses public writing and presentation skills. The course begins with the study of creating case studies as well as reading, interpreting and discussing case studies. Part 2 focuses on dissertation writing and other textual forms including press releases, speeches, newsletters and grants. Part 3 focuses on developing skills for speaking and listening effectively with different audiences, as well as the effective use of technology and presentations. Part 4 focuses on managing interactions with the media, e.g., interviews for print, radio and television. Teaching strategies would include case studies, readings, simulations and skills development experiences.
Prerequisites: Prior to enrolling in this class, candidates must be admitted to the Doctorate of Education in Curriculum and Instruction (EDCI) with an emphasis in STEM Education and/or obtain permission from the EDCI program coordinator and the course instructor.

Literature

LITR 2321 - British Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
A survey of the development of British literature from the Anglo-Saxon period to the present. Students will study works of prose, poetry, drama and fiction in relation to their historical, linguistic and cultural contexts. Texts will be selected from a diverse group of authors and traditions.
Prerequisites: *WRIT 1301*

LITR 2326 - American Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
A survey of American literature from the period of exploration and settlement to the present. Students will study works of prose, poetry, drama and fiction in relation to their historical, linguistic and cultural contexts. Texts will be selected from a diverse group of authors for what they reflect and reveal about the evolving American experience and character.
Prerequisites: *WRIT 1301*

LITR 2341 - Literature and Experience

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The study of one of more literary genres including poetry, fiction, drama and film.
Prerequisites: *WRIT 1301*

LITR 2371 - Introduction to Creative Writing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Instruction and practical experience in techniques and genres of imaginative writing. May include lyric poetry, short fiction, drama and/or creative nonfiction. Fulfills Core Creative Arts requirement.
Prerequisites: *WRIT 1301 and WRIT 1302*

LITR 3301 - Literary Studies: Genres and Critical Perspectives

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Introduction to the close study of literary and dramatic texts and issues affecting interpretation.

LITR 3302 - Principles of Composition

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 3334 - Mythology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Greco-Roman and other selected mythological texts important in world literature, such as Homeric or Akkadian epic, the Eddas, the stories of the Arthurian cycle and the Native American myths.

LITR 3338 - Modern Fantasy Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course surveys the development of the fantasy genre in English and American literature from its origins in the late 19th c., through the works of Tolkien and on to contemporary fantasy authors such as George R.R. Martin. The course also looks at the ways fantasy has proliferated into popular culture, especially roleplaying games such as Dungeons and Dragons and computer gaming.

LITR 3361 - Shakespeare

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Shakespeare's major plays and their production in the theatre of the English Renaissance.

LITR 3371 - Creative Writing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Practice and instruction in writing fiction, poetry, creative nonfiction, drama and/or other genres. Exercises in the creative process and workshop discussions of participants' work. Multi-genre survey (poetry, fiction, etc.) or single-genre topics course. May be repeated for credit with permission of instructor.
Prerequisites: *WRIT 1301 and WRIT 1302*

LITR 4301 - Literary Theory

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Theories about the nature of verbal art and the relationship between literature and reality.
Prerequisites: *LITR 3301*

LITR 4304 - Workshop in Poetics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The language, formal strategy and mechanical techniques of poetry. A practical sense of how poems work. Designed for teachers, readers and writers of poetry.
Prerequisites: *LITR 3301*

LITR 4312 - Chaucer

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The art of England's greatest narrative poetry: Canterbury Tales, Troilus and Criseyde.

LITR 4316 - Pre-1800 British Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An exploration of key authors and themes of British Literature before1800. Focus varies, and may include study of a historical period, literary movement, or genre. May be repeated for credit with permission of instructor.

LITR 4318 - Post-1800 British Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An exploration of key authors and themes of British Literature since 1800. Focus varies, and may include study of a historical period, literary movement, or genre. May be repeated for credit with permission of instructor.

LITR 4320 - The Romantic Movement in British Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Major Romantic poets and novelists: Coleridge, Wordsworth, Byron, Scott, Mary Shelley, Bronte and others. Topics may include revolution and war, gender issues, the rise of individual colonialism, exoticism, science or art.

LITR 4321 - Jane Austen

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An overview of the life and work of Jane Austen, focusing on major novels such as Pride and Prejudice, and early works such as Lady Susan, in relation to literary and cultural traditions of the period.

LITR 4322 - Victorian Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Major Victorian essayists, poets, and novelists, including Tennyson, the Brontes, George Eliot, Gaskell, Stoker, and Wilde; literary responses to industrialization, empire, and class struggle; examination of social, artistic, and moral tensions in Victorian literature.

LITR 4324 - Rise and Development of the British Novel

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Origins and development of the novel in English; major British novelists from the late 17th through the early 20th centuries such as Behn, Defoe, Richardson, Austen, Dickens, Hardy and Conrad.

LITR 4326 - Pre-1865 American Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
In this course, multicultural voices, including indigenous, African, Spanish and European writers will reflect our nation's earliest literature. Letters, memoirs, oral storytelling and/or slave narratives and their cultural and contextual history will be explored. May be repeated for credit with permission of instructor.

LITR 4328 - Post-1865 American Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
In this course, students will study significant realist, naturalist, modernist, and postmodernist writers. Students will learn about the historical and contextual history of authors such as Stephen Crane, Ernest Hemingway, Zora Neale Hurston, and Toni Morrison, among others. May be repeated for credit with permission of instructor.

LITR 4330 - American Realism and Naturalism

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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, James, Chesnutt and Crane.

LITR 4334 - The American Novel

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Focus on development of form, style and theme in American fiction; major and lesser-known novelists over two centuries.

LITR 4335 - American Modernism

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Literary experimentation in context of international Modernism; expressions of social and cultural dislocation or search for order. Authors may include Eliot, Fitzgerald, Faulkner and Hurston.

LITR 4336 - Contemporary American Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Diverse writings from recent decades; topics addressed may include revisions of traditional narrative; conformity and counterculture; postmodernism; re-imagining ethnic, gender, national or planetary identity. Authors may include Toni Morrison, Thomas Pynchon, Colson Whitehead and Lydia Davis.

LITR 4338 - American Minority Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Survey or in-depth focus on classic and contemporary texts for America's ethnic and/ or gender minorities: African Americans, Native Americans, Mexican Americans, women and others may be included.

LITR 4340 - American Immigrant Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
America's 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 of the 20th and 21st centuries.

LITR 4342 - Studies in Drama

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Explores drama as a form of literary expression; historical content and geographical scope varies by

semester. May be repeated for credit with permission of instructor.

LITR 4344 - Studies in the Novel

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Explores the novel as a form of literary expression; historical content and geographical scope varies by semester. May be repeated for credit with permission of instructor.

LITR 4345 - Contemporary Novel

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Novels of recent decades from around the world; topics may include postcolonialism, postmodernism, transnationalism, technology and virtuality. Authors may include Atwood, Ben Jelloun, Bolano, Coetzee, Djebar, Lahiri, Mieville, Morrison, Murakami, Ondaatje, Pamuk, Powers and Winterson.

LITR 4346 - Medieval Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Romance, lyric, fabliau, epic, play and story. Selections from such medieval masters as Dante; the Gawain, Tristan and Beowulf poets; Boccaccio; and Chretien de Troyes. Texts will be read in translation.

LITR 4350 - Masterpieces of European Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An exploration of key authors and themes of European Literature, with emphasis on literature since 1800. Focus varies, and may include study of a historical period, literary movement, or genre. May be repeated for credit with permission of instructor.

LITR 4352 - Masterpieces of 20th-Century European Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Major works by 20th-century European writers, including James, Conrad, Woolf, Proust, Colette, Camus, Mann, Kafka, Nabokov and Duras; topics may include the problems of modern existence, war, human rights, the citizen and the writer.

LITR 4356 - Modern American and British Poetry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Myth and epic, the personal poem, Expressionism, neo-Romanticism; includes such poets as Yeats, Auden, Stevens and Frost.

LITR 4358 - Contemporary Poetry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Poetry in English after 1950, American or transnational focus; may include such figures as Lowell, Ginsberg, Rich, Heaney and Walcott.

LITR 4360 - Film as Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Understanding films through the language of film (shots, montage, framing, lighting, sound, genre,

classical Hollywood and avant-garde). Film interpretation and critique.

LITR 4362 - The Literature of Adolescence

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Growing up: variance and continuity in depictions of adolescence by American and other writers.

LITR 4364 - Literature and Gender

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examines the construction of gender identity, sexuality, and gender norms in literary texts. Focus varies, and may include study of a historical period, literary movement, or genre; constructions of femininity and masculinity; sexual identities; representations of gender in relation to race, ethnicity, class, age, and ability. May be repeated for credit with permission of instructor. Cross-listed with Women's and Gender Studies.

LITR 4366 - Literature and Religion

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 to poetry. Topics, texts and themes will vary. May be repeated for credit with permission of instructor.

LITR 4368 - Science Fiction

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will focus on the study of texts (such as novels, short fiction, and films) that portray our future, visionary scientific endeavors, and contact between humans, aliens, and sentient technologies.

LITR 4370 - Tragedy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The dimensions of tragic experience as expressed in Western literature.

LITR 4371 - Comedy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The comic view of the human predicament as seen in writers such as Aristophanes, Moliere, Wilde, and others.

LITR 4389 - Independent Study in Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Permission of instructor required. May be taken for 3 hours of credit. For 1 hour of Independent Study credit, students should enroll in LITR 4189.

LITR 4391 - Selected Topics in Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered. Topics vary may be repeated for credit with permission of instructor.

LITR 5034 - Workshop in Poetics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 5039 - Editing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The interpersonal and linguistic skills required for editing. Students will learn to make documents highly readable by revising for content, mechanics, style, visual design, organization, illustrations, tables and documentation. Students may also be expected to publish a literary magazine.

LITR 5130 - Composition: Theory and Practice

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered. Topics vary may be repeated for credit with permission of instructor.

LITR 5132 - Literary Theory

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
History of main theories of literature; selected concepts, technical constructs, schools of criticism and theory. Literature M.A. candidates must take during first year of graduate work.

LITR 5430 - Creative Writing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Seminar in writing fiction, poetry, drama or creative nonfiction. Topics vary may be repeated for credit when genre varies.

LITR 5431 - American Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Seminar focused on a particular style, period, genre or topic in American literature, e.g., Romanticism, Realism, Modernism; fiction, poetry; drama; the city, the frontier. Topics vary may be repeated for credit.

LITR 5434 - British Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Seminar focused on a particular author, period or genre; for instance, Chaucer, Shakespeare, Spenser and Milton; women's writing. Topics vary; may be repeated for credit.

LITR 5435 - British Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Seminar focused on a particular period or genre; for instance, Restoration, 18th Century, Romantic, Victorian,

Modern: poetry or the novel. Topics vary; may be repeated for credit.

LITR 5436 - Major Authors

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Intensive study of one or more authors influential in American, English or world literature. For instance: Euripides, Dante, Dickinson, George Eliot or Walcott. Topics vary may be repeated for credit.

LITR 5437 - Literature and Culture

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Seminar on interdisciplinary approaches to the study of texts within cultures. Topics vary may be repeated for credit when content varies.

LITR 5438 - Literature and Gender

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Seminar on texts exploring gender issues. Examination of a range of theoretical approaches to such topics as gender and identity; gender, class and race; feminist theory; or gendered literary traditions. Topics vary; may be repeated for credit.

LITR 5439 - Genre, Movement, or Style

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Intensive study of a particular literary genre, movement, or style such as Romanticism, Surrealism, the Gothic, the short story, the epic, confessional poetry, mysteries and detective stories or magical realism. Topics vary; may be repeated for credit.

LITR 5831 - World/Multicultural Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Survey or in-depth focus of the literature of a nation, region, culture or diaspora, potentially in dialogue with other literary traditions. Topics may include Postcolonial Literature, Literature of India, American Minority or Immigrant Literature and others. Topics vary; may be repeated for credit.

LITR 5931 - Research Topics in Literature

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered. Topics vary; may be repeated for credit with permission of instructor.

LITR 5939 - Independent Study in Literature

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Permission of instructor required.

LITR 6739 - Graduate Internship

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Supervised composition internship in an approved setting. Comprehensive written report required.
Prerequisites: LITR 5130*, LITR 5739 and one semester tutoring in the Writing Center.*

LITR 6909 - Literature Comprehensive Exam

Credit Hours: 0 **Lecture:** 0 **Lab:** 0
Comprehensive exam for students following Option 4 degree requirements.

LITR 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Approval of adviser, thesis director and department chair are required.

Management

MGMT 3301 - Management Theory and Practice

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Management policies and processes including planning, organizing and controlling; overview of the functions of organization theory and behavior.

MGMT 4354 - Organizational Behavior Theory and Application

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Exploring the dynamics of human behavior in organizations in order to better understand and evaluate how people and groups in organizations behave, react and interpret events, and to apply these concepts successfully in a management context. **Prerequisites:** *MGMT 3301 or equivalent.*

MGMT 5031 - Survey of Business Principles

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An introduction to and survey of business principles including principles of statistics, economics and marketing theory and practice. Topics from statistics may include sampling, data measurements, descriptive statistics, probability, probability distributions, confidence intervals, hypotheses testing, correlation, simple and multiple regression, ANOVA, forecasting and statistical process control. Topics from economics may include principles and analysis of microeconomic and macroeconomic issues and concepts as applied in a domestic and global setting. Topics from marketing may include 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.

MGMT 5031 (formerly BAPA 5031) is a business foundation course and is designed for COB graduate students whose prior academic study lacked adequate coverage of specific basic principles critical for advanced studies in business. This foundation course may be waived by presenting equivalent courses taken at an accredited university and passing such courses with a grade of "C" or better. International students should obtain a subject analysis evaluation and have the results sent to the College of Business prior to matriculation for a possible waiver. Prior to registering for the foundation class, students should contact their academic advisor to see if courses they have already completed in their undergraduate degree satisfy foundation course requirements.

MGMT 5032 - Human Behavior in Organizations

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.

MGMT 5131 - The Global Environment of Business

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.

MGMT 5133 - Teamwork and Leadership Skills: Theory in Practice

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 50
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. Recommended that this course be taken early in the MBA program.

MGMT 5135 - Organizational Transformation, Learning, and Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Seminar in contemporary research and theory applicable to structure and design of organizations, with emphasis upon institutional development, design science and organizational learning.
Prerequisites: *MGMT 5032 or equivalent.*

MGMT 5233 - Entrepreneurship and Corporate Venturing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is based on the premise that new ventures are a continuous source of radical or disruptive innovations in the United States. Technology entrepreneurship, whether in a start-up or established company, involves identifying high-growth potential, technology intensive commercial opportunities, acquiring human and financial resources and navigating uncertainty. This course offers students two entrepreneurial perspectives: new firm and intrapreneurship (e.g., corporate venturing). From the new-firm perspective, students will examine how to identify and evaluate technological opportunities, form new ventures and manage them. From the corporate venturing perspective, students will learn opportunity and feasibility analyses, how to structure the new venture and manage high-growth projects. The goal of this course is to provide students with the tools to develop a successful business plan, build a start-up team, finance

the venture and lead the process of turning the opportunity into a reality.

MGMT 5234 - Leading Non-Profit Institutions

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will cover leadership in non-profit organizations. Topics include transformational leadership, communicating vision, enrollment, attentive listening, evaluating programs and acknowledgement and appreciation.

MGMT 5238 - Gender and Diversity Issues in Leadership

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course responds to recent demographic changes and opportunities presented by a diverse workforce. The challenges faced by organizational leaders on how to effectively manage a workforce that is increasingly diverse along the lines of race, ethnicity, gender, physical ability, cultural background and age will be emphasized.

MGMT 5332 - Labor Relations

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Relationships between unions and management and the structure of industrial bargaining; legal dimensions of employee relations, strikes and settlements.
Prerequisites: *MGMT 5032 or equivalent.*

MGMT 5434 - Negotiation Skills and Strategies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course provides a basic foundation in negotiation theory and practice. Analytical and interpersonal competencies are developed in the context of negotiation simulations and discussions using a variety of settings and media, while reflecting on the global context of negotiations that routinely take place within (and between) organizations. Includes the development of a negotiation dossier that students would routinely compile in preparation for a typical negotiation in their chosen field.

MGMT 5437 - International Leadership and Influence

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will focus on the similarities and differences in leadership processes as a function of national origin, language and dimensions of culture as inhibitors and driving forces of effective leadership in global organizations.

MGMT 5439 - Positive Leadership and Ethical Action

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course explores the impact of emerging areas of positive psychology, positive organizational behavior and positive organizational scholarship on the field of leadership, and how attributes of positive leadership influence leaders' ethical actions and decision making.
Prerequisites: *MGMT 5032*.

MGMT 5636 - Management of Technology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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; incorporating technology change into company structure and strategy.
Prerequisites: *MGMT 5032 or equivalent.*

MGMT 5637 - Entrepreneurship and Small Business Consulting

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *MGMT 5032 or equivalent.*

MGMT 5638 - Leading Technology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will focus on the necessary leadership requirements and strategies to lead scientific and commercial projects. It focuses upon leadership capacities in the selection, development and the effective management of scientists, engineers, biomedical personnel and technical professionals. Topics will include leading change, top level project leadership and organizational behavior and enterprise management principles applicable to science and technology.
Prerequisites: *MGMT 5032 or equivalent.*

MGMT 5915 - Co-op Education in Business

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Co-op
Fee ($): 85
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.
Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of the Director of Cooperative Education.*

MGMT 5931 - Research Topics in Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.

MGMT 5935 - Co-op Education in Business

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Co-op
Fee ($): 85
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.

Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of the Director of Cooperative Education*.

MGMT 5939 - Independent Studies in Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Independent directed study in Management.
Prerequisites: *Approval of instructor, faculty chair and associate dean required.*

MGMT 6131 - Foundations in Sustainability

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course covers the fundamentals of sustainability, including sustainability definitions and models, triple-bottom-line considerations in business, and sustainability concerns in natural resource management and community planning. Students taking this course will obtain an overview of how and where organizational and environmental management professionals interact with the field of sustainability.
"cross list ENVR 5131"

MGMT 6135 - Data Visualization and Communication

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course emphasizes communicating with data, primarily through the use of data visualizations. Data visualization is a medium through which data analytics can be used to support strategic and executive decision-making. Topics of the course include principles of visualization design, choices of visualizations, creating business dashboards and communicating visualizations through various media. Students will design visualizations suitable for publication in professional reports, online media and formal presentations. Various types of visualizations will be covered including bar/column charts (with clustered variations); line, box and stem charts; scatter plots; slope graphs; bubble charts; and heat maps.

MGMT 6237 - Comparative Leadership

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course will examine and focus on proven executive leadership best practices across a range of complex organizations.

MGMT 6331 - Organizational Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *MGMT 5032 or equivalent.*

MGMT 6332 - International Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course focuses on the challenges of international management including

topics of global strategy, organizational design, cross-cultural communication and human resources.
Prerequisites: *MGMT 5032 and MGMT 5131, or equivalents.*

MGMT 6333 - Seminar in International Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 6334 - Global Sustainability and Strategic Advantage

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course provides a basic understanding of the strategic implications and applications related to business and institutional sustainability. This course provides a basic understanding of the strategic implications and applications related to business and institutional sustainability. Using a strategy lens, this course seeks to provide students with an understanding of the key concepts related to the business case of sustainability, tackling topics key to sustainable strategies and social responsibility through a mix of assignments and case analyses.
Cross-listed: ENVR 5132
Prerequisites: *ENVR 5131 Foundations in Sustainability.*

MGMT 6731 - Strategic Management Seminar (Capstone)

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Introduction to corporate-level and business-level strategy. Study of the strategic management process and factors necessary for competitive success in industries.
Prerequisites: *Other degree requirements and LAST SEMESTER.*

MGMT 6739 - Internship in Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Supervised internship with an approved firm or with an industrial or governmental agency; written and oral reports required.
Prerequisites: *Master's degree candidacy and approval of adviser and dean.*

Marketing

MKTG 3301 - Principles of Marketing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 5332 - Executive Decisions in Marketing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *MGMT 5031 and MGMT 5032, or equivalents.*

MKTG 5334 - Strategic Brand Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Building and effectively maintaining brand equity is among the top priorities of high-performing companies. Effective brand building and strategic brand management drive customer loyalty and superior long-term performance. Strategic Brand Management is a graduate course that explores why brands are important, what they represent to consumers and what firms should do to manage them effectively.
Prerequisites: *MGMT 5031 or equivalents.*

MKTG 5532 - International Marketing Strategy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *MGMT 5031 or equivalent.*

MKTG 5533 - Seminar in International Marketing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *MGMT 5031 or equivalent.*

MKTG 5534 - Advanced Professional Services Marketing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *MGMT 5031 or equivalent.*

MKTG 5931 - Research Topics in Marketing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.

MKTG 5939 - Independent Studies in Marketing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Independent directed study in Marketing.
Prerequisites: *Approval of instructor, faculty chair and associate dean required.*

MKTG 6739 - Internship in Marketing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Supervised work experience in an approved business, non-profit or governmental agency. Written work is required by sponsoring faculty member.
Prerequisites: *Master's degree candidacy and approval of sponsoring faculty member, faculty chair and associate dean.*

Mathematics

MATH 1351 - Mathematics for Teachers II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Concepts of geometry, probability and statistics, as well as applications of the algebraic properties of real numbers to concepts of measurement with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek middle grade (4-8) teacher certification. Open only to teacher certification students.
Prerequisites: *MATH 1350*

MATH 2305 - Discrete Mathematics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Introductory mathematical logic, mathematical induction, relations and functions, basic counting techniques, graphs and trees and applications to computing devices. Designed for students majoring in the computer-related disciplines.
Prerequisites: *MATH 2413 or MATH 1325.*

MATH 2315 - Calculus III

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Vectors and vector valued functions, functions of multiple variables, partial derivatives, multiple integrals, volume and surface area and vector calculus.
Prerequisites: *MATH 2414*

MATH 2318 - Linear Algebra

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Systems of linear equations; vector spaces, linear transformations, determinants, matrices, eigenvalues and eigenvectors; applications to coding and difference equations.
Prerequisites: *MATH 2412 or MATH 2413*

MATH 2320 - Differential Equations

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Solutions of ordinary differential equations of the first and second

order, Laplace transforms, power series techniques, systems of equations, stability, numerical methods, geometric and physical applications.
Prerequisites: *MATH 2414*

MATH 2413 - Calculus I

Credit Hours: 4 **Lecture:** 4 **Lab:** 0
Fee Type: Special
Fee ($): 40
Limits and continuity; the Fundamental Theorem of Calculus; definition of the derivative of a function and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule, mean value theorem and rate of change problems; curve sketching; definite and indefinite integration of algebraic, trigonometric and transcendental functions with an application to calculation of areas.
Prerequisites: *MATH 2412 with a C- or better or meet requirement in UHCL Mathematics Department Placement and Testing policy.*

MATH 2414 - Calculus II

Credit Hours: 4 **Lecture:** 4 **Lab:** 0
Fee Type: Special
Fee ($): 40
Differentiation and integration of transcendental functions; parametric equations and polar coordinates; techniques of integration; sequences and series; improper integrals.
Prerequisites: MATH 2413 *with a C- or better or meet requirement in UHCL Mathematics Department Placement and Testing policy.*

MATH 3300 - Introduction to Modern Algebra and Number Theory

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An introduction to techniques of proof, problem solving and applications using topics from number theory, discrete mathematics and logic such as symbolic logic, various proof methods, sequences and recursion, congruence classes, modular arithmetic, permutations and inductive and deductive argument forms.
Prerequisites: *MATH 2413*

MATH 3301 - History of Mathematical Sciences

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Temporal relationships of concepts by means of biographic studies; development of mathematical theory and applications from ancient to contemporary times.
Prerequisites: *MATH 1314 or MATH 1324 or MATH 1332*

MATH 3304 - Algebra Through Technology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Using technology topics in elementary functions, simultaneous equations, polynomials and elementary topics in number theory. This course for Teaching Certification students only.
Prerequisites: *MATH 1314*

MATH 3305 - Euclidian/Non-Euclidian Geometry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
Formal set theory, logical structure and measurement.
Prerequisites: *MATH 1314*

MATH 3306 - Problem Solving

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Problem solving through experiences and reasoning; ideas from areas such as pattern recognition, simulation and logical deduction.
Prerequisites: *MATH 1351, MATH 3304, or equivalent or instructor permission.*

MATH 4313 - Introduction to Topology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Topological techniques in analysis, metric spaces, continuous transformations, connectivity, separation, compactness; nets and filters, cardinal arithmetic.
Prerequisites: *MATH 3331.*

MATH 4315 - Numerical Analysis and its Applications

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Introduction to methods and algorithms in numerical computation. The topics include techniques for finding the roots of equations and interpolation functions, numerical approximation of differentiation and integration, numerical solutions to ordinary differential equations, linear systems and nonlinear systems.
Prerequisites: *MATH 2315*, *MATH 2318, MATH 2320 and CSCI1320 or equivalent.*

MATH 4316 - Mathematic Software Applications

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
This course covers a number of applied mathematics models through scientific software simulators; Matlab and Mathematica, Symbolic, numerical and graphical simulations and symbolic operations 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.
Prerequisites: MATH2315, MATH 2318, MATH2320, and CSCI1320 or equivalent.

MATH 4321 - Predicate Logic

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An introduction to predicate logic; elements of formal logic systems; set theory and propositional calculus, completeness theorems and the nature of proofs.

MATH 4322 - Introduction to Abstract Algebra

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
Study of algebraic structures: maps,

operations, permutations and homomorphisms. Groups, rings, integral domains and fields; applications to symmetry; techniques of mathematical proof.
Prerequisites: *MATH 3312 or MATH 3331.*

MATH 4325 - Theory of Models and Applications

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Simulation and analysis on continuous and discrete mathematical models in science. It also includes the study of nonlinear dynamics, chaos and fractals.
Prerequisites: *MATH 2318 and MATH 2320 or equivalent.*

MATH 4341 - Introduction to Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Real numbers, sequences and series, differentiation and measure theory; Riemann, Stieltjes and Lebesgue integrals.
Prerequisites: *MATH 3331 or equivalent.*

MATH 4345 - Introduction to Statistics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Sampling distributions, point and interval estimation, hypothesis testing, regression and correlation, nonparametric statistics, analysis of variance.
Prerequisites: *MATH/STAT 4344.*

MATH 4346 - Introduction to Probability for Actuarial Exam P1

Credit Hours: 3

MATH 4348 - Introduction to Financial Mathematics for Exam FM

Credit Hours: 3

MATH 5030 - Current Issues in Mathematics Education

Credit Hours: 3 **Lecture:** yes
An introduction to the current thought on the teaching and learning of mathematics, contemporary issues related to the teaching and learning of mathematics, and the research foundation upon which it rests. Topics may include: Learning theory, the history of mathematics education, theoretical frameworks, professional standards, and best pedagogical practices.

MATH 5031 - Problem-Solving Strategies

Credit Hours: 3 **Lecture:** 3
Fee Type: Special
Fee ($): 10
This course 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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
A seminar on the content of secondary school courses in algebra and applicable instructional techniques.

MATH 5034 - Geometry Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
Topics in Euclidean and Non-Euclidean geometries with a focus on the teaching and learning of geometry (including the use of technology and concrete materials). Development of proof-writing techniques in geometry included.
Prerequisites: *MATH 3305 or equivalent.*

MATH 5035 - Precalculus Courses for Mathematics Teachers of Grades 10-14

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
A seminar on various approaches to the teaching of introductory calculus.

MATH 5037 - Technology for Mathematics Curriculum

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Current laboratory applications of computers and calculators in the mathematics curriculum. Symbolic, numerical and graphical computing will be applied to various mathematical problems.
Prerequisites: *14 semester hours credit in mathematics at the Calculus I level and above.*

MATH 5131 - Abstract Algebra

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Groups, rings, fields, modules; ideal theory, polynomial rings, algebraic and free groups.
Prerequisites: *MATH 4322 or equivalent.*

MATH 5132 - Real Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
General measure and integration theory. Banach and Hilbert spaces; applications to approximation theory, probability theory and summability.
Prerequisites: *MATH 4341 or equivalent.*

MATH 5133 - Complex Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The theory of analytic functions and analytic continuation. Branched functions; an introduction to homotopy theory and basic metric space topology. Integration theory, Cauchy's theorem and residue theory.
Prerequisites: *MATH 4363 or equivalent.*

MATH 5136 - Ordinary Differential Equations and Dynamical Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
This course covers the dynamical aspects of systems of ordinary differential equation. It includes local analysis of nonlinear systems and the existence of their periodic solutions.
Prerequisites: *MATH 2318 MATH 2315, MATH 2320*

MATH 5137 - Topology and Geometry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Set theory, topological spaces, connectedness and compactness, the fundamental group and covering spaces, surfaces and their applications.
Prerequisites: *MATH 4313 or equivalent.*

MATH 5231 - Linear Algebra

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fields and vector spaces, determinants and their characterization, adjoints operators, eigenvalues and eigenvectors, diagonalizability, canonical forms and matrix functions.
Prerequisites: *MATH 2318*.

MATH 5232 - Number Theory

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *MATH 3312 or equivalent.*

MATH 5330 - Mathematical Software and Modeling Simulation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course explores computer software in applied Mathematics. A collection of popular models in applied sciences will be focused on through the aid of computer software.
Prerequisites: *MATH 2318 and MATH 2320 or equivalent.*

MATH 5333 - Numerical Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
This course covers mathematical analysis and numerical computation of solutions to various problems, including linear and nonlinear systems, systems of ordinary differential equations, integral equations and

boundary value problems.
Prerequisites: *MATH 2318, MATH 2315, MATH 2320 and C/C++ or equivalent.*

MATH 5431 - Mathematical Biology in Applied Sciences

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
This course covers mathematical techniques and numerical treatments for analyzing and simulating a variety of models in physical, chemical and biological processes.
Prerequisites: *MATH 4325 or equivalent.*

MATH 5432 - Optimization

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is intended to cover central concepts of practical optimization techniques on linear and nonlinear programming, such as simplex methods, primal and dual methods, steepest descent methods, conjugate direction methods, quasi-Newton methods, penalty and barrier methods, etc. The application of optimization in engineering, business, management science, and statistics are also introduced.
Prerequisites: *MATH 2318*

MATH 5433 - Spectral Theory and its Applications

Credit Hours: 3 **Lecture:** yes
The topic of this course is the spectral theory of linear operators in Banach spaces and its applications to boundary value problems. From properties of eigenvalues and eigenfunctions of the Laplace operator, to the eigenfunction expansion for solutions of boundary value problems, this course aims to highlight spectral theory. These applicable topics are illustrated with applications to dynamical systems of fluid mechanics, electrostatic, and heat conduction.
Prerequisites: MATH 2318 Linear Algebra and MATH 2320 Differential Equations (or equivalent preparation)

MATH 5739 - Internship in Mathematics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Supervised work experience in an approved industrial or government agency. Written and oral report required.

MATH 5931 - Research Topics in Mathematics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Identified by specific title each time course is offered.

MATH 5939 - Independent Study in Mathematics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of instructor, chair and associate dean.*

MATH 6031 - Problem Solving Strategies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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. Note: No credit in MATH 6031 if MATH 5031 has been taken.

MATH 6033 - Instructional Applications of Algebra

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
A seminar on the content of secondary school courses in algebra and applicable instructional techniques.

MATH 6034 - Geometry Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *MATH 3305 or equivalent.*

MATH 6035 - Precalculus Courses for Mathematics Teachers of Grades 10-14

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
A seminar on various current and potential approaches to the content of precalculus mathematics with applicable instructional techniques.

MATH 6036 - Calculus for Mathematics Teachers of Grades 10-14

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
A seminar on various approaches to the teaching of introductory calculus.

MATH 6037 - Technology for Mathematics Curriculum

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Current laboratory applications of computers and calculators in the mathematics curriculum. Symbolic, numerical and graphical computing will be applied to various mathematical problems.
Prerequisites: *14 semester hours credit in mathematics at the Calculus I level and above. No credit in MATH 6037 if MATH 5037 has been taken.*

MATH 6837 - Research Project I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Student will complete research project developed in MATH 6837. A written paper and presentation will be required.

MATH 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of faculty adviser, master's committee and dean.*

STAT 4346 - Introduction to Probability for Actuarial Exam P1

Credit Hours: 3

STAT 4348 - Introduction to Financial Mathematics for Exam FM

Credit Hours: 3

Occupational Safety and Health

OSHE 4316 - System Safety and Accident Investigation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.

OSHE 4324 - Fire Safety Engineering

Credit Hours: 3 **Lecture:** yes

OSHE 4333 - Construction and General Industry Safety

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 50
This course 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.

OSHE 4334 - Chemical Processing and Petroleum Refining

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course covers the fundamentals of chemical processing, including basic process chemistry, equipment, diagrams, process flows, feedstock, and chemical products necessary to manufacturer chemical products on an industrial scale.
Prerequisites: *CHEM 2323*.

OSHE 4335 - Process Safety and Chemical Risk Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course covers the fundamentals of process safety management, risk-based process safety, and risk management plans to safeguard industrial chemical facilities that process flammable, combustible, reactive or toxic materials. The aim is on the prevention of toxic releases, fires and explosions that could cause loss of life, property damage and environmental harm. Includes

historical incidents and their contributing causes and outcomes, as well as safety management systems and process safety regulations.
Prerequisites: *CHEM 2323*

OSHE 4411 - Noise and Hearing Conservation

Credit Hours: 4 **Lecture:** 3 **Lab:** 1
Fee Type: Special
Fee ($): 100
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.
Prerequisites: PHYS 1301

OSHE 4413 - Industrial Ventilation

Credit Hours: 4 **Lecture:** 3 **Lab:** 1
Fee Type: Special
Fee ($): 100
General principles of ventilation, dilution ventilation, comfort ventilation; heat-cold stress control, hood design, air contaminant control; testing ventilation systems and industrial ventilation guidelines.
Prerequisites: *MATH 1314*

OSHE 5131 - Control of Occupational and Environmental Hazards

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *CHEM 2323, PHYS 1302*

OSHE 5135 - Statistical Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fundamental statistical concepts related to the applied industrial and environmental sciences: descriptive statistics; sampling; statistical distributions; confidence intervals, hypothesis testing; chi-square tests; correlation, simple and multiple linear regression; one-way ANOVA. Use of statistical software packages to analyze and present data.
Prerequisites: *MATH 1314*

OSHE 5233 - Recognition of Occupational Diseases

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Incidence and patterns of occupational diseases in the U.S.; approaches to recognition and prevention; workplace exposures and effects; occupational disorders by organ systems.

OSHE 5234 - Hazardous Materials Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 75
This course covers hazardous materials management as it pertains to the properties of hazardous materials, sampling and analysis, fate and transport in the environment, impacts on health and the environment, risk assessment, laws and regulations, generation, storage, transportation, disposal and

treatment. Emergency response and reporting are included.
Prerequisites: *CHEM 2323*.

OSHE 5235 - Fire Safety Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 75
This course studies fire science, causes, prevention and inspection. This includes fire dynamics and behavior, prevention activities, extinguishment, detection, hazards, fire causes, types of construction including structural features, flame spread, occupancy and fire load, as well as petrochemical fire safety and combustible dust.
Prerequisites: *CHEM 1311, PHYS 1301*

OSHE 5236 - Advanced Process Hazard Analysis and Consequence Assessment

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course applies engineering principles to process hazard assessment, dust hazard analysis and consequence assessment. Includes various assessment techniques and use of software packages to assess the consequences of toxic releases, fires and explosions on life, property and the environment.
Prerequisites: *CHEM 2323*

OSHE 5333 - Air Pollution

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Background, sources and fate of atmospheric pollutants. Air pollution episodes, meteorology, dispersion modeling, air quality measurements, controls, criteria, guidelines and health standards.
Prerequisites: *CHEM 2323, PHYS 1302*

OSHE 5334 - Human Factors Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.

OSHE 5335 - Ergonomic Methods and Analysis Techniques

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 75
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.

OSHE 5336 - Safety, Health and Environmental Issues

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Principles and concepts of environmental health and safety, including essential information related to the recognition, evaluation and control of occupational and environmental hazards; Includes information related to public safety, the community, businesses, labs, government and education/research or other work environments.

OSHE 5431 - Practicum in Industrial Hygiene and Safety

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Requires approval of faculty adviser. The selection, study and formal presentation of topics in Industrial Hygiene and Safety based on advanced field, laboratory, library research study and supervised work experience in an approved industrial firm or government agency or educational work assignments. Written and oral reports required.
Prerequisites: *12 hours of credit.*

OSHE 5530 - Research Methods: Occupational Safety and Health

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 75
Development of proposal for master's project or thesis research.
Prerequisites: *STAT 5135, adviser approval and approved research topic*.

OSHE 5739 - Internship in Occupational Safety and Health

Credit Hours: 3 **Lecture:** 1 **Lab:** 0
Supervised work experience in an approved industrial firm or governmental agency. Written and oral report required.
Prerequisites: *Master's degree candidacy as well as approval by adviser and dean*.

OSHE 5915 - Cooperative Education Work Term

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
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.)
Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education.*

OSHE 5919 - Independent Study in Occupational Safety and Health

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Prerequisites: *Approval of instructor, chair and associate dean.*

OSHE 5931 - Research Topics in Occupational Safety and Health

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.

OSHE 5939 - Independent Study in Occupational Safety and Health

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of instructor, chair and associate dean.*

OSHE 6135 - Radiation Protection

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 100
Advanced principles of ionizing and nonionizing 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.
Prerequisites: *PHYS 1302*

OSHE 6242 - Analytical Methods for Evaluation of Health Hazards

Credit Hours: 4 **Lecture:** 3 **Lab:** 1
Fee Type: Special
Fee ($): 100
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.
Prerequisites: *CHEM 2323, STAT 5135*

OSHE 6332 - Safety Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 50
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.
Prerequisites: *OSHE 3340 or equivalent.*

OSHE 6333 - OSHA Standards for the Construction & General Industries

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course covers OSHA policies, procedures, and standards as it relates to safety & health principles in the construction and general industries. While more emphasis is placed on areas that are most hazardous in the construction and general industries, the course emphasizes topics that all safety professionals should have a basic understanding of. Topics include safety as it relates to falls, scaffolding, record keeping, electrical standards, trenching, as well as administrative topics related to handling record keeping and OSHA audits.

OSHE 6731 - Graduate Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 75
Advanced seminar where an in-depth perusal of an environmental science topic shall be undertaken and a formal paper and presentation shall be completed.
Prerequisites: *OSHE 5530, STAT 5135 and 24 hours complete in an approved graduate program.*

OSHE 6838 - Research Project

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 75
Students complete their research project; write the research paper and present research findings in a public forum.
Prerequisites: *OSHE 5530, 24 hours completed within a CPS and approval of graduate adviser*.

OSHE 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Prerequisites: *Approval of faculty adviser, master's committee and dean.*

Philosophy

PHIL 5431 - Metaphysics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The study of major European philosophers of the modern period: Kant, Hegel, Nietzsche, Heidegger, Levinas and others.

PHIL 5931 - Research Topics in Philosophy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered. Topics vary may be repeated for credit with permission of instructor.

PHIL 5939 - Independent Study in Philosophy

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Permission of instructor required.

Physics

PHYS 1101 - Laboratory for College Physics I

Credit Hours: 1 **Lecture:** 0 **Lab:** 3
Fee Type: Special
Fee ($): 50
Laboratory to reinforce topics in College Physics I. Experiments on motion, Newton's laws, wave mechanics, heat and thermodynamics.

PHYS 1102 - Laboratory for College Physics II

Credit Hours: 1 **Lecture:** 0 **Lab:** 3
Fee Type: Special
Fee ($): 50

Laboratory to reinforce topics in College Physics II. Experiments conducted on electric fields, DC and AC circuits, magnetism, electromagnetic induction, light and optics.

PHYS 1301 - College Physics I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Algebra-based introductory physics course. Fundamentals of mechanics, kinematics, Newton's laws, conservation of energy, momentum, rigid body motion, waves, sound, fluids, heat and thermodynamics.
Prerequisites: *MATH 1314 and Trigonometry or MATH 2412,*

PHYS 1302 - College Physics II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Algebra-based introductory physics course. Electric forces and fields, current, DC and AC circuits, magnetism, electromagnetic induction, electromagnetic waves, light and optics.
Prerequisites: *PHYS 1101, PHYS 1301*
Corequisites: *PHYS 2126*

PHYS 2326 - University Physics II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Calculus-based introductory physics course. Electric forces and fields, Gauss' laws, DC and AC circuits, magnetic forces and fields, electromagnetic induction, Maxwell's equations, electromagnetic waves, geometric optics and introduction to modern physics.
Prerequisites: *MATH 2414, PHYS 2325*
Corequisites: *PHYS 2126*

PHYS 2425 - University Physics I with Lab

Credit Hours: 6 **Lecture:** 3 **Lab:** 3
Calculus-based introductory physics course. Fundamentals of linear and rotational kinematics and dynamics, Newton's laws, work, energy conservation, gravitation, wave mechanics, sound, fluid mechanics, heat and thermodynamics. Introduction to data acquisition and analysis in physics. Experiments conducted on motion, kinematics, wave mechanics, sound and heat. Topics also to include statistical methods, graphing, error analysis, computer techniques and reporting results. Calculus II recommended as a corequisite.
Prerequisite: MATH 2413 (Calculus I)
Prerequisites: MATH 2413 (Calculus I)

PHYS 2426 - University Physics II with Lab

Credit Hours: 6 **Lecture:** 3 **Lab:** 3
Calculus-based introductory physics course. Electric forces and fields, Gauss's law, DC and AC circuits, magnetic forces and fields, electromagnetic induction, Maxwell's equations, electromagnetic waves, geometric optics and introduction to modern physics. Experiments conducted on electrical circuits and optics. Topics include Ohm's Law, series and parallel circuits, electrical

power EMF, RLC components, optical elements and visual phenomena.
Prerequisites: MATH 2414 (Calculus II), and PHYS 2425
Prerequisites: MATH 2414 (Calculus II), and PHYS 2425

PHYS 3311 - Mathematical Methods for Physics and Engineering I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *MATH 2315*

PHYS 3312 - Mathematical Methods for Physics and Engineering II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *PHYS 3311 or equivalent*.

PHYS 5011 - Experiments in Modern Physics

Credit Hours: 1 **Lecture:** 0 **Lab:** 3
Topics include: Experiments including relativity, light, nuclear physics and quantum mechanics. Experimental research project.

PHYS 5311 - Recitation for Electrodynamics

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
One-hour recitation section to review examples and problems in PHYS 5331.
Pre- or Co-requisite: PHYS 5331

PHYS 5331 - Electrodynamics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Dynamics of electric and magnetic fields, Maxwell's equations, electromagnetic radiation, special relativity, wave guides, boundary value problems, multipoles, scattering, radiation from moving charges, radiating systems, relativistic particles in electromagnetic fields, collisions of charged particles, radiation damping and radiative beta process.

PHYS 5411 - Recitation for Classical Mechanics

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
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.
Pre- or Co-requisite: *PHYS 5431*.

PHYS 5431 - Classical Mechanics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
One-hour recitation section to review examples and problems in PHYS 5531.
Pre- or Co-requisite: *PHYS 5531*.

PHYS 5531 - Mathematical Methods I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is a continuation of Mathematical Methods I. Course content may include: advanced 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 and engineering.
Prerequisites: *PHYS 5531 or instructor approval.*

PHYS 5533 - Methods in Computational Physics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An introduction to the numerical methods used to solve various physics problems; evolving differential equations, performing Monte-Carlo simulations, simulate fluid flow and more.
Prerequisites: *PHYS 5531 or instructor approval and a working knowledge of a programming language*.

PHYS 5611 - Recitation for Quantum Mechanics I

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
One-hour recitation section to review examples and problems in PHYS 5631.
Pre- or Co-requisite: *PHYS 5631*.

PHYS 5612 - Recitation for Quantum Mechanics II

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
One-hour recitation section to review examples and problems in PHYS 5632.
Pre- or Co-requisite: *PHYS 5632*.

PHYS 5631 - Quantum Mechanics I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *PHYS 5631 or equivalent.*

PHYS 5711 - Recitation for Statistical Mechanics

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
One hour recitation section to review examples and problems in PHYS 5731.
Pre- or Co-requisite: *PHYS 5731*.

PHYS 5731 - Statistical Mechanics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Principles of statistical mechanics and their applications to various physical systems, fundamental principles of thermodynamics and statistical mechanics, including probability theory, kinetic theory, entropy, classical statistical mechanics, ensembles, quantum statistical mechanics, ideal Bose and Fermi systems and phase transitions.

PHYS 5739 - Internship in Physics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
Supervised work experience in an approved industrial firm or government agency. Written and oral report required.
Prerequisites: *Master's degree candidacy as well as approval by adviser and dean.*

PHYS 5911 - Research Topics in Physics

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Identified by specific title each time course is offered.

PHYS 5915 - Cooperative Education Work Term

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Co-op
Fee ($): 100
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.)
Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education.*

PHYS 5919 - Independent Study in Physics

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Prerequisites: *Approval of instructor, chair and associate dean.*

PHYS 5931 - Research Topics in Physics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Identified by specific title each time course is offered.

PHYS 5939 - Independent Study in Physics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Prerequisites: *Approval of instructor, chair and associate dean.*

PHYS 6132 - General Relativity

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

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.

Prerequisites: *PHYS 5331 or equivalent.*

PHYS 6231 - Plasma Physics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Computer programming experience and PHYS 5533 are desired, but not required. The course provides a basic understanding of plasma physics fundamentals and a review of the state-of-the-art current research of plasma science and engineering (nuclear fusion, industrial plasmas, advanced space propulsion and space plasmas).

Prerequisites: *Core Physics courses or instructor approval.*

PHYS 6331 - Astroparticle Physics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Topics include: Symmetries and conservation rules, introduction to representation of groups, gauge theories, neutrino astrophysics, particle cosmology and astrophysics.

Prerequisites: *PHYS 5632 or equivalent.*

PHYS 6837 - Research Project & Seminar I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Fee Type: Special
Fee ($): 45
Development of a supervised graduate research project. Seminar speaker reviews on current research in physics, space science and engineering. Written report and oral presentation. May be used to complete a thesis proposal.
Prerequisites: *Permission of instructor*

PHYS 6838 - Research Project and Seminar II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 45
Performance of a supervised graduate research project. Seminar speaker reviews on current research in physics, space science and engineering. Written report and oral presentation. Not intended for students completing a master's thesis.
Prerequisites: *PHYS 5739 or PHYS 6837.*

PHYS 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 60
Prerequisites: *Approval of faculty adviser, master's committee and dean.*

Psychology

PSYC 2301 - Introduction to Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Survey of the major psychological topics, theories and approaches to the scientific study of behavior and mental processes.

PSYC 3315 - Psychological Thinking

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 20
Focuses on gaining skills necessary to understand and critique issues and research from a psychological perspective. Emphasis will be on critical thinking and expression of ideas, APA style and journal reading. Psychology majors must take this course in the first semester of their junior year.

PSYC 3321 - Learning

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
Basic principles of learning and how they apply to human behavior.

PSYC 3331 - Theories of Personality

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Theories of the origins, structure and dynamics of personality; emphasis on the "normal" personality.

PSYC 4311 - Social Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Attitudes, social cognition, personal perception, self, social influence, relationships, prejudice, helping and aggression. Theories, research and application. **Cross-listed:** SOCI 4311.

PSYC 4314 - Child Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Cognitive, social, and emotional development of children; psychoanalytic, behavioristic and Piagetian approaches.

PSYC 4316 - Brain and Behavior

Credit Hours: 3 **Lecture:** 3 **Lab:** 0m
The biological basis of how one thinks, feels and acts.

PSYC 4351 - Abnormal Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Neurotic and psychotic personality patterns; etiology, symptoms, diagnosis and correctional methods and institutions viewed from a psychological perspective.

PSYC 4382 - Cognitive Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An empirical and theoretical examination of human cognitive processes. Possible topics include perception, memory, problem solving and artificial intelligence.

PSYC 5030 - Experimental Analysis of Behavior: Special Topics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course serves as an introduction the Experimental Analysis of Behavior. Topics include stimulus equivalence, conditional discriminations, rule-governance, behavioral pharmacology and verbal behavior.
Prerequisites: *PSYC 5235, PSYC 5435, and PSYC 6238.*

PSYC 5031 - Human Growth and Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An overview of the developmental process throughout the life span. Focus on physical, cognitive, social and emotional components of development.

PSYC 5038 - Foundations of Development: Infancy and Childhood

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The study of theories and research methodologies as applied to infants and children. The focus of the course will be how these theories and methodologies aid in understanding infants' and children's physical, cognitive and socio-emotional development.

PSYC 5039 - Foundations of Developmental Psychology: Adolescent

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Graduate-level introduction to the study of normative psychological development during adolescence. The class will cover contemporary and classic research on biological, cognitive, emotional and social development during the second decade of life, and on the contextual factors, both interpersonal and institutional, that influence adolescent development.

PSYC 5111 - Orientation to School Psychology

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Orientation of students to the field of School Psychology. Addresses the history and development, paradigms for service delivery, and roles and functions of school psychology specialists. Students will accompany practicing LSSP to be directly exposed to roles and functions performed.
Prerequisites: *Admission to School Psychology program.*

PSYC 5131 - Psychopathology of Childhood

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Survey of psychological disorders of childhood and adolescence: diagnostic categories, assessment approaches,

etiology, treatment and prognosis.
Prerequisites: *PSYC 5031 or equivalent.*

PSYC 5134 - Interviewing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Fee Type: Special
Fee ($): 15
Interviewing skills, goal setting, evaluating client progress, cultural sensitivity and ethics. Critical analysis of research literature.

PSYC 5135 - Ethics in Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Ethics, dual relationships, legal issues, confidentiality and other professional issues in the delivery of human services.

PSYC 5136 - Multicultural Counseling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of culturally sensitive clinical practice with ethnic and other minority clients.
Prerequisites: *Admission to the Clinical Psychology, Family Therapy, or School Psychology program.*

PSYC 5138 - Mindfulness and Acceptance Therapies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of the theory and research supporting recent trends in behavior therapy, particularly the group of therapies interested in the constructs of mindfulness and acceptance.
Prerequisites: *Admission to the Clinical Psychology, Family Therapy, or School Psychology program.*

PSYC 5139 - Skill Development

Credit Hours: 3 **Lecture:** 3

This course introduces students to the major concepts in the field of judgment and decision-making and how to affect decision-making outcomes for themselves and others.

PSYC 5231 - Psychotherapy: Theory and Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Forms of modern psychotherapy: psychoanalysis, humanistic, existential and behavioral.
Prerequisites: *PSYC 3331, PSYC 4351, or equivalent Admission to the Clinical Psychology, Family Therapy, or School Psychology program.*

PSYC 5233 - Introduction to Family Therapy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
Introduction to theories and techniques of family and marital therapy, family process and lifestyle of the family.

PSYC 5234 - Individual and Family Development Across the Lifespan

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Overview of individual and family process and modifications to family structures over the course of the family cycle (e.g., birth of child, adolescence and mid-life, launching and empty nest, etc.). Limited to students in Clinical Psychology or Family Therapy
Prerequisites: *PSYC 5233 and limited to students in Clinical Psychology or Family Therapy*

PSYC 5235 - Learning Principles

Credit Hours: 3 **Lecture:** 3 **Lab:** 1

Fee Type: Special
Fee ($): 45
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 50
An overview of assessment methods and instruments related to marital and family dysfunctions. Diagnosis of dysfunctional relationship patterns and of nervous and mental disorders.
Prerequisites: *Admission to the Family Therapy program.*

PSYC 5239 - Group Psychotherapy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: Admission to the clinical psychology or family therapy programs

PSYC 5331 - Personnel Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Pre- or Co-requisite: *PSYC 6333*. *PSYC 6036 may also be used with instructor consent.*

PSYC 5332 - Organizational Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Fee Type: Special
Fee ($): 15
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
Interdisciplinary examination of the determinants and consequences of effective and ineffective leadership in various types of organizations. **Cross-listed:** SOCI 5339.

PSYC 5334 - Change and Organizational Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
Introduces students to notion of change at both individual and organizational levels. Survey of organizational change techniques and strategies. Students learn to work in groups and apply OD models to diagnose organizational problems and recommend interventions. **Cross-listed:** SOCI 5430.

PSYC 5335 - Career Counseling

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 35
Review of theories of career choice, accessing vocational information, theories, and methods of career assessment and counseling techniques to facilitate career development across the lifespan.

PSYC 5339 - Training and Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Overview of training and development in organizations with particular emphasis on needs assessment, the learning environment and methods of program evaluation.

PSYC 5432 - Psychoactive Drugs

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Legal and illegal drugs and their effects 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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
Study of the factors that contribute to substance abuse and the various treatment modalities.

PSYC 5435 - Conceptual Issues in Behavior Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Coverage of major theories that have contributed to contemporary behavior analysis. Topics include radical behaviorism, philosophy of science, and a functional analysis of language (verbal behavior).
Prerequisites: *PSYC 5235*.

PSYC 5437 - Aging

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of current and future issues relating to the elderly from both a psychological and a societal perspective. **Cross-listed:** SOCI 5437.

PSYC 5438 - Development of Gender and Racial Identity

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of theoretical approaches to the study of gender and racial/ethnic identity development.

PSYC 5532 - Advanced Social Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Theory, methodology, and research findings pertinent to the individual in social context **Cross-listed:** SOCI 5532.

PSYC 5533 - Psychology of Gender, Race, and Sexuality

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Sex roles, stereotyping, socialization of women and men, feminism, female sexuality, feminist therapy, androgyny and situation of minority women. Women's and Gender Studies course.

PSYC 5535 - Cross-Cultural Perspectives on the Family

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 50
Cross-cultural data are used to examine family systems including marriage, sex roles and child rearing.

PSYC 5536 - Occupational Health Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
Effects of work environment on employees' health and well-being. Emphasis on promotion of wellness and prevention of negative health-related consequences within organizational settings.

PSYC 5537 - Professional Issues in Industrial/ Organizational Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 20
Survey of issues related to professional ethics, relevant legislation, professional affiliations, professional identity and professional responsibilities. Topics vary may be repeated for credit.

PSYC 5538 - Job Attitudes

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on employee attitudes in the workplace. We will examine common attitude theories, attitude change and the proper measurement of such attitudes.
Pre- or Co-requisite: *PSYC 6037 or PSYC 6334*

PSYC 5539 - Cross-cultural Issues in I/O Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course views industrial-organizational psychology through a cross-cultural lens discussing business practices and outcomes around the world and the impact that culture has on organizations.

PSYC 5630 - Behavioral Family Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 50
This course provides training in assessment, treatment, consultation, and coordination of care within an evidence-based approach for disruptive behaviors, behavioral parent training (BPT). This course also covers the theoretical underpinnings for the field of BPT and empirical data supporting its validity. Practical and ethical issues for working with children/families in clinical settings is discussed.
Prerequisites: *Admission to the Clinical Psychology, School Psychology, Applied Behavioral Analysis, or Family Therapy program.*

PSYC 5634 - Judgment and Decision Making

Credit Hours: 3 **Lecture:** 3
This course introduces students to the major concepts in the field of judgment and decision-making and how to affect decision-making outcomes for themselves and others.

PSYC 5731 - Psychotherapy Skills and Professional Orientation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Counseling skills development and microskills laboratory experience. The course also familiarizes students with codes of ethics, legal aspects of professional practice and facilitates the development of role identity for individuals providing counseling and psychosocial interventions.
Prerequisites: *Admission to the Clinical Psychology, School Psychology, or Family Therapy program.*

PSYC 5734 - Ethics, Law, and Professional Consultation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Issues in professional practice: career planning, licensing, Texas law, ethics and professional consultation, standards and responsibilities.
Prerequisites: *Admission to the Clinical Psychology, School Psychology, or Family Therapy program.*

PSYC 5735 - Anxiety and Stress Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of development and maintenance of stress and anxiety. Focus on anxiety disorders, stress conditions, and methods of treatment including cognitive-behavioral therapy, progressive muscle relaxation, exercise, meditation, stress inoculation and pharmacological approaches.

PSYC 5736 - Behavioral Medicine

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Clinical applications of behavioral principles in the prevention and treatment of physical disease.
Pre- or Co-requisite: *A course in behavior analysis or in learning principles.*

PSYC 5737 - Family Therapy Professional Ethics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 50
Issues in the professional practice of family therapy: legal and professional standards and responsibilities, ethics, licensing and Texas law.
Prerequisites: *Admission to the Family Therapy program.*

PSYC 5738 - Family Therapy Practicum

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
Fee Type: Practicum
Fee ($): 80
Supervised clinical experience working with families including study of advanced family systems interventions and a focus on students' own families.
Prerequisites: *PSYC 5233, PSYC 5731, PSYC 5737, and PSYC 6531 Admission to the Family Therapy program.*

PSYC 5835 - Acceptance and Commitment Therapy for Addictions

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of factors contributing to substance abuse as well as conceptual and applied learning about treatment modalities, with emphasis on mindfulness and acceptance-based psychotherapies. Limited to students in Clinical Psychology, School Psychology, or Family Therapy
Prerequisites: *Limited to students in Clinical Psychology, School Psychology, or Family Therapy*

PSYC 5919 - Independent Study in Psychology

Credit Hours: 1 **Lecture:** 0 **Lab:** 0
Permission of instructor required. May be taken for 1, 2, or 3 credit hours.

PSYC 5929 - Independent Study in Psychology

Credit Hours: 2 **Lecture:** 0 **Lab:** 0
Permission of instructor required. May be taken for 1, 2, or 3 credit hours.

PSYC 5931 - Research Topics in Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered. Topics vary may be repeated for credit with permission of instructor.

PSYC 5932 - Research Topics in Applied Cognitive Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Special topics class focused on current research topics in the field of applied psychology especially those topics which have crossover into other psychological fields and non-psychology disciplines.

PSYC 5939 - Independent Study in Psychology

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Permission of instructor required. May be taken for 1, 2, or 3 credit hours.

PSYC 6030 - Sensation and Perception

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special

Fee ($): 15
Exposes students to the complexities and mechanisms of human sensation/perception. Class will focus on details of human sensation/ perception and the application of such knowledge.

PSYC 6031 - Behavioral Assessment

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of various behavioral assessment instruments, single subject research designs, and ethics as applied to behavioral analysis. Behavior Analysis MA or Applied Behavior Analysis certificate
Prerequisites: *PSYC 5235 and PSYC 6238 or equivalent.*

PSYC 6032 - Cognitive Assessment

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
Fee Type: Practicum
Fee ($): 140
Review of theory underlying intelligence tests with emphasis on the CHC approach. Supervised practice in the administration, scoring and interpretation of intellectual tests, specifically the Wechsler Scales and Woodcock-Johnson.
Prerequisites: *Admission to the Clinical Psychology or School Psychology program.*
Pre- or Co-requisite: *PSYC 6036 and PSYC 6037.*

PSYC 6033 - Personality Assessment

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 100
An overview of the major psychological assessment techniques. Emphasis on structured interviews, personality inventories, and projective techniques.
Prerequisites: *Admission to the Clinical Psychology or School Psychology program.*

PSYC 6034 - Consultation in School Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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. Field Experience
Prerequisites: *31 hours of School Psychology coursework Admission to School Psychology program.*

PSYC 6035 - Qualitative Research Methods

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Qualitative research involves data collection and rigorous analysis of observations, interviews, focus groups, archives and primary sources and other records to better understand human behavior.

PSYC 6036 - Advanced Nonexperimental Methods and Statistics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Advanced and design research methodologies and statistical analysis

for the behavioral sciences with emphasis on nonexperimental and correlational research.
Prerequisites: *Undergraduate course in statistics.*

PSYC 6037 - Advanced Experimental Methods and Statistics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Advanced application and design of research methodologies and statistical analysis for the behavioral sciences with emphasis on experimental research.
Prerequisites: *Undergraduate course in statistics.*

PSYC 6038 - Clinical Practicum

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Fee Type: Practicum
Fee ($): 140
Application of therapy skills with clients under supervision. Written report required. Students need to take this class for two semesters.
Prerequisites: *PSYC 5731 and PSYC 6531 Admission to the Clinical Psychology program; permission of the instructor and twelve hours of graduate-level coursework including Basic Psychotherapy Skills and Psychopathology.*

PSYC 6039 - School Psychology Practicum

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Fee Type: Practicum
Fee ($): 140
Application of assessment skills with clients under supervision. Written reports required. Students need to take this class for two semester. Field Experience required
Prerequisites: *PSYC 6032 and PSYC 6133 Admission to the School Psychology program.*

PSYC 6111 - Student Diversity in Learning

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Study of potential effects of racial, cultural, ethnic, experiential, socioeconomic, gender-related and linguistic variables that affect development and learning. Development of cultural competency and necessary skills for providing services to diverse populations of children and families in an educational setting.
Prerequisites: *Admission to the Clinical Psychology, School Psychology, or Health Service Psychology program.*

PSYC 6121 - Ethics and Law in School Psychology

Credit Hours: 2 **Lecture:** 2 **Lab:** 0
Exploration of ethical and legal guidelines pertinent to delivery of psychological services in a school setting. Planning and establishing a professional identity for career development; understanding legalities, ethics and standards of practice for school psychology; and working effectively with special populations and problems in school settings.
Prerequisites: *Admission to the Clinical Psychology, School Psychology, or Health Service Psychology program.*

PSYC 6130 - Psychological Measurement

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This is an introductory core clinical course that focuses on methods and objective measures used in the assessment of child, adolescent and adult patients across a wide range of referral questions. It is designed to cover major domains of assessment across the life span. It is also designed to provide information and training in the skills needed for conducting psychological assessments.

PSYC 6132 - Seminar in Professional School Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *51 hours of School Psychology coursework.*

PSYC 6133 - Personality Assessment of the Child

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 100
Supervised Review and practice in the use of major personality tests for to assess children and adolescents, including projective and objective/ empirical measures. Report writing required.
Prerequisites: *PSYC 5131 and PSYC 6032 Admission to the Clinical Psychology or, School Psychology, or Health Service Psychology programs.*

PSYC 6134 - Biological Basis of Behavior

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The role of the nervous system in perception, movement, drives, emotions, higher mental processes and mental illness.

PSYC 6137 - Family Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 50
Overview of research methods with a focus on research in family process and family therapy.
Prerequisites: *PSYC 5236 Admission to the Family Therapy program.*

PSYC 6138 - Design/Evaluation of School Health Programs

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will cover the ten components of the CDC Coordinated School Health Model and address the current health issues facing school-aged children. The course will also include a review of school-based crisis prevention/ intervention. **Cross-listed:** PSYC 7331.
Prerequisites: *School Psychology SSP or by instructor permission.*

PSYC 6139 - Intervention I: Academic and Cognitive Skills

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 140
Overview and clinical practice of

research-based interventions to promote academic and cognitive skills in school-aged children. Topics include bilingual education, preschool education standardized academic achievement measures, curriculum-based assessment and design of reading, math and written expression interventions.
Prerequisites: *Admissions to the School Psychology program or permission of instructor.*

PSYC 6230 - Intervention II: Social and Behavioral Skills

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Overview and clinical practice in school, community and family interventions that promote safe schools and social competence among children and youth.
Prerequisites: *PSYC 6139 Admission to the School Psychology program or permission of instructor.*

PSYC 6231 - Intervention III: Affective and Adaptive Skills

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Theories and evidence-based counseling interventions for youth (e.g., Cognitive Behavior Therapy, Motivational Interviewing, Mentoring); field-based experience; crisis intervention; prevention issues.
Prerequisites: *Admission to School Psychology program; successful completion of PSYC 5131, PSYC 6133, and PSYC 6139.*

PSYC 6233 - Advanced Family Therapy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
In-depth review of family systems and family therapy paradigms.
Prerequisites: *PSYC 5233 Admission to the Family Therapy program or permission of instructor Must be taken in conjunction with/or PSYC 5731*.

PSYC 6234 - Systems and Symptoms

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 50
In-depth study of systems theory with emphasis on clinical implications.
Prerequisites: *PSYC 6233 Admission to the Clinical Psychology, School Psychology, or Family Therapy program.*

PSYC 6235 - Behavioral/Cognitive Therapies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Application of principles of behavior and cognition to individual therapy.
Pre- or Co-requisite: *PSYC 5235 or previous course in learning Admission to the Clinical Psychology, Behavior Analysis, School Psychology, or Family Therapy program.*

PSYC 6236 - Child and Adolescent Family Therapy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 10
Family therapy approaches to problems of children and adolescents; focus on multiple contexts such as

family, school, and community.
Prerequisites: *PSYC 5233 and PSYC 5234 Admission to the Family Therapy program.*

PSYC 6238 - Applied Behavior Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The use of learning principles in applied areas such as education, business, health and human services.
Pre- or Co-requisite: *PSYC 5235 or equivalent.*

PSYC 6239 - Behavioral Interventions I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Specialized application of behavior analytic principles and methods, focusing on acquisition, maintenance and generalization of behavior; requires up to 10 hours per week of field activities. Behavior Analysis master's degree or Applied Behavior Analysis certificate.
Prerequisites: *PSYC 5235, PSYC 6238, PSYC 6338, and PSYC 6339*.

PSYC 6330 - Research and Practicum in Applied Behavior Analysis

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
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. Behavior Analysis master's degree or Applied Behavior Analysis certificate
Prerequisites: *PSYC 6239, PSYC 6331, PSYC 6338, and PSYC 6339.*

PSYC 6331 - Behavioral Interventions II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Specialized application of behavior analytic principles and methods, focusing on the reduction of behavior disorders; requires up to 10 hours per week of field activities. Behavior Analysis master's degree or Applied Behavior Analysis certificate
Prerequisites: *PSYC 6031, PSYC 6338, and PSYC 6339.*

PSYC 6332 - Advanced Consultation and Program Design/Evaluation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
More in-depth coverage of consultation models. Supervised projects involving consultation. Methods to evaluate effective interventions and service delivery methods for at-risk and special populations. Field Experience required
Prerequisites: *Admission to the School Psychology program, 40 hours of coursework that must include PSYC 6034 and PSYC 6139.*

PSYC 6333 - Research Design and Statistics for I/O Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
Application and design of research methodologies for organizations with a focus on action research, quasi-experimental design and interpretation of results.
Prerequisites: *Must have passed an*

undergraduate statistics class Admission to the master's degree program in Industrial/ Organization Psychology or permission of instructor.

PSYC 6334 - Research Design and Statistics II for I/O Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
Application and interpretation of statistical analysis and research results in organizations with a special emphasis on reporting and creating actionable items for organizational implementation.
Prerequisites: *PSYC 6333; Admission to the master's degree program in Industrial/Organizational Psychology or permission of instructor.*

PSYC 6335 - Research Methods in Neuroscience I

Credit Hours: 3 **Lecture:** 2 **Lab:** 2
Fee Type: Special
Fee ($): 50
Overview and application of current methods and commonly used techniques used in neuroscience research. Permission of instructor required.

PSYC 6336 - Research Methods in Neuroscience II

Credit Hours: 3 **Lecture:** 2 **Lab:** 2
Fee Type: Special
Fee ($): 50
Overview and application of current research methods and commonly used techniques used in neuroscience research. Permission of instructor required.

PSYC 6337 - Development and Treatment of Mood and Anxiety Disorders

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This class will provide training and information regarding how mood and anxiety disorders develop, are maintained, and are most effectively treated. It will include the training on the empirically validated treatments for both mood and anxiety disorder. This class will enable students to develop a foundation for expertise in mood and anxiety disorders.
Pre- or Co-requisite: Must be admitted to the Clinical Psychology or School Psychology Program.

PSYC 6338 - Ethics and Professional Issues in Behavior Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Ethics and professional standards in the practice of behavior analysis.
Pre- or Co-requisite: *PSYC 5235 or PSYC 6238 Limited to students enrolled in master's degree Behavior Analysis or the Applied Behavior Analysis Certificate or permission of instructor.*

PSYC 6339 - Research Methods in Behavior Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Application and design of research methodologies for behavior analysis. Topics include measurement, experimental design, data analysis,

social validity and ethical considerations.
Pre- or Co-requisite: *PSYC 5235 Admission to the master's degee program or Graduate Certificate in Behavior Analysis or permission of instructor.*

PSYC 6430 - Verbal Behavior

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed to present a conceptual, basic experimental, and applied approach to the study of verbal behavior (language and communication) from a behavior-analytic perspective.
Prerequisites: *PSYC 5235*

PSYC 6431 - User-Centered Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
Study of the way users should be included in the design process including needs analysis, requirements writing, iterative testing of low/medium/high fidelity prototypes, and implementation of requirements and evaluations. Students will independently apply the UCD process to an applied problem.

PSYC 6432 - Seminar in Advanced Statistics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Overview of advanced topics in statistics, e.g., multiple regression, meta-analysis, and signal detection analysis.
Pre- or Co-requisite: *graduate-level statistics course.*

PSYC 6434 - Human Factors Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Analysis of principles of human factors, along with introduction and overview of the HF/E disciplines.

PSYC 6435 - Human Factors, Methods, and Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Human Factors methods necessary for developing and testing human-machine and systems that support efficient and effective performance.
Prerequisites: *Admission to the Human Factors Psychology concentration or permission of instructor*

PSYC 6439 - Practicum in Psychology

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Fee Type: Practicum
Fee ($): 40
Students apply knowledge methods they have learned to practical and applied psychology based problems. Permission of instructor required.

PSYC 6530 - Personnel Management and Supervision in Applied Behavior Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course covers behavior analytic approaches to staff and caregiver training, supervision of individual performance and systems management from an organizational

behavior management perspective.
Prerequisites: *Enrollment in master's degree Behavior Analysis or ABA Certificate programs.*

PSYC 6531 - Psychopathology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Current issues and research in behavior pathology. **Cross-listed:** PSYC 7531
Prerequisites: *Admission to the Clinical Psychology, Family Therapy, or School Psychology program.*

PSYC 6533 - History and Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed to assist students in an appreciation of changes in psychology over time. This includes a general overview of the philosophical origins of the field, major approaches to the field of Psychology and how each has emerged and influenced the other and changes in conceptual and methodological approaches to the field over time.

PSYC 6534 - Couples and Sex Therapy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 50
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.
Prerequisites: *PSYC 5233 Admission to a professional psychology program.*

PSYC 6538 - Performance Appraisal and Feedback

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An overview of performance appraisal, evaluation and measurement in organizations, as well as the delivery and reception of organizational and supervisory feedback.
Prerequisites: *PSYC 5331*

PSYC 6539 - Practicum in Industrial/ Organizational Psychology

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Supervised application of psychological principles in an organizational setting. Review of ethical, legal and professional issues. Written report required. Permission of instructor required.
Prerequisites: *PSYC 5331, PSYC 5332, PSYC 6333, and PSYC 6334*.

PSYC 6636 - Clinical Internship

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Fee Type: Practicum
Fee ($): 30
Arrangements must be completed by preregistration. Students are required to meet all academic requirements and professional development standards before starting internship. Students must take this class for at least two semesters.
Prerequisites: *Program approval for placement in an appropriate internship.*

PSYC 6666 - Clinical Internship

Credit Hours: 6 **Lecture:** 0 **Lab:** 0
Fee Type: Practicum
Fee ($): 60
Minimum of two days a week in an approved internship setting. Written report required. Arrangements for internship must be completed by preregistration. Students will need to take two semesters of this class.
Prerequisites: *Admission to the Clinical Psychology, School Psychology, or Family Therapy program.*

PSYC 6733 - Applied Developmental Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Culmination of a graduate concentration that prepares students to use developmental research in applied settings, e.g. medical centers, advocacy and services specifically for age groups within the discipline, including public analysis and application.

PSYC 6734 - Assessment in Industry

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 50
Psychological testing and measurement theory as it applies to assessment of people in organizations. Covers different assessment tools and their use in industry.
Prerequisites: *PSYC 6036 or PSYC 6333.*
Corequisites: *PSYC 6037 or PSYC 6334*

PSYC 6735 - Seminar in Industrial/Organizational Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 20
Issues related to the practice of I/O psychology. Topics include professional issues, consulting skills and career development. This is a hands-on course.
Prerequisites: *Students must have a minimum cumulative graduate GPA of 3.00 and completion of all core I/O courses.*

PSYC 6739 - Graduate Internship

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Fee Type: Practicum
Fee ($): 50
Internship as a capstone experience for graduate Psychology students. Prerequisites: 24 hours of graduate-level coursework and approval of internship coordinator. Students seeking an internship must have completed psychological diversity course. Written report required. Arrangements for internships should be completed by the beginning of the prior semester.
Prerequisites: 24 hours of graduate-level coursework and approval of internship coordinator. Students seeking an internship must have completed psychological diversity course. Written report required. Arrangements for internships should be completed by the beginning of the prior semester.

PSYC 6832 - Advanced Cognitive and Affective Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Latest theories and research findings related to human cognition and affect. Topics include perception, attention, memory, language, unconscious processing, emotions and motivational states.

PSYC 6839 - Master's Project Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0

Approval of project director required.PSYC 6909 - Psychology Comprehensive Exam
Credit Hours: 0 **Lecture:** 0 **Lab:** 0
Comprehensive exam for students pursuing the coursework only option.
Prerequisites: *Completion of, or current enrollment in, all Core courses and Research Design and Statistics I & II.*

PSYC 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Approval of thesis director required. PSYC 6036 and PSYC 6037 suggested.

PSYC 7030 - Orientation to Health Service Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will serve as an introduction to the Health Service Psychology program and an overview of the various roles and functions within Health Service Psychology (with a focus on Clinical and School Psychology).
Prerequisites: *Must be enrolled in the Health Service Psychology program.*

PSYC 7031 - Dialectical Behavior Therapy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course reviews the major principles, strategies, and methods of Dialectical Behavior Therapy (DBT). Emphasis will be placed on training in the component principles, strategies, modes, and functions of DBT and their corresponding empirical foundations. The course provides an introductory overview so students may go on to participate in supervised DBT practice. Teaching strategies include didactic and experiential training, clinical application, and empirical research.
Prerequisites: Admission to the Clinical Psychology program or the Health Service Psychology program.

PSYC 7032 - Cognitive Assessment

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 140
This course provides training in the major cognitive assessment techniques. Emphasis and training will be placed on the WAIS-IV, WISC-V, WJ-IV, DAS-II and Binet5 including integrative reports of these measures. Teaching strategies will include didactic training, experiential training, clinical application and report writing.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7033 - Personality Assessment

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 120

This course provides training in the major psychological assessment techniques. Emphasis and training will be placed on structured interviews, objective measurement and personality inventories, including integrative reports of these measures. Teaching strategies will include didactic training, experiential training, clinical application and report writing.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7034 - Neuropsychological Assessment

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 140
This is an advanced course with the goal of introducing students to the theory and practice of clinical/school neuropsychology. Students will learn to assess and interpret the relationship between nervous system function, cognition, emotion and behavior; and to apply this knowledge in diagnostics and design of individualized interventions. Students will gain an understanding of the field through review of adult and pediatric medical diseases and psychological disorders. Teaching strategies will include didactic training, experiential training, clinical application and report writing.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7038 - Practicum

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Fee Type: Special
Fee ($): 140
This course is 2-semester sequence where students will provide clinical services (assessment, therapeutic intervention and consultation) in the university psychological services clinic. Course components involve didactic training, experiential training, clinical application and report writing. The course is designed to teach data-based problem solving to diagnostic assessment and evidence-based treatment.

Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7039 - External Practicum/Internship

Credit Hours: 3 **Lecture:** 0 **Lab:** 0

Fee Type: Special
Fee ($): 140
Students develop conceptual and professional skills related to the practice at a field site, including practice with various specified assessment, intervention and consultation activities.

Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7130 - Experimental Methodology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0

Fee Type: Special
Fee ($): 50
This is the first of a three-course sequence (PSYC 7131 and PSYC 7132) and focuses on quantitative methodology related to psychological research and design. Topics will

include research ethics, validity, reliability, measurement design, sampling, single subject design, experimental and quasi-experimental design.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7131 - Quantitative Analysis I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 50
This is the second of a three-course sequence (with PSYC 7130 and PSYC 7132) and focuses on quantitative techniques of inquiry that pertain to experimental analysis. Topics will include descriptive statistics, hypothesis testing using parametric and non-parametric statistics, and factorial designs.
Prerequisites: *PSYC 7130. Admission to the Health Service Psychology program.*

PSYC 7132 - Quantitative Analysis II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 50
This is the third of a three-course sequence (with PSYC
7130 Experimental Methodology and PSYC 7131) and focuses on higher level quantitative techniques of inquiry including regression and correlation analyses.
Prerequisites: *PSYC 7130 and PSYC 7131. Admission to the Health Service Psychology program.*

PSYC 7136 - Multicultural and Diversity Issues

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Perspectives on the role of culture in understanding human behavior and pathology. The emphasis is on the centrality of culture in understanding health and psychopathology in clinical, school, community, and medical settings. Focus will be on clinical practice with individuals from diverse socio-cultural groups. This course will familiarize students with perspectives on culture and diversity and facilitate the development of cultural competence in research and clinical practice.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7138 - Mindfulness and Acceptance Therapy

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
This course will familiarize students with the theory and research supporting recent trends in behavior therapy, particularly constructs of mindfulness and acceptance. This course will train students in the "how-to" of empirically supported mindfulness and acceptance treatments for a variety of disorders. Finally, the class will review evidence for the efficacy and effectiveness of mindfulness and acceptance therapies. Students will be responsible for training others in areas of mood or anxiety disorders.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7139 - Intervention I: Academic and Cognitive Skills

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 140
This course provides training in curriculum-based, criterion-referenced and norm-referenced academic assessment techniques; covers universal screening, benchmarking and progress monitoring and incorporates the comprehensive Rtl process. Emphasis and training will be placed on objective measurement, learning evidence-based interventions for academic deficits and the use of data to generate tailored evidence-based interventions based on patterns of academic and cognitive strengths and weaknesses.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7232 - Advanced Child Behavioral Therapy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will provide training in skills necessary for working with families of children with a variety of clinical and health issues. This class will train students in the "how-to" of several empirically supported treatments for a variety of disorders in children and adolescents. Further, the course will cover how to engage in assessment, treatment, consultation and coordination of care within an evidence-based approach. Finally, the class will review evidence for the efficacy and effectiveness of interventions, as well as clinical issues related to the practice of psychotherapy with children, adolescents and families.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7235 - Advanced Behavioral Therapy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will train students to become familiar with the benefits and limitations of identifying and using empirically supported psychological treatments (ESTs) and the professional controversies surrounding identification and dissemination of ESTs. Students become familiar with a number of ESTs for various disorders in clinical and health populations.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7239 - Advanced Group Psychotherapy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will focus mainly on didactic teaching of fundamental group psychotherapy concepts and experiential exercises, including participating in group activities. Students will be trained to run different types of groups with a variety of populations. Students will also experience feedback to meet personal and professional needs.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7331 - School Health Programs

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will cover the eight components of the CDC Coordinated

School Health model (Health Education; Healthy and Safe School Environment; Counseling and Mental Health Services; Parent and Community Involvement; Staff Wellness; Promotion Health Services; Physical Education; Nutrition Services). The course is designed to address the current health issues facing school-aged children and the links between academic success and health issues. **Cross-listed:** PSYC 6138
Prerequisites: *Psy.D. major. Admission to the Health Service Psychology program.*

PSYC 7332 - Advanced Consultation and Program Design/Evaluation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Students will examine theories and models of both mental health consultation and program evaluation. Students will be expected to demonstrate their expertise via practical exercises. This course will familiarize students in different types of program evaluation, including needs assessment, formative research, process evaluation, monitoring of outputs and outcomes, impact assessment and cost analysis.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7333 - Pediatric Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will provide training and information related to providing clinical services with children and adolescents within a medical setting, to gain competency in treating patients presenting with a range of medical conditions, and to develop skills for designing and implementing research involving medically ill patients. This course will also provide information regarding the interaction between mental and physical health and ethical and sociocultural considerations in behavioral medicine.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7334 - Adult Behavioral Medicine

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will help students learn: 1) how to provide clinical services within a medical setting; 2) how to gain competency treating patients presenting with a range of medical conditions (as primary or secondary diagnoses); 3) how to develop an understanding of interactions between mental and physical health; and 4) how to develop skills for implementing research involving medically ill patients.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7337 - Development and Treatment of Mood and Anxiety Disorders

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will provide training and information regarding how mood and anxiety disorders develop, are maintained, and are most effectively treated. It will include the training on the empirically validated treatments for both mood and anxiety disorder. This class will enable students develop

a foundation for expertise in mood and anxiety disorders.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7531 - Psychopathology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed to introduce you to a variety of psychological disorders and the theory underlying etiologies of these disorders. **Cross-listed:** PSYC 6531
Prerequisites: *Psy.D. major. Admission to the Health Service Psychology program.*

PSYC 7630 - Behavioral Family Systems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 50
This course provides training in assessment, treatment, consultation, and coordination of care within an evidence-based approach for disruptive behaviors, behavioral parent training (BPT). This course also covers the theoretical underpinnings for the field of BPT and empirical data supporting its validity. Practical and ethical issues for working with children/families in clinical settings is discussed.
Prerequisites: *Psy.D. students only. Admission to the Health Service Psychology program.*

PSYC 7736 - Ethics and Professional Issues in Health Service Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will provide training and information related to the professional issues when working in a medical setting. This course will also provide information regarding the interaction between mental and physical health and ethical and sociocultural considerations in medical psychology.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 7835 - Acceptance and Commitment Therapy for Addictions

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of factors contributing to substance abuse as well as conceptual and applied learning about treatment modalities, with emphasis on mindfulness and acceptance-based psychotherapies.

PSYC 7931 - Research Topics in Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered. Topics vary may be repeated for credit with the permission of instructor.

PSYC 7936 - Evidence-Based Clinical Supervision Practices

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Fee Type: Special
Fee ($): 140
Introductory and advanced training in concepts, processes and styles of clinical supervision for clinical and school psychology in various health settings. The course reviews theories of supervision and legal, ethical and

cultural issues related to supervision.
Prerequisites: *Admission to the Health Service Psychology, Clinical Psychology, or School Psychology programs AND successful completion of one semester of practicum.*

PSYC 7939 - Health Service Psychology Thesis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course entails completion of a research thesis under the supervision/mentorship of a faculty member for the Health Service Psychology program.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 8930 - Doctoral Dissertation

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
This course is designed to develop understandings, skills and outlooks to conduct original, independent research in an area of specialization (pediatric psychology, health psychology, clinical psychology, school psychology). The instructor of record is the student's dissertation chair. may be repeated for up to 9 hours.
Prerequisites: *Admission to the Health Service Psychology program.*

PSYC 8931 - Doctoral Internship

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Internship is the culminating experience of the student's program. It involves a planned program of participation in a specific setting and allows the opportunity to integrate coursework, research, theory and practical experiences in a supervised, applied setting. The internship occurs on a full-time basis and consists of approximately 1500 clock hours for 3 consecutive semesters.
Prerequisites: *Admission to the Health Service Psychology program.*

School Library and Information Science

SLIS 5012 - Professional Preparation Seminar for School Librarians

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 15
This course is designed to assist students in the School Library and Information Science Specialist certification plan to understand the state certification standards for successful entry into their chosen educational fields. Completion of the course is dependent upon candidates passing all state assessments required for their degree/certification plans.
Prerequisites: *An approved, signed degree plan on file in the COE.*

SLIS 5532 - Selecting Literature and Materials for Young Adults

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
This course is about the selection, evaluation and strategies for use of literature in grades 8-12, including print and digital reading materials and other resources.

SLIS 5533 - Selecting Literature and Materials for Children

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
This course examines the application of higher order thinking skills to reading in literature and the content areas.

SLIS 5931 - Research Topics in Library Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by title each time course is offered.

SLIS 5939 - Independent Study in Library Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of instructor and associate dean.*

SLIS 6134 - School Library Collection Development Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the philosophy, principles, and fundamentals of school library collection management including selection, acquisition, cataloging, circulation and deselection of print and non-print materials.

SLIS 6136 - Librarians as Instructional Partners

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the principles and fundamentals of collaborative planning and instruction in the school library. Offered fall and spring semesters only.
Prerequisites: *SLIS 6336*.

SLIS 6234 - Librarians Empowering Learners Through Advocacy Leadership

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the principles and methods of creating dynamic school library programs through collaboration with teachers, administrators, librarians and the community.

SLIS 6334 - Administration of School Library Services

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course exams the principles and illustrative practices in the organization, budgeting, policy making, facilities planning and staffing of school libraries.

SLIS 6336 - Media and Technology Selection and Application

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
This course is about the selection, evaluation, application and integration of educational technologies and applications, including the design and production of media in school libraries.

SLIS 6338 - School Library Systems & Services

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is an introduction and evaluation of the current library reference, information and retrieval systems and their applications in school libraries.

SLIS 6430 - Research in Library Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the principles and fundamentals of action research in the school library to improve the way issues are addressed and problems are solved.

SLIS 6735 - Leadership Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course provides a demonstration of acquired competency through completed projects on current topics in school librarianship. This capstone experience provides a rich opportunity to demonstrate the inter-relatedness of theory and practice.
Prerequisites: Completion of all SLIS coursework in plan of study. Class Notes: Prerequisite must be completed prior to enrolling in course (See Catalog). Students taking this course must be enrolled in the School Library and Information Science M.S. without certification or must have adviser approval. All class instruction and course requirements are online.

SLIS 6739 - School Library Practicum

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
Supervised field experiences in EC-12, incorporating information skills instruction and practice in school library management and leadership. This course is offered during the fall and spring semesters only.

Sociology

SOCI 5032 - Mental Health and Illness

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Overview of mental health and illness beginning with a comparison of the sociological perspective of mental illness to biological and psychological views. We will then examine how social factors relate to patterns of mental illness in society. Finally, we will examine various aspects of mental health systems and policies.

SOCI 5035 - Human Rights and Social Justice

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of methods, theories, debates, and case studies related to human rights in the United States and globally. Students will gain skills required to conduct future research on the topic.

SOCI 5131 - Contemporary Sociological Theory

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
In-depth analysis of delinquency theories, issues, and policies in the U.S. and abroad. Topics include measurements and research, serious violent offenders, gangs and treatment by justice agencies. **Cross-listed:** CRIM 5133

SOCI 5136 - Women and the Law

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Evolution of women's legal rights in the United States. Examination of contemporary issues in the context of human rights law. Legal status of women in economic, political and judicial sectors.

SOCI 5137 - Race and the Law

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Evolution of legal rights of race/ethnic groups in the U.S. from a sociological perspective. Examination of the civil rights movement, hate crimes and Affirmative Action policy.

SOCI 5233 - Religion and Immigration Studies in Houston

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Exploration of the dynamic relationship between religion and immigration with a specific focus on the role faith communities play in the migrant experience. **Cross-listed:** SOCI 3317

SOCI 5236 - Religion and Global Change

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of religion in the modern world, religious identities and the process of secularization, all from a global, cross-cultural perspective. **Cross-listed:** CRCL 5033.

SOCI 5333 - Minorities and Majorities

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
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. **Cross-listed:** PSYC 5534.

SOCI 5334 - Social Stratification

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
Patterns of social and economic inequality in the United States. Distribution of income and wealth, social mobility, life changes, education and power. Class, race and gender differences will be discussed as well as patterns of social change.

SOCI 5336 - Law and Society

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Survey of problematic issues in contemporary American society from the perspectives of sociological, philosophical and legal theories. Examination of the controversial ways

our political system seeks to reconcile civil liberties with the collective obligations of the social contract. **Cross-listed:** CRIM 5336

SOCI 5337 - Complex Organizations

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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, organizational environments and exercises in designing prototype organizations.

SOCI 5339 - Leadership in Organizations

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Overview of the topic of leadership in organizations from multiple perspectives including psychology, sociology and management. **Cross-listed:** PSYC 5333.

SOCI 5433 - Social Conflict and Mediation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of theories of social conflict and application of dispute resolution/mediation techniques to needs of the community groups, courts, churches, businesses and nongovernmental agencies.

SOCI 5434 - Marriage and Family

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This graduate seminar will introduce students to a wide range of studies in the sociology of the family, improving their ability to critically analyze work in this field and inspiring students' own family-related research.

SOCI 5435 - Gendered Inequality: Work and Family

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of two important institutions in American society: work and the family. Explanation of the way gender, work and family life interconnect and influence each other.

SOCI 5438 - Sociology of the Life Course and Aging

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Introduction of students to the life course. In particular, the course introduces students to the theories, methods and substantive topics which exemplify the life course paradigm.

SOCI 5532 - Advanced Social Psychology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Theory, methodology, and research findings pertinent to the individual in a social context. **Cross-listed:** PSYC 5532.

SOCI 5533 - Sociology of Human Intimacy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Inquiring into the forms and dynamics of human intimacy. Topics include attraction, sexuality, marriage and

divorce, domestic violence, friendship and loneliness.

SOCI 5537 - Urban Problems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
Examination of classical theories of urban life and urban development; exploration of urban problems such as crime, transportation, suburban conflict and corresponding urban policy.

SOCI 5633 - American Immigration Studies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
Examination of the central concepts and major paradigms in the study of American immigration.

SOCI 5731 - Politics and Protest

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
Exploration of the issues of race, religion, sex and gender in American politics and protests.

SOCI 5732 - Seminar in Social Problems

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
Examination of contemporary social problems such as inequality, consumerism, genetics and various environmental issues using sociological theory, methods and contemporary films.

SOCI 5931 - Research Topics in Sociology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific topic each time the course is offered. Topics vary may be repeated for credit with permission of instructor.

SOCI 5939 - Independent Study in Sociology

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Permission of adviser and instructor required. May be repeated for credit with permission of adviser and instructor.

SOCI 6432 - Qualitative Research Methods

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Overview of qualitative research methods. During the semester, students will gain hands-on experience in qualitative research. Students will gain entry to a research site, collect qualitative data and present research findings.

SOCI 6730 - Advanced Non-Experimental Research and Statistics

Credit Hours: 3 **Lecture:** 3 **Lab:** 1
Fee Type: Special
Fee ($): 30
Multivariate statistical analysis including advanced regression, ANOVA, and logistical regression. Students will develop a research

project and do statistical analysis; may be part of a student master's degree thesis.

SOCI 6731 - Graduate Research Methods

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
Advanced study of logic, principles and procedures involving techniques of data collection, organization and statistical analysis. Students are encouraged to take Graduate Research Methods before taking Graduate Statistics.

SOCI 6734 - Women's Health

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An in-depth look at the social and political issues that shape women's health, health care, social and medical attitudes towards the female body. We will also explore how social and policy changes can improve--or threaten--women's health.

SOCI 6737 - Medical Sociology

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of a conceptual and substantive overview of Medical Sociology, focusing on some of the most fundamental and salient sociological issues concerning health, illness and health care. Using critical thought, students will apply various theoretical perspectives to the changing social reality of health and illness.

SOCI 6739 - Graduate Internship

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Fee Type: Practicum
Fee ($): 50
Capstone experience for graduate Sociology students. 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.
Prerequisites: *24 hours of graduate course credit before enrolling in internship as well as approval of the Sociology internship coordinator.*

SOCI 6909 - Sociology Comprehensive Exam

Credit Hours: 0 **Lecture:** 0 **Lab:** 0
The comprehensive exam will be either a research proposal developed by the student in consultation with a faculty adviser that synthesizes theory, a literature review and methodology, or it will be a written exam that includes questions from all full-time Sociology faculty.

SOCI 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Approval of adviser, thesis director and department chair required.

Software Engineering

SWEN 4320 - Introduction to Software Process and Project Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Introduction to Software process models, process modeling and improvement; project planning, scheduling and project management.

SWEN 4342 - Software Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Introduction to Software Engineering. Major phases of the software life cycle are introduced from requirements through maintenance.
Prerequisites: *A course in programming in a high-level language; Data Structures is recommended.*

SWEN 4346 - Software Testing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Current and traditional testing techniques will be explored and exercised, including but not limited to black box testing, white box, equivalence partitioning, recurrence testing, validation testing, as well as validation and verification techniques. Integrated Laboratory instruction.

SWEN 5130 - Requirements Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Current techniques, methods, tools and processes used in requirements analysis, definition and specification, including system modeling.

SWEN 5131 - Software Engineering Tools

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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 5132 - Software Design Patterns

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course provides an in-depth view of software design patterns-- the recurring solutions to common problems in software design. It provides opportunities for learning the most advanced features of modern software development methodology. Topics include design visualization, creational, structural and behavioral design patterns, anti-patterns, service-oriented architecture pattern, secure usability and pattern languages.
Prerequisites: *SWEN 5432*.

SWEN 5133 - Aspect-Oriented Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Aspect-Oriented software development (AOD) is a new programming paradigm that increases modularity with a separation of crosscutting concerns. This course provides a broad perspective of AOD. The topics include Aspect-Oriented design in C# and visual programming languages,

separation of concern in .Net web development, visual simulations, patterns and frameworks, aspects design in video game and robotics software development.
Prerequisites: *A course in data structures.*

SWEN 5134 - Gaming Software Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 40
This course provides an in-depth study of computer game development technology based on SOA architecture; the design principles, architecture pattern, dynamic interoperability, visual simulation, web gaming services and technology infrastructures.
Prerequisites: *SWEN 5236 and SWEN 5237.*

SWEN 5135 - Configuration Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines configuration management including configuration item identification, change reporting and evaluation, change execution, version control, configuration, change control tools, techniques and methods, as well as management principles related to configuration control.

SWEN 5136 - Software for Robotics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course addresses the design and implementation of software to control autonomous robotic devices to perform special tasks under various conditions. It provides a study of programming issues of robotics control for individual and multiple cooperating robots, including design principles, theories, graphical programming languages, algorithms, data acquisition and analysis, machine intelligence and techniques to develop autonomous robotics system with various sensors and actuators.
Prerequisites: *A course in data structures.*

SWEN 5137 - Game Design and Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Principles of game design and development of software for computer gaming.
Prerequisites: *A course in data structures.*

SWEN 5138 - Design and Development of Virtual Worlds, Sims and Animation Scripting

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Project-based course that involves the introduction to and development of Virtual World and Sims using 3-D graphic software and animation scripting languages. Includes periodic oral presentations and project documentation. Students may be required to provide their own laptop and may be required to purchase special software.
Prerequisites: *SWEN 5236 and SWEN 5237.*

SWEN 5139 - Data Science and R in Software Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course covers the breadth of data science, how to identify the needs for big data in projects, how to create data sets, clean data sets, basic machine learning techniques, as well as how to create features and feature selection. Students will learn and apply the R programming language as well as JMP and Weka, and Tableau for data visualization.
Prerequisites: CSCI 2315 or CSCI 2305 recommended

SWEN 5230 - Software Project Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Issues faced in the management of large software development projects: estimation, planning execution, monitoring, evaluation and refinement.

SWEN 5232 - Software Construction

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Study of modern software development design and implementation methods, as well as program and design analysis methods and implementation techniques. Course will involve the study of UML and .Net and C-sharp programming as well as other current languages and exercise common data structures such as stacks, queues, linked lists, arrays and heaps. The course is mainly a programming course.
Prerequisites: *CSCI 2315*.

SWEN 5233 - Software Architecture

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Knowledge of complex programs recommended. Domain models, generic architectures and frameworks as well the context, scope, current and future state of software architecture.
Prerequisites: SWEN 5236 , SWEN 5237 , and SWEN 5432

SWEN 5234 - Software Processes

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Detailed coverage of the theory, application, assessment and evaluation of the Unified Process Model. Course will cover the process modeling, process assessment, quality assessment of process models and process improvement techniques.
Prerequisites: *SWEN 5236*.

SWEN 5235 - Software Construction II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Continuation of the study of modern software development with the programming of more complex software and the associated design and implementation methods, analysis

methods and implementation techniques. Agile-based methods will be included. The course will also involve the study of UML and .Net and C-sharp programming. The course is mainly a programming course. Laboratory Instruction.
Prerequisites: SWEN 5236

SWEN 5236 - Engineering Software I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 40
Modern programming techniques. Basic programming techniques using C/C, Java and other modern languages. Topics will include basic statements, declarations, data types, stream I/O, user-defined classes and types, object-oriented programming, exceptions and templates. Course will include programming surrounding the common data structures: arrays, linked lists, queues and stacks.

SWEN 5237 - Engineering Software II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 40
Modern programming techniques, continued. Continuation of SWEN 5236 with a review of intermediate programming topics including object-oriented programming structure and organization, requirements specification introduced. Programming topics will include recursion, design patterns, concurrent programming, graphical user interfaces, abstract data types, binary trees, binary search trees, heaps, hashing techniques, as well as the implementation of searching and sorting algorithms.
Prerequisites: *SWEN 5236*.

SWEN 5238 - Innovation and Creativity

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course is designed to foster students' ability to think creatively in the design of innovative products, services and organizations. Students will learn to define and describe creative diversity, including creative style, creative level and be given exercises and problems solving skills to improve innovation and creativity level.

SWEN 5239 - Agile Software Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 40
This course addresses the main Agile software development methodologies such as Scrum, Kanban, Lean, Extreme programming, crystal (XP), dynamic system development methods (DSDM, feature-driven development [FDD]). The course will implement the techniques with real-world case studies. It will offer techniques to improve software development productivity via effective leadership and quantitative methods in software management.
Prerequisites: *SWEN 5236 or a course in data structures.*

SWEN 5430 - Software Metrics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Theory, application and techniques of measurement and analysis. Process and product metrics.

SWEN 5431 - Testing, Verification and Validation

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *SWEN 5236*.

SWEN 5432 - Software Engineering Life Cycle

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *SWEN 5236, SWEN 5237.*

SWEN 5433 - Software Design

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Theory, application and techniques of software design, its representation and analysis, including domain modeling and analysis.
Prerequisites: *SWEN 5236, SWEN 5237.*

SWEN 5435 - Personal Software Process

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination, study and improvement of the students' personal software development practice and study of the process used to affect such improvement.

SWEN 5532 - Software Safety

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Analysis, design, verification and validation of mission and safety-critical systems. Risk and hazard assessment, certification techniques and standards.
Prerequisites: *SWEN 5236*.

SWEN 5534 - Reuse and Reengineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Engineering for and with reuse. Domain and application engineering and reverse and forward engineering.
Prerequisites: *SWEN 5236, SWEN 5237.*

SWEN 5739 - Internship in Software Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Supervised work experience in an approved industrial firm or government agency. Written and oral report required.
Prerequisites: *Approval by adviser and associate dean.*

SWEN 5931 - Research Topics in Software Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Identified by specific title each time course is offered.

SWEN 5939 - Independent Study in Software Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Prerequisites: *Approval of instructor, chair and associate dean.*

SWEN 6837 - Software Engineering Capstone Project

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *Student must be in their last 9 hours of SWEN graduate study including the 3 hours of capstone in these 9 hours and must have completed all core courses.*

SWEN 6838 - Software Engineering Capstone Project

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *Student must be in their last 9 hours of SWEN graduate study including the 3 hours of capstone in these 9 hours and must have completed all core courses.*

SWEN 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Prerequisites: *Approval of faculty adviser, master's committee and dean.*

Spanish

SPAN 5031 - Intensive Spanish I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed to provide Spanish language proficiency and communication skills: listening, reading, speaking and writing.

SPAN 5033 - Intensive Spanish II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Development of Spanish communication skills: listening, reading speaking, and writing.
Prerequisites: *1 semester of college Spanish or 2 years of high school Spanish.*

SPAN 5035 - Intensive Spanish III

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Development of Spanish communication skills and cultural backgrounds.
Prerequisites: *2 semesters of college Spanish or 4 years of high school Spanish.*

SPAN 5931 - Research Topics in Spanish

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific topic each time course is offered. Topics vary may be repeated for credit with permission of instructor.

Special Education

SPED 4300 - Survey of Exceptionalities

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course will provide a study of teaching students with disabilities and diverse needs with an emphasis on making individualized effective instructional decisions.
Prerequisites: *SPED 2301 or equivalent.*

SPED 4311 - Assessment in Special Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
A survey of special education assessment procedures with a focus on alternate assessment procedures used in inclusive settings to link assessment and instruction.
Prerequisites: *SPED 2301 or equivalent.*

SPED 4312 - Diagnostic Instruction for Learners With Special Needs

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *SPED 2301 or equivalent, SPED 4311 or equivalent, concurrent enrollment in a TCED or LLLS methods course.*

SPED 4313 - Individualizing Instruction for Students With Disabilities

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
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.
Prerequisites: *SPED 2301, SPED 4311, SPED 4312, SPED 4321, SPED 4332 or equivalents.*

SPED 4321 - Implementing Positive Behavior Supports

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Prerequisites: *SPED 2301.*

SPED 4332 - Early Childhood Special Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 20
This course provides a comprehensive overview of early childhood special education. Content integrates theory, law, research and current evidence-based practices associated with serving young children (birth through age 8), who present a wide range of special needs. The emphasis of content is on early childhood programs associated with public schools. Field experience is required.
Prerequisites: *SPED 2301.*

SPED 5010 - Professional Preparation Seminar for Special Educators

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 15
This course is designed to prepare students to successfully complete the SPED TExES and is designed to assist students in the SPED supplemental certification plan to understand the state certification standards for successful entry into their chosen educational fields. Completion of the course is dependent upon candidates passing all state assessments required for their degree/certification.
Prerequisites: *An approved, signed degree plan on file in the COE.*

SPED 5030 - Survey of Individual Differences

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is a 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 life span.

SPED 5131 - Educational Assessment of Exceptionalities

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
This course is 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.
Prerequisites: *SPED 5030 or equivalent.*

SPED 5132 - Curricular Approaches to Learning Difficulties

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines the causal factors and remedial alternatives for children with low performance records in regular school environments.
Prerequisites: SPED 5030 or equivalent and SPED 5131

SPED 5133 - Practicum in Inclusive Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
This course focuses on the integration of content area knowledge, pedagogical theory and collaborative practices that are essential in the delivery of specifically designed instruction. Approved practicum placements will emphasize application in inclusive settings.
Prerequisites: *SPED 5131, SPED 5132, SPED 5233.*

SPED 5233 - Providing Positive Behavioral Support

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is 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 the development of intervention plans.
Prerequisites: SPED 5030 *or equivalent.*

SPED 5332 - Evaluation, Assessment and Program Planning for Young Children with Special Needs

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 20
This course provides a comprehensive overview of early childhood intervention and special education by integrating theory, law, research and current evidence-based practices associated with serving young children (birth to age 8), who present a wide range of special needs. Field experiences required.

SPED 5333 - Advanced Interdisciplinary Studies in Young Children with Special Needs

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 20
This is an advanced study of the education of young children with disabilities and their families. Content explores researching program designs and an eclectic blend of approaches and strategies that can be utilized to meet individual child needs.
Prerequisites: SPED 5332 or ECED 5332

SPED 5737 - Practicum: Young Children with Special Needs

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
This is the completion of all prior

course work for the Early Childhood Handicapped Endorsement. It includes fieldwork with infants and/or young children with disabilities; not limited to school, agency or privately funded programs.
Prerequisites: *ECED 5332/SPED 5332 and ECED 5333/ SPED 5333.*

SPED 5931 - Research Topics in Special Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by title each time course is offered.

SPED 5939 - Independent Study of Exceptionalities

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of instructor and associate dean.*

SPED 6030 - Educational Law, Leadership and Advocacy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed to provide educators an in-depth study of the federal and state laws concerning provision of educational services and supports to students with disabilities in the public schools. Candidates will increase their knowledge of advocacy and leadership skills in order to advance quality service provision for individuals with disabilities. The course includes study of applicable Constitutional Law, the Individuals with Disabilities Act (IDEIA), Section 504 of the Rehabilitation Act (as it pertains to special education), Texas Special Education Standards, and Interpretive case law.

SPED 6131 - Collaboration and Problem-Solving

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This critical thinking and problem-solving course emphasizes evidence-based practices associated with working in teams and fundamental collaborative strategies critical to both professional and personal success. Experiential learning strategies provide a method for exploring processes for individual and collective problem-solving through analyzing the role of multiple perspectives which foster greater interpersonal connections, increase clarity and collaboration while motivating individuals to creatively leverage and generate meaningful outcomes.

SPED 6232 - Contemporary Issues in Education; Discourses of Learning for Students wth Diverse Needs

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The essence of this course is designed to provide learning experiences which consider different understandings of education and services for individuals with special needs that frame current public and professional debates as well as the policies that impact students. A broad range of challenges, topics, and patterns of practices will be analyzed.

SPED 6333 - Transdisciplinary and Inclusive Pedagogy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course explores the theory, content, and practice of

transdisciplinary and inclusive pedagogy, including differentiated instruction and universal design. Emphasis is on classroom and community based activities, curricula, and assessment that are designed and delivered to engage all students in learning that is meaningful, relevant and accessible. Candidates are challenged to think critically about diversity and equity issues.

SPED 6531 - Family and Community Partnerships

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course addresses the development of partnerships between culturally, linguistically and ability diverse families, children, schools, and communities through the use of evidence-based strategies. Emphasis is placed on developing skills and identifying benefits for establishing, supporting, and maintaining respectful, collaborative relationships between diverse families, programs/schools, and community agencies/resources reflective of ethical conduct and the nuances of individual contexts. Upon completion, candidates should be able to identify appropriate relationship building strategies between diverse families, children, schools, and communities and demonstrate a variety of communication skills that build and sustain reciprocal relationships.

SPED 6532 - Data Management and Decision-Making

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Effective data-driven decision-making can transform practices, programs and services, As such, this course focuses on frameworks to better structure the way individuals think about complex decision using data analytics. Strategies for effectively organizing and communicating data will be emphasized. Given data-driven decisions are reliant upon the quality of data gathered and the effectiveness of analysis and interpretation, knowledge will be applied to simulated experiences.
Prerequisites: EDUC 6032

SPED 6533 - Transition Planning

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course provides an overview of the common challenges facing youth with disabilities in the transition from secondary school environments to post-school activities. Furthermore, this course examines evidence-based methods for developing successful transition plans (strategies and coordination) to meet individual student needs. The focus in on educational issues such as self-determination, person-centered planning, self-advocacy, access to career and technical educational, employment, post secondary training, independent living preparation, and community living skills.

SPED 6534 - Coordination of Services

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is designed for candidates to acquire knowledge and skills associated with collaborative decision-making and problem solving within

agency-wide, school-wide, and/or district-wide settings and to promote transdisciplinary collaboration among service providers while discussing topics related to a variety of disabilities, the role of professionals, parent advocacy, communication skills, and transition services and extracurricular activities for children and youth with disabilities. Candidates in this course will also explore the essential questions Professional Learning Communities need to ask and answer, how to engage in authentic collaboration and collective inquiry, and how to organize themselves around a results orientation.

SPED 6535 - Reflective Seminar with Applied Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course involves an applied research project individualized to the professional aspirations and skills of candidates emphasizing reflective and integrative inquiry paired with demonstration of professional competencies. As the capstone for the degree, the course involves appraisals of published research, research design and implementation, and demonstration of select professional competencies. This is a capstone course and should be taken the candidate's last semester. Enrollment requires instructor permission.

Statistics

STAT 3308 - Computational Statistics

Credit Hours: 3 **Lecture:** 0 **Lab:** 1
Fee Type: Special
Fee ($): 40
Descriptive statistics, basic probability concepts, normal distribution, parameter estimation, testing of hypothesis, correlation and regression and statistical computation using Excel.
Prerequisites: *MATH 1314 or equivalent. Not available for mathematics majors.*

STAT 3334 - Probability and Statistics for Scientists and Engineers

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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 hypothesis, two sample methods, analysis of variance, correlation and regression analysis.
Prerequisites: *MATH 2413, MATH 2414; Not available for mathematics majors.*

STAT 4344 - Introduction to Probability

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Sample space, probability function, combinatorics, discrete and continuous random variables, special probability distributions, moment generating function, multivariate distributions and

central limit theorem.
Prerequisites: *MATH 2414*.

STAT 4345 - Introduction to Statistics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Sampling distributions, point and interval estimation, hypothesis testing, regression and correlation, nonparametric statistics, analysis of variance.
Prerequisites: *MATH/STAT 4344.*

STAT 5135 - Applied Statistical Methods

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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. Not available for graduate credit for statistics majors.
Prerequisites: *STAT 3308 or equivalent.*

STAT 5431 - Advanced Probability

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Probability axioms and properties, conditional probability, random variables, probability distributions, moment generating function, laws of large numbers and central limit theorem.
Prerequisites: *MATH/STAT 4344.*

STAT 5432 - Principles of Statistical Inference

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Review of probability distributions and sampling distributions, point and interval estimation, tests of hypothesis, uniformly most powerful tests, likelihood ratio test, chi-square test, method of Monte-Carlo and bootstrap procedures, and EM algorithm.
Prerequisites: STAT 4345.

STAT 5531 - Multivariate Statistical Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
The study of multivariate normal distribution, estimation of mean and covariance matrix. T2statistic, Wishart analysis, principal components and factor analysis and other techniques as applied to industrial and decision processes.
Prerequisites: *MATH 4345/STAT 4345 or equivalent.*

STAT 5532 - Linear Models and Regression Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Distributions of quadratic forms, general linear models, least squares estimation, hypothesis testing, confidence intervals, multiple

regression, variable selection, residual analysis and regression diagnostics.
Prerequisites: *MATH/STAT 4345 or equivalent.*

STAT 5533 - Statistical Computing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Data management, reporting, graphical displays, macros, statistical analysis and interpretation and related topics.
Prerequisites: *MATH/STAT 4345 or equivalent.*

STAT 5534 - Sampling Methods

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *MATH/STAT 4345 or equivalent.*

STAT 5535 - Experimental Designs and Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Completely randomized design, randomized blocks, Latin squares, factorial experiments, confounding and fractional factorial designs for industrial experiments and applications.
Prerequisites: *MATH/STAT 4345 or equivalent.*

STAT 5537 - Elements of Statistical Learning

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Univariate statistical modeling, model-fit tests, model comparisons, logistic models, time series and spectral analysis, non-linear models, bootstrap methods and simulations.
Prerequisites: *STAT 4345 and some programming background in R/Python.*

STAT 5538 - Categorical Data Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Introduction and inference for binomial and multinomial observations using proportions and odds ratios; generalized linear models for discrete data; logistic regression for binary responses; alternative modeling for binary responses; logit models for nominal and ordinal responses; inference for matched pairs.
Prerequisites: *STAT 4345 or equivalent.*

STAT 5631 - Survival Data Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *MATH/STAT 4345 or equivalent.*

STAT 5634 - Data Visualization and Graphical Tests

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
The objective of this course is to introduce data visualization techniques and related statistical testing procedures. Topics include data exploration, basic graphical techniques in R and SAS, graphical model diagnostic tools, graphical tests, cluster analysis, classification and regression trees.
Prerequisites: *STAT 4345 and some programming background in R / Python.*

STAT 5635 - Applied Time Series Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
The objective of this course is to apply statistical methods for the analysis of data that have been observed over time. Topics include moving average, auto-regression, spectral analysis, modelling and forecasting.

STAT 5636 - Bayesian Data Analysis

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
The objective of this course is to introduce the main concepts in Bayesian philosophy and broaden statistical thinking. Topics include Bayesian vs frequentist thinking, Bayes theorem, conjugate and non-conjugate priors, grid-based simulations, MCMC simulations, Gibbs and Metropolis-Hastings algorithms, linear models and hypothesis tests.

STAT 5637 - Applied Stochastic Models

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Formulation and analysis of stochastic models with particular emphasis on applications; elements of stochastic processes; homogeneous, nonhomogeneous and compound Poisson processes; Markov Chain; transient and steady state properties of Markov processes in discrete and continuous time; basic renewal theory.

STAT 5739 - Internship in Statistics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Supervised work experience in an approved industrial firm or government agency. Written and oral report required.
Prerequisites: *Approval by adviser and associate dean.*

STAT 5915 - Cooperative Education Work Term

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
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).
Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education.*

STAT 5919 - Independent Study in Statistics

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Prerequisites: *Approval of instructor, chair and associate dean.*

STAT 5931 - Research Topics in Statistics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Identified by specific title each time course is offered.

STAT 5939 - Independent Study in Statistics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Prerequisites: *Approval of instructor, chair and associate dean.*

STAT 6837 - Statistics Research and Consulting I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Each student will develop a research proposal which allows integrating statistics knowledge and data analysis procedures. A written proposal will be required.
Prerequisites: *STAT 5532 or STAT 5535.*

STAT 6838 - Statistics Research and Consulting II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Each student will carry out analyses of data and develop inferences. A written paper and a presentation will be required.
Prerequisites: *STAT 6837*.

STAT 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Prerequisites: *Approval of faculty adviser, master's committee and dean.*

Studies in Language and Culture

SILC 4301 - Spanish for Bilingual Teachers

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Development of advanced reading and writing skills in Spanish with special emphasis on communication with the bilingual community. Course taught in Spanish.
Prerequisites: *Fluency in Spanish.*

SILC 4302 - Introduction to the Study of Languages

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study of phonology, morphology, syntax and semantics of the English language.

SILC 4310 - Foundations of Bilingual and ESL Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Survey of social, political, economic and educational issues related to the development and implementation of bilingual education and ESL programs.

SILC 4311 - ESL Methods

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Emphasis on teaching English to second language learners in the ESL classroom and on putting theory into practice.

SILC 4312 - Content-Based ESL

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
Issues related to the integration of content with ESL instruction. Field experiences required.

SILC 4313 - Language Learning

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Analysis of language acquisition and second language learning.

SILC 4315 - Theories of American Pluralism

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
A review of theoretical foundations of pluralism and their impact on mainstream America.

SILC 4316 - Bilingual Curriculum in the Content Areas

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Study and design of the content area curriculum within a bilingual education program. Course taught in Spanish and English.
Prerequisites: *Fluency in Spanish and SILC 4301.*

SILC 4351 - Development of Biliteracy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
A comprehensive study of theories and research dealing with the development of biliteracy. Course taught in Spanish and English.
Prerequisites: *Fluency in Spanish and SILC 4301.*

SILC 5010 - Professional Preparation Seminar for Educators of English Language Learners

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
This course is designed to assist students in the ESL Supplemental Certification plan to understand the state certification standards for successful entry into their chosen educational field. Completion of the course is dependent upon candidates passing all state assessments required for their degree/certification plan.

Prerequisites: *An approved, signed degree plan on file in the COE.*

SILC 5031 - Curriculum Issues in Educating the Bilingual Student

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is about the study and design of the curriculum for bilingual education programs with an emphasis on teaching academic content areas and vocabulary development (mathematics, social sciences and sciences). Course taught in Spanish.
Prerequisites: *Fluency in Spanish.*

SILC 5032 - Applied Linguistics for Bilingual Education/ESL

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is about the analysis of language development, language acquisition and language use.

SILC 5033 - Cross-Curricular Literacy for Second-Language Learners

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course includes research, theory, and practice in the development of reading and writing skills for second language learners in all content areas.

SILC 5034 - Community Collaboration

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is about establishing partnerships to meet the needs of diverse communities. Field experiences required.

SILC 5035 - Interpersonal Interactions in Diverse Settings

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Emphasis on developing and 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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is 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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is a survey of theoretical, historical, legal and sociocultural basis of bilingual education and ESL programs.

SILC 5134 - Second Language Teaching

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines the trends, issues and practices related to the teaching of English as a second language.

SILC 5531 - Literacy for Spanish-Speaking Students

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is a 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.
Prerequisites: *Fluency in Spanish.*

SILC 5931 - Research Topics in the Studies of Language and Culture

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by title each time course offered.

SILC 5939 - Independent Study in Language and Culture

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of instructor and associate dean.*

SILC 6030 - Foundations of Multicultural Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course discusses social, cultural and legal issues regarding diversity in the United States.

SILC 6031 - Social Justice Leadership, Policy and Advocacy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines leadership issues within current local and national policies.

SILC 6032 - Models of Language

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is 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 6033 - Reflection in Social Justice Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on self-awareness and reflection regarding social justice issues and their impact on engagement and advocacy.

SILC 6034 - Current Issues in Diverse Communities

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course addresses current social justice research, issues and trends in local, national and global contexts.

SILC 6035 - Social Foundations of Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines the social, historical and philosophical foundations of education.

SILC 6036 - Equity Pedagogy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course examines strategies in developing, implementing and

evaluating curriculum and instruction within a social justice framework.

SILC 6734 - Studies in Language & Culture Graduate Seminar

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will involve demonstration of acquired competencies through research on multicultural and linguistic issues. A written paper and presentation will be required.
Prerequisites: *Approval of associate dean.*

SILC 6739 - Studies in Language and Culture Practicum

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Supervised practice under the guidance of a selected professor.
Prerequisites: *Approval of associate dean, completion of core courses, completion of Area of Concentration courses.*

SILC 7030 - Intercultural Communication

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on the understanding of cultural issues that influence communication effectiveness with diverse populations.

Systems Engineering

SENG 5130 - Systems Engineering Processes

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *Foundation courses.*

SENG 5230 - Systems Engineering Economics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special

Fee ($): 40
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *SENG 5231 and SENG 5232 or permission of instructor and adviser.*

SENG 5330 - Risk Management

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *Foundation courses.*

SENG 5332 - Decision Analysis for Systems Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *Foundation courses.*

SENG 5334 - Human Factors Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *Foundation courses.*

SENG 5335 - Healthcare Systems Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Healthcare Systems Engineering integrates key concepts of systems engineering with the special challenges of complex health care systems. The course provides a comprehensive overview of the healthcare system, healthcare delivery and healthcare systems modeling. The course includes numerous examples, case studies and learning activities to thoroughly explain the concepts presented, including healthcare systems, delivery, quantification, and design. The course addresses a variety of healthcare systems engineering challenges in patient flow, financial aspects, health data informatics and analytics, lean and six sigma, patient safety, capacity management and logistics, and the health supply chain.

SENG 5336 - Healthcare Systems Analytics and Optimization

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Healthcare delivery presents numerous systems analysis problems including diagnosis, forecasting, scheduling and optimization. The objective of this course is to provide students with an overview of systems analysis and optimization in healthcare decision making. Students will apply statistical methods including Bayesian belief networks and Dempster-Shafer theory, linear and nonlinear optimization techniques including simplex and greedy-based algorithms and Monte Carlo modeling. Students will be exposed to several real-world projects for health care. Students will learn about current problems in healthcare systems.

SENG 5337 - Healthcare Systems Integration

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Healthcare Systems Integration introduces the design process for a typical healthcare system. The course provides a comprehensive overview of the healthcare system, communication, security and robots in healthcare systems. Electronic instruments from sensor to computer are considered. Static and dynamic characteristics of components and systems are examined theoretically and empirically. General healthcare systems are designed, constructed and tested. A variety of healthcare applications of instrumentation are discussed.

SENG 5532 - Advanced Decision Analysis for Systems Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
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.
Prerequisites: *SENG 5332.*

SENG 5739 - Internship in Systems Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Supervised work experience in an approved industrial firm or government agency. Written and oral report required.
Prerequisites: *Approval by adviser and associate dean.*

SENG 5915 - Cooperative Education Work Term

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 100
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.)
Prerequisites: *Approved Candidate Plan of Study, completed cooperative education file and approval of associate dean and Director of Cooperative Education.*

SENG 5931 - Research Topics in Systems Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Identified by specific title each time course is offered.

SENG 5939 - Independent Study in Systems Engineering

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Prerequisites: *Approval of instructor, chair and associate dean.*

SENG 6837 - Systems Engineering Capstone Project

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Teams will meet on a weekly basis with their faculty mentor to discuss progress.
Prerequisites: *Completion of at least 18 hours of the core curriculum including systems engineering project.*

SENG 6939 - Master's Thesis Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 40
Prerequisites: *Approval of faculty adviser, master's committee and dean.*

SENG 6969 - Master's Thesis Research

Credit Hours: 6 **Lecture:** 6 **Lab:** 0
Prerequisites: *Approval of faculty adviser, master's committee and dean.*

Teacher Education

TCED 4100 - Core Subjects Teacher Seminar

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 15
This course is designed to assist EC-6 and 4-8 and candidates seeking cor- subject certifications to understand the state and federal rules and standards for their chosen fields. Completion of the course is dependent upon candidates passing all state assessments required for their degree/certification plan. This course must be completed to be eligible for Internship I (TCED 4378).
Prerequisites: *Admission to Teacher Education Program and an approved, signed degree or certification plan on file in the COE.*

TCED 4102 - Secondary (4-8 and 7-12) Content Teacher Seminar

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 15
This course is designed to assist 4-8 and 7-12 candidates seeking content-specific certifications to understand the state and federal rules and standards for their chosen fields. Completion of the course is dependent upon candidates passing all state assessments required for their degree/certification plan. This course must be completed to be eligible for Internship I (TCED 4378).
Prerequisites: *Admission to Teacher Education Program and an approved, signed degree or certification plan on file in the COE.*

TCED 4303 - Creating Positive Learning Environments in EC-6

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
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.
Pre- or Co-requisite: INST 3313*, WRIT 3304 or WRIT 3307.*

TCED 4304 - Creating Positive Learning Environments in 4-8

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Theories and strategies for guiding young adolescents' behavior and for effectively managing middle school classroom environments. The class focus will be on understanding the major concepts, principles, theories and research underlying the philosophical foundations and organizational structure of developmentally appropriate middle-level programs and schools.
Pre- or Co-requisite: *INST 3313 and one of the following: WRIT 3304, WRIT 3305, WRIT 3307, WRIT 3315.*

TCED 4306 - Creating Positive Learning Environments in 7-12

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Theories and strategies for guiding adolescent learners' behavior and for effectively managing high school classroom environments. Focus will be on approaches that promote autonomy in adolescent learners.
Pre- or Co-requisite: *INST 3313 and one of the following: WRIT 3305, WRIT 3306, WRIT 3307, WRIT 3315.*

TCED 4321 - Social Studies Methods for EC-6

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
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.
Prerequisites: *Admission to the Teacher Education Program and successful completion of TCED 4303.*

TCED 4322 - Science Methods for EC-6

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
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.
Prerequisites: *Admission to the Teacher Education Program and successful completion of TCED 4303.*

TCED 4323 - Mathematics Methods for EC-6

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
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.
Prerequisites: *MATH 3302 and admission to the Teacher Education Program and successful completion of TCED 4303.*

TCED 4331 - Social Studies Methods for Grades 4-8

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
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 to students in grades 4-8. Field experiences required.
Prerequisites: *Admission to Teacher Education Program and successful completion of TCED 4304.*

TCED 4332 - Science Methods for Grades 4-8

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25

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.
Prerequisites: *Admission to Teacher Education Program and successful completion of TCED 4304.*

TCED 4333 - Mathematics Methods for Grades 4-8

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
Methods of developing students' understanding of mathematics. Emphasis on problem solving with manipulative and curriculum materials appropriate for use with students in grades 4-8. Algebraic and graphing technology will be addressed. Field experiences required.
Prerequisites: *MATH 1315, admission to Teacher Education Program and successful completion of TCED 4304.*

TCED 4361 - Methods in Secondary Social Studies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
Strategies for developing social studies activities; emphasis on instructional techniques, content disciplines, local community, values and controversial issues and national trends. Field experiences required.
Prerequisites: *Admission to the Teacher Education Program and successful completion of TCED 4306.*

TCED 4362 - Methods in Secondary Science

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
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.
Prerequisites: *Admission to the Teacher Education Program and successful completion of TCED 4306.*

TCED 4363 - Methods in Secondary Mathematics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
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.
Prerequisites: *MATH 3304 or equivalent, admission to the Teacher Education Program and successful completion of TCED 4306.*

TCED 4378 - Clinical Teaching I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Teaching
Fee ($): 85
Field experiences required in a public

school setting. TCED 4100 or TCED 4102 must be taken prior to consideration for Internship I (TCED 4378).
Prerequisites: *Approval of associate dean and completion of WRIT 3307 with a grade of C or better.*

TCED 4678 - Post-Degree Clinical Teaching I

Credit Hours: 6 **Lecture:** 6 **Lab:** 0
Post-baccalaureate internship with joint supervision by the school district where the intern is employed and the UHCL Center for Professional Development of Teachers. Field experiences required in a public school setting.
Prerequisites: *Approval of associate dean.*

TCED 4679 - Post-Degree Clinical Teaching II

Credit Hours: 6 **Lecture:** 6 **Lab:** 0
Post-baccalaureate internship with joint supervision by the school district where the intern is employed and the UHCL Center for Professional Development of Teachers. Field experiences required in a public school setting.
Prerequisites: *Approval of associate dean.*

TCED 4978 - Clinical Teaching II

Credit Hours: 9 **Lecture:** 9 **Lab:** 0
Fee Type: Teaching
Fee ($): 350
Field experiences required in a public school setting.
Prerequisites: *TCED 4378 and approval of the associate dean.*

TCED 5010 - Professional Preparation Seminar

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Fee Type: Special
Fee ($): 15
This course is designed to assist students to understand the state certification standards for successful entry into their chosen educational fields. Completion of the course is dependent upon candidates passing all state assessments required for their degree/certification plans.
Prerequisites: *An approved, signed degree or certification plan on file in the COE.*

TCED 5014 - Mentoring and Cognitive Coaching

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
This course enables participants to apply peer mentoring and cognitive coaching theories and will include observation and feedback techniques.

TCED 5030 - Models of Teaching

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is an analysis of the knowledge base for instruction and development of proficiency in a variety of teaching models. Field experiences is required for students seeking teacher certification.

TCED 5031 - Curriculum Planning

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
In this course, candidates will design and evaluate curriculum for early childhood through twelfth grade; study of curriculum theory, design principles, issues and trends.
Prerequisites: *TCED 5030*.

TCED 5032 - Preparation for K-12 Educators for National Board for Professional Teaching Standards I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is an initial preparation for educators teaching 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.
Prerequisites: *Three years of teaching experience.*

TCED 5033 - Management Strategies for Creating a Positive Learning Environment in EC-6

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course presents effective management strategies that can be implemented across content areas in EC-6 classrooms. Field experience is required for students seeking teacher certification.

TCED 5034 - Management Strategies for Creating a Positive Learning Environment in 4-12

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course presents effective management strategies that can be implemented across content areas in 4-12 classrooms. Field experience is required for students seeking teacher certification.

TCED 5035 - Integrated Instruction: Models for Application

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course presents theories and strategies on effective approaches for interdisciplinary integration in all content areas. Using vertical alignment, these models will be applicable across Pre-K-12 curriculum.

TCED 5038 - Professional Development for Enhancing Teacher Leadership

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course presents strategies for generating a professional development plan and involves participation in self-selected professional activities (e.g., conference attendance and presentations, article and conference proposal writing, etc.). Content of the course involves examination of current research on teacher professional development and leadership.

TCED 5130 - Generic Instructional Practices

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course provides an analysis of the knowledge base for instruction and development of proficiency in a variety of teaching and training models that

specifically address adult learners. This course is presented through online instruction.

TCED 5131 - Content Information Organization and Delivery

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course presents information on the design and presentation of content to adult learners; the study of content development and delivery is covered. The course is presented online.

TCED 5132 - Teacher Leadership and Mentoring

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Aspects of teacher leadership traits and qualities necessary for application in public schools, specifically for curriculum specialists, team leaders and teacher mentors. This course also presents in-depth coverage of strategies and processes for mentoring teachers across all grade levels and content areas.

TCED 5133 - Teaching Using the Brain

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Theories and strategies for implementing aspects of how the brain functions and how the learning process occurs in learning environments. The focus will be on applying these strategies to aspects of classroom management, lesson planning and instruction.

TCED 5134 - Introduction to Models of Teaching

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course presents foundational knowledge of instructional planning, pedagogical strategies and development of a variety of teaching models. Field experiences is required.

TCED 5136 - Principles and Application of Andragogy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course explores principles and theories of andragogy, as well as applications that best meet the needs of adult learning in training environments. This course is offered online.

TCED 5138 - Training and Professional Development

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course presents strategies for generating professional development workshops and training for adult learners. It involves participation in self-selected professional activities (e.g., webinars). Aspects of leadership are explored as an aspect of professional development presentations. This course is offered online.

TCED 5231 - Teaching Social Studies in the Elementary School

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
This course focuses on curriculum design, instructional models and authentic assessment techniques for developing social studies knowledge, citizenship and critical thinking skills;

emphasis is on best practice and research-based strategies for teaching 4-8 students. Field experiences required.
Prerequisites: *Admission to Teacher Preparation Program.*

TCED 5232 - Teaching Science in the EC-6 Classroom

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
This course focuses on the development of science concepts in EC-6 instruction. Emphasis is on curriculum materials and the process approach as a science teaching method. Field experiences required.
Prerequisites: *Admission to Teacher Education Program.*

TCED 5233 - Teaching Mathematics in the EC-6 Classroom

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
This course focuses on the development of mathematical concepts and teaching strategies for EC-6. Emphasis is on problem solving with manipulative and curriculum materials appropriate for use with EC-6 students. Field experiences required.
Prerequisites: *MATH 1351 and Admission to Teacher Education Program.*

TCED 5234 - Social Studies Methods for the Secondary Grades

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
This course focuses on curriculum designs, instructional models, and authentic assessment techniques for developing social studies knowledge, citizenship, and critical thinking skills; emphasis is on best practice and research-based strategies for teaching secondary students. Field experiences required.
Prerequisites: *Admission to Teacher Education Program.*

TCED 5235 - Science Methods for the Secondary Grades

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
This course focuses on strategies for teaching secondary science, including safety. Emphasis is 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.
Prerequisites: *Admission to Teacher Education Program.*

TCED 5236 - Mathematics Methods for the Secondary Grades

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
This course focuses on curriculum designs, instructional models and authentic assessment techniques for developing mathematical knowledge

and problem-solving skills. Emphasis is on best practice and research-based strategies for teaching mathematics to secondary students. Field experiences required.
Prerequisites: *Admission to Teacher Education Program.*

TCED 5330 - Fostering Critical Inquiry: Introduction to Action Research

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Students will engage in inquiry to define and investigate a classroom issue of interest and explore structured action research as a tool to foster the improvement of classroom practice.
Prerequisites: *EDUC 6033*.

TCED 5331 - Social Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Explore critical and controversial issues in contemporary education and determine how these issues impact students, teachers and the K-12 education system. The themes of the course will include social justice, multiculturalism, community and 21st-century critical dispositions and skills.

TCED 5332 - Teaching Science in the 4-8 Classroom

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 25
This course discusses the development of science concepts and teaching strategies for grades 4-8. Emphasis is on the inquiry approach to teaching science consistent with concepts of cognitive development. Field experiences required.
Prerequisites: Admission to Teacher Education Program.

TCED 5333 - Teaching Mathematics in the 4-8 Classroom

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 15
This course focuses on the development of mathematical concepts and teaching strategies for grades 4-8. Emphasis is on problem solving with manipulative and curriculum materials appropriate for use with fourth to eighth grade students. Algebraic and graphing technology will be addressed. Field experiences required.
Prerequisites: *MATH 1351 and Admission to Teacher Education Program.*

TCED 5334 - Teaching Social Studies in the 4-8 Classroom

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course focuses on curricula designs, instructional models and authentic assessment techniques for developing social studies knowledge, citizenship and critical thinking skills. Emphasis is on best practice and research-based strategies for teaching 4-8 students. Field experiences required.
Prerequisites: *Admission to Teacher Preparation Program.*

TCED 5338 - Strategies for Publishing Instructional Products

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will focus on strategies, techniques and guidelines useful for getting teaching ideas, stories and innovative curriculum products published.
Prerequisites: *MATH 3037 and Admission to Teacher Education Program.*

TCED 5431 - Nature of the Middle Level Learner

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is 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. Field experiences is required for students seeking teacher certification.

TCED 5530 - Adolescent Development and Curriculum

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course is a developmental approach to the study of adolescents related to discipline, classroom management and scope and sequence of curriculum. Field experience is required for students seeking teacher certification.

TCED 5911 - Research Topics in Teacher Education

Credit Hours: 1 **Lecture:** 1 **Lab:** 0
Identified by specific title each time course is offered.

TCED 5921 - Research Topics in Teacher Education

Credit Hours: 2 **Lecture:** 2 **Lab:** 0
Identified by specific title each time course is offered.

TCED 5931 - Research Topics in Teacher Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific title each time course is offered.

TCED 5939 - Independent Study in Teacher Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Prerequisites: *Approval of instructor and associate dean.*

TCED 6031 - Application of Technology in the Classroom

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
Students will learn how to use and integrate computers and various software applications (e.g., word processors, databases, spreadsheets and 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 email and the internet that can be used to enhance student learning.
Prerequisites: *Basic computer literacy.*

TCED 6639 - Capstone Project

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course serves as a capstone experience for candidates in the C and I master's degree program in specialization tracks that are conducted online. The capstone experience results in a product created that aligns with the professional standards of the specialization.

TCED 6734 - Advanced Seminar in Science Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This seminar covers advanced topics on research in science education. Emphasis is on instructional techniques and concept formation.

TCED 6735 - Seminar in Environmental Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 30
This seminar will discuss the skills needed to address environmental issues, at local, state, regional and national levels; and selecting and implementing actions to resolve these issues through political, economic, legal, educational and lifestyle avenues. Other topics include questioning, analysis, and interpretation skills and knowledge of environmental processes and systems.

TCED 6736 - Fundamentals in Environmental Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
This course will focus on the conceptual and philosophical basis for, and goals of, environmental education. In addition, students will examine the environmental education theory, practice and implementation along with the professional responsibilities of the environmental educator.

TCED 6737 - History and Philosophy of Environmental Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course will focus on the history, philosophy, practices, methods and issues of environmental education. In addition, students will examine the evolution of environmental education as a profession.

TCED 6738 - Instructional Strategies in Environmental Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
The course will address the fundamentals of high-quality education and the unique features of environmental education to design and implement effective instruction. Topics include strategies for teaching about the environment using effective methodologies; developing, applying and evaluating environmental education curriculum materials and resources including technologies to assist learning and planning for both the formal and informal settings.

TCED 6739 - Curriculum and Instruction Practicum

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Practicum
Fee ($): 72
Supervised internship in curriculum

and instruction.
Prerequisites: *Approval of the associate dean.*

TCED 6769 - Graduate Clinical Teaching

Credit Hours: 6 **Lecture:** 6 **Lab:** 0
Fee Type: Practicum
Fee ($): 85
This course is designed for students earning teacher certification. Current practitioners will engage in an action-research inquiry to investigate a pedagogical issue within their own teaching. Candidates earning their teaching certification will have the opportunity to teach in the public schools as part of the state requirements with intensive, sustained supervision and support.
Prerequisites: *Enrollment in MAT program and approval of Associate Dean.*

Women's and Gender Studies

WGST 5337 - Violence Against Women

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Global perspectives of violence against women by men. Topics include rape, sexual abuse, incest, female genital mutilation, battering, sexual slavery and sexual harassment.

WGST 5438 - Development of Gender and Racial Identity

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Examination of theoretical approaches to the study of gender and racial/ethnic identity development.

WGST 5533 - Psychology of Gender, Race, and Sexuality

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Topics include sex roles, stereotyping, socialization of women and men, feminism, female sexuality, feminist therapy, androgyny and the situation of minority women.

WGST 5732 - Seminar in Women's and Gender Studies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
An advanced course in Women's and Gender Studies with analysis and application of feminist theory across multiple disciplines.
Prerequisites: *Any previous course with Women's and Gender Studies content.*

WGST 5931 - Research Topics in Women's and Gender Studies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Fee Type: Special
Fee ($): 5
Identified by specific title each time course is offered. Topics vary may be repeated for credit with permission of instructor.

WGST 5939 - Independent Study in Women's Studies

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Permission of instructor required.

Writing

WRIT 3304 - Advanced Writing for Education

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Frequent writing practice with the study of composition theories and strategies for writing as a professional educator. This course introduces prospective teachers to methods for evaluating student writing and designing effective writing assignments and instructional materials.
Prerequisites: *WRIT 1301 Composition I and WRIT 1302 Composition II with a C- or better and junior-level standing.*

WRIT 3307 - Advanced Writing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Explores invention of ideas to strategies appropriate to various types of writing. Models of organization, analysis of style, role and importance of mechanics and syntax.
Prerequisites: *Completion of WRIT 1301 Composition I and WRIT 1302 Composition II with a grade of C- or better and junior-level standing.*

WRIT 5130 - Composition Theory

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Introduces graduate students to the current research, theory and pedagogical approaches that inform the teaching of writing. The overall goal of this course is to provide students with a solid background in composition theory and practice to build a lifetime of exploration of this extremely important subject.

WRIT 5131 - Writing Pedagogy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Provides a practical guide to teaching writing courses in community college and university settings. Topics may include teaching online and working with special populations such as developmental writers or non-native speakers. Topics vary may be repeated for credit with permission of instructor.

WRIT 5132 - Seminar in Rhetorical Theories I

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Provides an overview of some of the primary scholarship that has affected the study of global rhetoric from antiquity through the late 18th century.

WRIT 5133 - Seminar in Rhetorical Theories II

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Provides an overview of critical texts that explain global theories and methodologies pertaining to the field of contemporary rhetorical studies from the late 18th to the 21st centuries, including studies of race, gender, disability, new media and embodiment.
Prerequisites: *WRIT 5132*.

WRIT 5134 - Special Topics in Discourse Studies

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Writing-intensive seminar, investigating a special issue or topic in the study of discourse, literacy and disciplinary communication as selected by the instructor. Topics vary may be repeated for credit with permission of instructor.

WRIT 5135 - Special Topics in Linguistics

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Graduate seminar investigating a special topic in the study of language, linguistics and psychosocial communication. Topics vary may be repeated for credit with permission of instructor.

WRIT 5136 - Writing for Graduate School

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Introduces graduate students to the rhetorical and stylistic aspect of graduate-level texts in their disciplines. Students will study and practice writing the types of texts required in these fields.

WRIT 5137 - Grant and Proposal Writing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Project-based course covers the complete process of grant proposal development from project identification, research and assessment of viable funding sources, budget development and proposal preparation to post-award or rejection follow-up.

WRIT 5138 - Multimedia Composition and Theory

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
In-depth study of the theory and methods for composing multimedia texts, combining text, audio, video and images. Students will design and produce texts and publish them in e-portfolios.

WRIT 5139 - Digital Rhetoric

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Explores the dynamics of online, networked reading and writing practices. Encourages critical thinking about how technology informs rhetorical theory and shapes praxis with attention given to the ways individuals, teams, businesses and organizations construct and distribute knowledge in electronic spaces.

WRIT 5230 - Collaborative Writing Pedagogy

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Introduces students to the theories and practices that inform collaborative pedagogy. Students will learn theories of collaboration, practice methods for one-on-one and small group conferencing, learn research skills, understand formatting styles for different academic disciplines and practice the interpersonal skills necessary for working with a diverse student population.

WRIT 5931 - Research Topics in Writing

Credit Hours: 3 **Lecture:** 3 **Lab:** 0
Identified by specific topic each time the course is offered. Topics vary may be repeated for credit with permission of instructor.

WRIT 5939 - Independent Study in Writing

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Permission of adviser and instructor required.

WRIT 6739 - Internship

Credit Hours: 3 **Lecture:** 0 **Lab:** 0
Supervised three-unit internship in approved internship setting. Comprehensive written report required.
Prerequisites: *Students must have completed at least 15 units of graduate-level courses in the WRIT rubric.*

Faculty

A

Abdelzaher, Dina
Associate Professor of Management; B.B.A., Ph.D., Florida International University

Abeysekera, Krishani
Senior Lecturer/System Administrator of Computer Science and Computer Information Systems; B.S., M.S., University of Houston-Clear Lake

Abukmail, Ahmed
Associate Professor of Computer Science; B.S., Ohio State University; M.S., Ph.D., University of Florida

Akladios, Magdy
Department Chair of Physical and Applied Sciences and Professor of Occupational Safety and Health, B.S., Cairo University; MBA, M.S.I.E., M.S., Ph.D., West Virginia University

Al-Mubaid, Hisham
Professor of Computer Science and Computer Information Systems; B.S., University of Jordan; M.S., Ph.D., University of Texas at Dallas

Alexander, Karen
Associate Professor of Nursing; B.S.N., Excelsior College; Ph.D., University of Texas Medical Branch

Amonette, William E.
Associate Professor of Fitness and Human Performance; B.S., M.A., University of Houston-Clear Lake; Ph.D., University of Texas Medical Branch

Anders, Anne
Assistant Professor of Economics; B.S., Seton Hall University; M.A., Ph.D., Clemson University

Anderson-Diaz, Comeka
Clinical Associate Professor of Criminology; B.A., B.S., Pennsylvania State University; M.A., Penn State Harrisburg; J.D., Pennsylvania State University; LL.M., University of Alabama

Ariza, Martha
Lecturer in Biotechnology; D.V.S.Z., Universidad de Caldas; M.S., University of Texas at San Antonio; Ph.D., Texas A&M University

Arney, Jennifer
Associate Professor of Sociology; B.A., M.A., Texas Tech University; Ph.D., Arizona State University

Ayadi, Mary O.
Professor of Healthcare Administration; B.S., University of Ibadan; M.A., Georgia State University; Ph.D., Georgia State University

B

Baker, Sheila
Associate Professor of School Library and Information Science; B.S., Ohio University; M.L.I.S, Florida State University; Ph.D., Florida State University

Baldwin, Andrea
Senior Lecturer of Communication; B.A., M.A., University of North Texas; Ph.D., Southern Illinois University at Carbondale

Bartsch, Robert A.
Program Director, Center for Faculty Development, and Professor of Psychology; B.A., Rice University; M.A., Ph.D., University of Colorado

Beavers, Elizabeth A.
Associate Professor of Special Education; B.S., The University of Southern Mississippi; M.S., Southern Illinois University at Edwardsville; Ph.D., The University of Southern Mississippi

Bendeck, Yvette M.
Professor of Finance; B.S., M.S., Georgia Tech; Ph.D., Arizona State University

Bentley, Jason
Assistant Professor of Exercise & Health Sciences; B.S., Milwaukee School of Engineering; M.S., Medical College of Wisconsin; Ph.D., University of Texas Medical Branch

Bettayeb, Saïd
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., University of North Texas

Blake, Ira
Professor of Psychology; B.A., George Washington University; M.A., San Francisco State University; M.A., Columbia University; Ph.D., Columbia University

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

Bolden-Gastile, Takisha
Lecturer of Secondary Science and Math and UHCL*Teach* Master Teacher; B.A., Baylor University; EMBA, Texas Woman's University; Ed.D., Texas Southern University

Bozkurt, Ipek
Associate Professor of Engineering Management; B.S., Hacettepe University; M.E.M., Ph.D., Old Dominion University

Brims, Michael
Associate Professor of Communication and Digital Media; B.A., University of Houston; M.A., Ludwig Maximilians Universitaet, Muenchen; M.F.A., University of Houston

Brown, Amber
Associate Professor in Early Childhood Education; B.S.E., East Texas Baptist University; M.S., Ed.D., University of North Texas

Brown, Suzanne E.
Department Chair of Curriculum and Instruction and Associate Professor of Curriculum and Instruction; B.S., Southwest Texas State University; M.A., Ph.D., Texas A&M University

Bryant, Vernon
Senior Lecturer in Computer Engineering; B.S., University of Houston; M.S., University of Houston-Clear Lake

Buddharaju, Pradeep
Associate Professor of Computer Science and Computer Information Systems; B. Tech-Jawaharlal Nehru Technological University; M.S., Ph.D., University of Houston

C

Carter, Nelson
Lecturer of Mathematics; A.S., San Jacinto College; B.S., M.S., University of Houston-Clear Lake

Cathright, Tamekia
Visiting Assistant Professor of Counseling, Special Education and Diversity; B.S.,

University of Texas Southwestern Medical Center; M.S., Troy University; Ph.D., University of the Cumberlands

Cazes, Denise B.
Senior Lecturer of Fitness and Human Performance; B.S., M.A., University of Houston-Clear Lake

Cedillo, Christina
Associate Professor of Writing; B.A., Texas A&M University; M.A., Texas A&M International University; Ph.D., Texas A&M University

Chambers, Silvana
Assistant Professor of Management; B.S., M.A., Tusculum University; Ph.D., University of Texas at Tyler

Chan, Tak Shing (Leo)
Associate Professor of Communication and Digital Media Studies; B.A., University of Kentucky; M.A., Ph.D., Southern Illinois University

Chandra, Ashish
Professor of Healthcare Administration; B.S., M.M.S., Banaras Hindu University; MBA, Ph.D., University of Louisiana at Monroe

Cherry, Stephen M.
Associate Professor of Sociology; B.A., M. A., University of Houston-Clear Lake; Ph.D., University of Texas at Austin

Clardy, J. Mark
Assistant Professor of Healthcare Administration; B.A., University of Dallas; MBA, University of Mary Hardin-Baylor; M.H., University of Dallas; Ph.D., University of Texas at Tyler

Clark, Debra E.
Associate Professor of Communication; B.S., Tennessee State University; M.L.A., University of St. Thomas; Ph.D., University of Southern Mississippi

Clody, Michael
Associate Professor of Literature; B.A., Saint Louis University; M.A., University of Delaware; Ph.D., S.U.N.Y.-Buffalo

Cooper, Jane McIntosh
Assistant Professor of Qualitative Research; B.S., University of Massachusetts; M.A., Texas State University; Ed.D., University of Houston

Corrales, Antonio
Associate Professor of Educational Administration; B.A., Metropolitan University, MBA, Reutlingen University of Technology & Business, M.S., Ed.D., University of Houston-Clear Lake

Costello, Sarah
Associate Professor of Art History; B.A., Georgetown University; M.A., Bryn Mawr College; Ph.D., Binghamton University

Cotten, Stephen
Associate Professor of Economics; B.S., Vanderbilt University; M.A., Ph.D., University of Tennessee

Covarrubias-Cabeza, Julio
Assistant Professor of Humanities; B.A., Arizona State University; M.A., University of Washington-Seattle; Ph.D., University of Washington-Seattle

Crawford, Caroline M.
Professor of Instructional Design and Technology; B.A.T., Sam Houston State University; M.L.A., Houston Baptist University; Ed.D., University of Houston

Curtis, Maria F.
Associate Professor of Anthropology and Cross-Cultural and Global Studies; B.A., Georgia State University; M.A., Ph.D., University of Texas at Austin

D

Dabney, James
Program Chair of Systems Engineering and Professor of Systems Engineering; B.S., Virginia Polytechnic Institute and State University; M.S., University of Houston-Clear Lake; Ph.D., Rice University

Daghooghi, Mohsen
Assistant Professor of Mechanical Engineering; B.S., University of Tehran; M.S., University of Tehran; Ph.D., The State University of New York at Buffalo

Daniels, Jaxenne
Lecturer in Psychology; B.S. University of Pittsburgh; M.S., University of Florida; Ph.D., University of Florida

Datta, Soma
Associate Professor of Software Engineering; B.S., Calcutta University, India; P.G.D.I.M, Bharatiya Vidya Bhavan, India; M.S., Indira Gandhi National Open University, India; Ph.D., Texas Tech University

Davari, Sadegh
Department Chair of Computing Sciences and Professor of Computer Science and Computer Information Systems; B.S., Institute of Advanced Accounting; M.S., Ph.D., University of Oklahoma

Davis, Randy
Associate Professor of Counseling; B.A., University of Central Oklahoma, M.S., Ph.D., Texas A&M

Dean, Julianna
Assistant Professor of Exercise and Health Sciences; B.A., Scripps College; M.S., University of Houston-Clear Lake; Ph.D., University of Texas Medical Branch at Galveston

Decker, Phillip J.
Professor of Healthcare Administration; B.A., M.A., Ohio State University; Ph.D., San Diego State University

Decman, John
Professor of Educational Leadership; B.A., Purdue University; M.S., Indiana University; Ed.D., Ball State University

Diepenbrock, Clotilde M.
Chair, Department of Communication and Studio Arts, and Associate Professor of Writing; B.A., California State University; M.A., University of Southern California; Ph.D., University of Southern California

Divoll, Kent A.
Associate Professor of Curriculum and Instruction; B.S., Westfield State College; M.Ed., Lesley University; Ed.D., University of Massachusetts Amherst

Djordjevic, Dragana
Senior Lecturer of Writing; B.A., University of Belgrade; M.A., Ph.D., Texas A&M University

Dodson, Kimberly
Associate Professor of Criminal Justice and Criminology; B.S., M.A., East Tennessee State University; Ph.D., Indiana University of Pennsylvania

Du, Hui
Professor of Accounting; B.A., Peking University; MBA, Ph.D., Rutgers University

Dubrovskiy, Anton V.
Program Chair of Chemistry and Assistant Professor of Chemistry; B.S., M.S., Higher Chemical College of Russian Academy of Science; Ph.D., Iowa State University

Dugre, Neal
Associate Professor of History; B.A., Elon University; M.A., Ph.D., Northwestern University

E

Elkins, Sara
Associate Professor of Clinical Psychology; B.A., M.A., Ph.D., University of Tennessee

Enciso Domingúez, Giazú
Assistant Professor of Psychology; B.S., Benemérita Universidad Autónoma de Puebla; M.A., Benemérita Universidad Autónoma de Puebla; Ph.D., Benemérita Universidad Autónoma de Puebla

Erdem, S. Altan
Professor of Marketing; B.S., Middle East Technical University; MBA, University of North Texas; Ph.D., University of North Texas

Everhart, Jonathan
Associate Professor of Legal Studies; B.B.A., MBA, Angelo State University; M.S., University of the Incarnate Word; J.D., Thurgood Marshall School of Law; L.L.M., Georgetown University Law Center; DBA, University of the Incarnate Word

F

Feagin, Terry
Professor of Computer Science and Computer Information Systems; B.A., Rice University; M.A., Ph.D., University of Texas at Austin

Fessler, Emily
Associate Professor of Family Therapy; B.S., Texas Tech University; M.S., Ph.D., Auburn University

Fox, Tom
Associate Professor of Mathematics; B.S., Aquinas College; M.S., St. Louis University; M.A., Bowling Green State University; Ph.D., Illinois State University

French, Leticia
Senior Lecturer of Writing; B.A., M.A., Texas A&M University at Corpus Christi

Fritz, Jennifer N.
Professor of Behavior Analysis; B.S., M.S., Ph.D., University of Florida

G

Garcia, Thomas
Assistant Professor of Biology; B.S., Florida State University; M.S., Ph.D., University of Illinois at Urbana-Champaign

Garland, Kathleen
Lecturer of Environmental Management; B.A., B.S., Ph.D., Penn State University State College

Garrison, David
Associate Dean of the College of Science and Engineering and Professor of Physics; B.S., Massachusetts Institute of Technology; Ph.D., Pennsylvania State University

Gauna, Leslie
Assistant Professor in ESL/Bilingual Education; B.A., Universidad Nacional de Rosario; M.Ed., Ed.D., University of Houston

Georgiadou, Sofia
Assistant Professor of Family Therapy; B.A., Aristotle University of Thessaloniki; M.A., Ph.D., University of Louisiana at Monroe

Gercek, Gokhan
Professor of Management Information Systems; B.S, M.S., Middle East Technical University, Turkey; MBA, University of Houston-Clear Lake; Ph.D., Arizona State University

Gessler, Anne
Clinical Associate Professor of Humanities and First-Year Experience; B.A., College of William and Mary; M.A., Ph.D., University of Texas at Austin

Giles, Michelle
Assistant Professor of Educational Technology; B.S., M.Ed., Texas A&M University; M.S., University of Houston-Clear Lake; Ph.D., University of North Texas

Gossett, Lisa B.
Department Chair of Management and Associate Professor of Environmental Management; B.S.M.E., Rice University; J.D., University of Houston Law Center

Grace, Jennifer
Assistant Professor of Educational Foundations; B.S., Louisiana State University; M.Ed., Ph.D., University of New Orleans

Graves, Shanna
Associate Professor of Early Childhood Education; B.A., M.A., Xavier University of Louisiana; Ph.D., Pennsylvania State University

Griffin, Sarah
Assistant Professor of Health Service Psychology; B.A., Washington University in St. Louis; M.S., Purdue University; Ph.D., Purdue University

Gruber, Stephen
Lecturer in Biology; B.S. Texas A&M University at Galveston; M.S. University of Houston-Clear Lake

Gu, Vicky
Associate Professor of Decision Sciences; B.S., Campbell University; M.S., Indiana University; MBA, Thunderbird School of Global Management; Ph.D., Texas Tech University

Guerrero, Laura
Assistant Professor of Management; B.B.A., The University of Texas at El Paso; MBA, Simon Fraser University; Ph.D., Western University.

Guillen, George
Executive Director of the Environmental Institute of Houston and Associate Professor of Biology and Environmental Science; B.S., M.S., Texas A&M University; Ph.D., University of Texas School of Public Health

Gupta, Shivani
Assistant Professor of Healthcare Administration; Ph.D. Administration Health Services (Concentration in Strategic Management) University of Alabama at Birmingham School of Health Professions & the Collat School of Business, Birmingham, Alabama; M.B.A. The University of Southern Mississippi College of Business, Hattiesburg, Mississippi; B.D.S (Bachelor of Dental Sciences), Government Dental College & Hospital, Patiala, India

H

Hales, Barbara
Professor of History; B.A., Vanderbilt University; M.A., University of Arizona; M.A., Cambridge University; Ph.D., University of Arizona

Hamidi, Youssef
Assistant Professor of Mechanical Engineering; B.S., Ecole Mohammadia d'Ingenieurs; M.S., Ecole Mohammadia d'Ingenieurs; Ph.D., University of Oklahoma

Hao, Jun
Assistant Professor of Accounting; B.A., Tsinghau University; MBA, Central Missouri State University; M.S., University of Missouri; Ph.D., University of Texas at San Antonio

Harman, Thomas L.
Department Chair of Engineering and Professor of Computer Engineering; B.S., University of Maryland; Ph.D., Rice University

Harris, Brandon
Assistant Professor of Communication; B.A. Queen's University of Charlotte; M.A., Queen's University of Charlotte; Ph.D., University of Oregon

Hasan, Khondker S.
Assistant Professor of Computer Science; B.S., North-South University, Bangladesh; M.S., Wichita State University; Ph.D., University of Oklahoma.

Hasan, Rajib
Associate Professor of Accounting; BCom, University of Dhaka; MBA, University of Dhaka; MBA, Georgia State University; Ph.D., University of Texas at Dallas

Hedengren, Mary
Lecturer of Writing; B.A., M.A., Brigham University; Ph.D., University of Texas at Austin

Heerey, Michael
Lecturer of Mathematics; B.S., M.A., University of Arizona

Helm, James C.
Associate Professor of Software Engineering; B.S., Missouri Valley University; M.S., University of Missouri at Rolla; Ph.D., Texas A&M University

Hentges, Beth
Associate Professor of Psychology; B.A., M.A., Ph.D., University of Houston

Hettiarachchi, Charitha
Assistant Professor of Management Information Systems; B.S., Sabaragamuwa University of Sri Lanka; M.S., St. Cloud State; Ph.D., North Dakota State

Hoang, Trung Q.
Visiting Assistant Professor of Chemistry; M.S., Ph.D., University of Oklahoma

Hodges, Adam
Professor of History; B.Sc., London School of Economics and Political Science; M.A., Portland State University; Ph.D., University of Illinois

Horton, Emily
Assistant Professor of Counseling; B.S., Indiana University-Purdue University Indianapolis; M.A., West Virginia University; Ph.D., University of Texas at San Antonio

Howard, Cynthia L.
Department Chair of Environmental Sciences and Professor of Biology and Environmental Science; B.A., Miami University; M.S., University of Houston-Clear Lake; Ph.D., University of Texas Health Science Center

Hsu, Henda
Associate Professor of Criminal Justice and Criminology; B.A., University of California-Berkeley; M.A., Ph.D., University at Albany State University of New York

Hugetz, Edward T.
Professor of Humanities and Fine Arts; B.A., University of Notre Dame; M.A.H., State University of New York at Buffalo

Huss-Keeler, Rebecca
Professor of Early Childhood Education; B.S., Lock Haven University of Pennsylvania; M.A., Peabody College of Vanderbilt University; Ph.D., Georgia State University

I

Imrecke, Daniel
Assistant Professor of Geology and Environmental Sciences; B.S., Stephen F. Austin State University; M.S., Ph.D., University of Houston

J

Jacobs, Lorie
Associate Professor of Writing; B.A., Tulane University; M.A., University of Nevada; Ph.D., University of Texas at Arlington

Jain, Preeti
Associate Professor of Early Childhood Education; B.A., M.Ed., Ed.D., University of Houston

James, Kelsey
Assistant Professor of Psychology; B.S., University of California, Santa Barbara; M.A., San Francisco State University; M.A., University of California, Santa Cruz; Ph.D., University of California, Santa Cruz

Jancenelle, Vivien
Assistant Professor of Management; B.S., University of Passau; M.S., ESC Clermont; MBA, Cleveland State University; DBA., Cleveland State University

Jayalath, Kalanka
Assistant Professor of Statistics; B.S., University of Peradeniya, Sri Lanka; M.S., Sam Houston State University; Ph.D., Southern Methodist University

Jenkins, Sandra
Visiting Assistant Professor of Nursing; B.S.N., Texas Women's University; M.S., University of Central Texas; M.S.N., Northwestern State University; Ph.D., University of Texas at Austin

Jeong, Ki-Young
Program Chair and Associate Professor of Engineering Management; M.S., Ph.D., Texas A&M University; MBA, University of Massachusetts; B.S., Korea University

Jin, Hae Rin (Helen)
Assistant Professor of Criminal Justice and Criminology; B.S., Arizona State University; M.A., John Jay College of Criminal Justice; Ph.D., Sam Houston University

Johnson, Vanessa
Associate Professor of Legal Studies; B.S., Tulane University; MBA, New York University; L.L.M., University of Houston Law Center

Johnston, Amanda M.
Associate Professor of Psychology; B.S., University of Iowa; M.A., Miami University; Ph.D. Miami University

Jones, Lisa
Professor of Multicultural Education; B.S., Texas A&M University; M.Ed., Prairie View A&M University; Ed.D., University of Houston

Jones, Robert M.
Professor of Educational Foundations; B.S., University of Oklahoma; M.T., East Central State University; Ed.D., Oklahoma State University

K

Kanenberg, Heather
Associate Professor of Social Work; B.S.W., Murray State University; M.S.W., Ph.D., University of Houston

Kanter, Laura
Lecturer of Social Work; B.A., Antioch University; M.S.W., University of California, Los Angeles

Kayaalp, Alper
Assistant Professor of I/O Psychology; B.S., Military Academy/Turkey; M.A., West Chester University of Pennsylvania; Ph.D., Universite Libre De Bruxelles/Belgium

Kelling, Angela
Associate Professor of Psychology; B.S., M.A., Ph.D., Georgia Institute of Technology

Kelling, Nicholas
Associate Professor of Psychology; B.S., M.S., Ph.D., Georgia Institute of Technology

Khoury, Raymond
Department Chair and Lecturer in Healthcare Administration; B.S., University of Houston; M.S., University of Houston-Clear Lake

Kice, Brent
Associate Professor of Communication; B.A., Loyola University New Orleans; M.A., Southeastern Louisiana University; Ph.D., Louisiana State University

Kim, Sehan
N.A.S.D., Assistant Professor of Accounting; A.B., University of Alberta; B.A., Yonsei University; M.S., Purdue University; Ph.D., University of Pittsburgh

Kirac, Emre
Assistant Professor of Engineering Management; B.S., Uludag University; M.S., Colorado State University-Pueblo; Ph.D., University of Arkansas

Kirkman, Dorothy M.
Associate Professor of Management; B.A., North Carolina State University; MSIA, Carnegie Mellon University; Ph.D., Rutgers, The State University of New Jersey

Klett, Elizabeth
Professor of Literature; B.A., Drew University; M.A., University of Birmingham; Ph.D., University of Illinois

Klyueva, Anna
Associate Professor of Communication; B.S., Khujand State University; M.A., Ph.D., University of Oklahoma

Koc, Hakduran
Program Chair of Computer Engineering and Associate Professor of Computer Engineering; B.S., Ankara University, M.S., Ph.D., Syracuse University

Kovic, Christine M.
Professor of Anthropology and Cross-Cultural and Global Studies; B.A., Rice University; M.A., Hunter College-City University of New York; Ph.D., City University of New York

Kraus, Daniel
Assistant Professor of Art and Design; B.F.A., University of North Florida; MFA, Temple University, Tyler School of Art

Kritikos, Tessa
Assistant Professor of Health Service Psychology; B.A., Georgetown University; M.A., Boston University; Ph.D., Boston University

Kussro, Lauren
Assistant Professor of Art and Design; B.F.A., Indiana University-Herron School of Art and Design; M.F.A., University of Tennessee

Kusters, Isabelle
Associate Professor of Exercise and Health Sciences; B.A., University of Texas at Austin; M.P.H., Ph.D., University of Texas School of Public Health

L

Lacher, Lisa
Program Chair of Information Technology and Assistant Professor of Information Technology; B.S., North Dakota State University; M.S., South Dakota State University; Ph.D., North Dakota State University

Lacina, Michael J.
C.P.A., Department Chair and Professor of Accounting; B.B.A., Western Michigan University; MBA, Michigan State University; Ph.D., Purdue University

LaMontagne, Michael G.
Assistant Professor of Microbiology; B.S., University of Massachusetts; Ph.D., Boston University

Larson, Stuart
Associate Professor of Graphic Design; B.F.A., Kansas City Art Institute; M.F.A., Visual Studies Workshop, Rochester, N.Y.

Lash, Jeff
Professor of Geography; B.A., University of Texas at Austin; M.A.G., Ph.D., Texas State University

Lastrapes, Renee
Associate Professor of Educational Foundations; B.A., M.Ed., Ed.D., Louisiana State University

Leal, Roberta
Assistant Professor of Social Work; M.S.W., Ph.D., University of Houston

Lechago, Sarah
Associate Professor of Psychology, Learning, and Behavior Analysis; B.A., University of Houston; M.A., Ph.D., Western Michigan University

Leonard, Clay
Associate Professor of Art and Design; B.F.A., Adrian College; M.F.A., Bowling Green State University

Lerman, Dorothea C.
Director, Center for Autism and Developmental Disabilities, and Professor of Psychology; B.S., M.S., Ph.D., University of Florida

Li, Yingfu (Frank)
Program Chair of Statistics and Associate Professor of Statistics; B.S., Nanjing Normal University; M.S., Jilin University; M.S., Ph.D., University of Memphis

Liaw, Morris M.
Associate Professor of Computer Science and Computer Information Systems; B.S., Chung Yuan College; M.S., Ph.D., University of North Texas

Lin, Jian
Assistant Professor of Management Information Systems; B.Ec., Ji Nan University (China); M.S., Ph.D., University of Houston

Liu, Xinying
Assistant Professor of Computer Information Systems; B.S., Zhongnan University of Economics and Law; M.S., University of Maryland, College Park; Ph.D., Georgia State University

Lu, Jack Y.
Professor of Chemistry; B.S., M.S., Northeast Normal University; Ph.D., Northwestern University

Lu, Jiang
Assistant Professor of Computer Engineering; B.S., Shanghai Maritime University, M.S.; University of Florida; Ph.D., University of Alabama

Lucas, Amy
Chair, Department of Social and Cultural Sciences, and Associate Professor of Sociology; B.A., Pennsylvania State University; M.A., Ph.D., University of North Carolina at Chapel Hill

M

Ma, Jingjing
Department Chair of Mathematics and Statistics and Professor of Mathematics; M.S., Jiangxi University; P.R. China; M.A., Ph.D., University of Toledo

MacDermott, Alexandra
Associate Professor of Physical Chemistry and Physics; M.A., D.Phil., Oxford University

Makepeace, Jason
Associate Professor of Art and Design; B.A., College of Charleston; M.F.A., University of Houston

Marcoline, Anne
Associate Professor of Literature; B.A., Hamilton College; M.A., Ph.D., University California, Santa Barbara

Marks, Barry R.
Professor of Accounting; B.S., Purdue University; M.S., Case Western Reserve University; Ph.D., Purdue University

Marquez, Judith
Professor of Bilingual and Multicultural Education; B.A., Pan American University; M.A., Ph.D., University of Texas at Austin

Martynov, Aleksey
Associate Professor of Management; B.S., M.S., Perm State University; Ph.D., University of Kansas

Masood, Samina S.
Professor of Physics; B.Sc., M.A., Punjab University, Lahore; M.Sc., M.Phil., Ph.D., Quaid-i-Azim University, Islamabad

Mathews, Nisha
Assistant Professor of Nursing; B.S., Delhi University; M.S.N., Walden University; Ph.D., Texas Women's University

Matthew, Kathryn I.
Associate Vice President, Academic Affairs; Professor of Reading and Language Arts; B.A., M.Ed., University of New Orleans; Ed.D., University of Houston

Matthews, Frank F.
Associate Professor of Mathematics; B.S., California Institute of Technology; M.S., Ph.D., Ohio State University

Mayes, Van E.
Assistant Professor of Physics; B.S., M.S., Ph.D., Texas A&M University

Mayfield, Clifton
Associate Professor of Management; B.S., MBA, University of Arizona; Ph.D., University at Albany-State University of New York

McCauley, Jennifer Maritza
Assistant Professor of Literature; B.F.A, University of Pittsburgh; M.F.A., Florida International University; Ph.D., University of Missouri-Columbia

McMullen, J. Michael
Professor of Sociology; B.A., University of Kansas; M.A., Ph.D., Emory University

Merfish, Beth Matusoff
Chair, Department of Liberal Arts, and Associate Professor of Art History; B.A., Wellesley College; M.A., Ph.D., New York University-Institute of Fine Arts

Michael, Timothy B.
Associate Professor of Finance; B.A., University of North Carolina at Charlotte; MBA, University of North Carolina at Charlotte; Ph.D., University of South Carolina

Milam, Alex
Associate Professor of Industrial/Organizational Psychology; B.A., University of Texas at Austin; M.H.A/MBA, University of Houston-Clear Lake; Ph.D., University of Houston

Miller, Queinnise
Assistant Professor of Educational Leadership; B.S., University of Houston, M.A., Ph.D., Prairie View A&M University

Mills, W. Ronald
Professor of Biology and Chemistry; B.S., M.S., Austin Peay State University; Ph.D., Miami University

Mitchell, Jordan P.
Associate Professor of Healthcare Administration; B. M, MBA, East Carolina University; Ph.D., University of South Carolina

Mokrech, Mustafa
Geographic Information Sciences Analyst of the Environmental Institute of Houston and Faculty; Ph.D., King's College, University of London

Molen, Angela
Lecturer of Mathematics; A.A., San Jacinto College; B.S., M.S., University of Houston-Clear Lake

Moreno, Georgina
Assistant Professor of Psychology; B.S., Texas A&M University; Ph.D., University of Iowa

Morgan, Valerie
Assistant Professor of Health Service Psychology; B.A., Stanford University; M.F.A., University of Montana

Mountain, Jeffrey R.
Program Chair of Mechanical Engineering and Professor of Mechanical Engineering; B.S., M.S. Ph.D.; University of Texas at Arlington

Moya, David
Director, Children's Art School, and Clinical Assistant Professor of Art and Design; B.F.A., M.A., University of Houston-Clear Lake

Murasko, Jason E.
Associate Professor of Economics; B.S., Texas Christian University; M.A., Rice University; Ph.D., Rice University

Mustafaev, Zokhrab
Program Chair of Mathematics and Associate Professor of Mathematics; M.S., Moscow State University, Russia; M.A., Ph.D. University of Rochester

N

Newsum, Janice
Assistant Professor in Library & Information Science; B.A., Rhodes College; M.Ed., University of St. Thomas; M.S.I., Ph.D., Florida State University

Nguyen, Luong A.
Assistant Professor of Computer Engineering; B.S., M.S., University of Washington; M.S., University of Houston-Clear Lake; Ph.D., Rice University

Noghani, Farzaneh
Assistant Professor of Management; Ph.D., Business Administration, Concentration in Management Texas Tech University; Master of Science in Chemical Engineering, Texas Tech University; Bachelor of Science in Chemical Engineering, Sharif University of Technology

Novakov-Ritchey, Christina
Assistant Professor of Humanities; B.A., University of California, Davis; M.A., University of California, Los Angeles; Ph.D., University of California, Los Angeles

O

Orhan, Mehmet
Visiting Assistant Professor of Economics; B.S., M.A., Ph.D., Bilkent University (Turkey)

P

Pace, Robert
Clinical Associate Professor of Counseling; B.S. and M.Ed., Stephen F. Austin State University; Ed.D., Texas Southern University

Pan, Shanshan
Assistant Professor of Accounting; B.A., Beijing Foreign Studies University; M.P.A., Mississippi State University; Ph.D., Louisiana State University

Paul, Christine
Director, HSH Continuing Education Program, and Adjunct Instructor of Spanish; B.A., M.A., Mississippi State University

Pavlova, Ivelina
Associate Professor of Finance; B.B.A., University of Economics, Varna, Bulgaria; MBA, Clarion University of Pennsylvania; Ph.D., Florida International University

Pedro, Joan
Dean, College of Education and Professor in Curriculum and Instruction; B.A., M.Ed.,

University of West Indies; M.Sc.Ed., University of Miami; Ph.D., Virginia Polytechnic Institute and State University

Penn, Everette B.
Professor of Criminal Justice and Criminology; B.A., Rutgers University; M.A., University of Central Texas; Ph.D., Indiana University of Pennsylvania

Perdue, D. Grady
Professor of Finance; B.A., University of Alabama; MBA, Auburn University-Montgomery; M.A., Ph.D., University of Alabama

Perez-Davila, Alfredo J.
Professor of Computer Science and Computer Information Systems; B.S., Tecnologico de Monterrey (Mexico); M.S., Stanford University; M.S., Ph.D., Vanderbilt University

Peters, Michelle
Department Chair of Educational Leadership and Policy Analysis and Professor of Educational Foundations; B.S., University of Missouri-Columbia; M.S., University of Missouri-Rolla; Ed.D., The George Washington University

Phalen, Robert
Program Chair and Associate Professor of Occupational Safety and Health; B.A., California State University Fullerton; Ph.D., University of California Los Angeles

Phillips, Charles E., Jr.
Lecturer of Computer Science; B.S., West Point United States Military Academy; M.S., Naval Postgraduate School; Ph.D., University of Connecticut

Piercy, Jeremy
Assistant Professor of History; B.A., University of North Carolina-Chapel Hill; M.A., University of North Carolina-Greensboro; Ph.D., University of Edinburgh

Place, Lynn
Lecturer of Marketing; B.A., Drake University; MBA, Marketing, DePaul University

Powers, William P., Jr.
Director, Texas Department of Correction Transforming Lives by Degrees program, and Adjunct Instructor of History; B.S., Angelo State University; M.A., University of Texas at Arlington; Ph.D., Texas A&M University

Pule, Heather
Assistant Professor of Reading and Language Arts; B.A., M.Ed., Texas Tech University; Ed.D. University of Houston

Puzdrowski, Richard L., Jr.
Department Chair of Biology and Biotechnology and Associate Professor of Biology, Biotechnology and Environmental Science; B.S., M.S., Ph.D., University of Michigan

R

Rashid, M. Bazlur
Associate Professor of Biology and Biotechnology; M.D., Dhaka Medical College, Ph.D., Osaka University Medical School

Raymond, Roberta
Associate Professor of Reading and Language Arts; B.S., Southwest Texas State University; M.S., University of Houston-Clear Lake; Ed.D., Sam Houston State University

Reinbergs, Eric
Assistant Professor of Health Service Psychology; B.A., Columbia College; M.Ed., University of Massachusetts Amherst; Ph.D., University of Massachusetts Amherst

Renz, Franciszka
Assistant Professor Management; B.S., University of Passau; MBA, Murray State; M.S., University of Regensburg; Ph.D., University of Texas at El Paso

Rios, Desdamona
Associate Professor of Social Psychology; B.A., California State University; Ph.D., University of Michigan

Rivas, Teresa
Lecturer of Mathematics; B.A., M.A., The University of Texas at Austin

Roberson, Anthony
Assistant Professor of Health Service Psychology; B.A., Truman State University; M.A., Louisiana State University; Ph.D., Louisiana State University

Robinson, Leroy, Jr.
Associate Professor of Marketing; B.S., Louisiana State University; M.S., Perdue; Ph.D., University of South Florida

Rohde, Larry
Associate Professor of Biology and Biotechnology; B.S., M.S.T., Tarleton State University; Ph.D., University of Texas Health Science Center-Houston

Rolf, Skylar
Assistant Professor of Management; B.S., Northwest Missouri State University; M.A., MBA, John Brown University; Ph.D., University of Nebraska

Romero, Wanalee Ocasio
Director, First-Year Experience, and Clinical Associate Professor of Literature and First-Year Experience; B.A., University of Texas at Austin; M.A., Ph.D., Northwestern University

S

Sakoglu, Unal "Zak"
Assistant Professor of Computer Engineering; B.S., Bilkent University; M.S., Ph.D., The University of New Mexico

Saleem, Naveed
Department Chair of Management Information Systems and Professor of Management Information Systems; B.S., M.A., Punjab University (Pakistan); MBA, Andrews University; Ph.D., University of Texas at Austin

Sanford, Glenn M.
Dean, College of Human Sciences and Humanities and Professor of Philosophy; B.A., The College of Wooster; Ph.D., Duke University; J.D., University of Houston

Sant'Ana, Thais
Assistant Professor of History; B.A., Pontifical Catholic University of Campinas; B.A., State University of Campinas; M.A., State University of Campinas; Ph.D., University of Illinois at Urbana-Champaign

Santiago-Vazquez, Lory Z.
Program Chair of Biotechnology and Associate Professor of Biology and Biotechnology; B.S., University of Puerto Rico, Humacao; M.A., Ph.D., University of California, Santa Barbara

Seahorn, Christal R.
Associate Professor of Writing; B.A., Trinity University; M.A., University of York; Ph.D., University of Louisiana

Seevers, Randy L.
Interim Department Chair of Counseling, Special Education, and Diversity and Associate Professor of Special Education; B.S., Ohio State University; M.Ed., Texas Tech University; Ph.D., Ohio State University

Sha, Kewei
Assistant Professor of Computer Science; B.S., East China University of Science and Technology; M.S., Ph.D., Wayne State University

Shaman, Nicholas
Assistant Professor of Psychology; B.S., Boston University; M.A., Ph.D., University of California, Riverside

Sharifahmadian, Ershad
Visiting Assistant Professor of Computer Engineering; B.S., Shahed University; M.S., Tehran University; Ph.D., University of Nevada, Las Vegas

Sheng, Lifei
Assistant Professor of Decision Sciences; B.S., Shanghai Jiao Tong University; Ph.D., University of British Columbia

Shepherd, Terry
Associate Dean, College of Education; B.S., Indiana State University; M.S., Indiana University South Bend; Ed.D., Ball State University

Shiau, Lie June
Professor of Mathematics; B.S., National Central University, R.O.C.; M.A., Ph.D., State University of New York at Buffalo

Shih, Liwen
Professor of Computer Engineering; B.S., National Chiao Tung University, R.O.C.; Ph.D., Case Western Reserve University

Shin, Haeyoung
C.P.A., Associate Professor of Accounting; B.B.A., Korea University; M.A., M.A.S., Ph.D., The University of Texas at Dallas

Short, Mary B.
Chair, Department of Clinical, Health, and Applied Sciences, and Professor of Clinical Psychology; B.S., North Dakota State University; M.A., Mankato State University; Ph.D., Western Michigan University

Shulsky, Debra
Associate Professor of Curriculum and Instruction; B.A., M.Ed., Ed.D., University of Houston

Silvermintz, Daniel E.
Professor of Humanities; B.A., Vassar College; M.A., University of Massachusetts at Amherst; M.A., St. John's College; M.A., Ph.D., University of Dallas

Simieou, Felix
Associate Professor of Educational Leadership; B.A., McNeese State University; M.S., University of Houston-Clear Lake; Ph.D., Michigan State University

Sisman, Cengiz
Professor of History; B.A., Bosphorus University; M.A., Temple University; M.A., Ph.D., Harvard University

Smedley, Diane
Visiting Assistant Professor of Counseling, Special Education, and Diversity; B.S., University of Central Florida; M.A., Sam Houston State University

Sorensen, Susan M.
C.P.A., Associate Professor of Accounting; B.S., Oklahoma State University; Ph.D., University of Minnesota

Steel, Douglas
Associate Professor of Management Information Systems; B.S., University of Houston; MBA, University of Houston-Clear Lake; Ph.D., University of Houston

Stephens, Brian
Program Chair of Biology and Assistant Professor of Biotechnology and Biology; B.S., M.S., University of Houston-Clear Lake; Ph.D., University of California, Davis

Stephenson, Hunter W.
Associate Professor of Writing; B.S., United States Coast Guard Academy; M.A., Ph.D., Kent State University

Strait, Gerald
Associate Professor of School Psychology; B.A., M.A., Ph.D., University of South Carolina

Stringer, Donna
Lecturer of Management; B.B.A., University of Houston-Clear Lake, M.A., University of Houston-Clear Lake, M.A., University of Alabama, Ph.D., University of Texas-Arlington

Sublett, Lisa
Assistant Professor of Industrial/Organizational Psychology; B.S., Baylor University; M.A., Ph.D., University of Houston

Subramanian, Shreerekha
Professor of Humanities; B.A., University of Michigan; M.F.A., Syracuse University; Ph.D., Rutgers University

Su-Kubricht, Li Ping
Assistant Professor of Family Therapy; B.A., Brigham Young University-Hawaii; M.A., Ph.D., Brigham Young University

Sun, Dongmin
Associate Professor of Environmental Geology; B.S., Daqing Petroleum Institute; M.S., Research Institute of Petroleum Exploration & Development, Beijing, China; Ph.D., Texas A&M University

Sun, Nanfei
Assistant Professor of Management Information Systems; B.S., Chongqing University; M.S., University of North Carolina at Charlotte; Ph. D., University of Houston

Sutherland, Steven
Associate Professor of Psychology; B.S., University of Mary Washington; M.A., Ph.D., Southern Illinois University at Carbondale

T

Tajani, Neelofer
Clinical Assistant Professor of Early Childhood Education; B.S., University of Houston-Clear Lake; M.Ed., Ph.D., University of Houston

Taylor, Joyce
Senior Lecturer of Behavioral Sciences; B.S., University of Dayton; B.S., Wilberforce University; M.A., University of Houston-Clear Lake

Tello, Angelica
Associate Professor of Counseling; B.A., University of Texas-Austin; M.A., Ph.D., University of Texas-San Antonio

Thomas, Miriam
Lecturer, College of Education School Library and Information Science; B.S., Virginia Commonwealth University; M.L.S., Ed.D., Sam Houston State University

Thompson, Walter
Lecturer of Physics; B.S., University of Texas; M.A., John Hopkins University

Trubl, Patricia J.
Lecturer of Biology; B.S., M.S., Arizona State University

U

Unwala, Ishaq
Assistant Professor of Computer Engineering; B.S., West Virginia University; M.S., Ph.D., University of Texas at Austin

V

Voelker, Troy A.
Associate Dean and Associate Professor of Management; B.B.A., MBA, Sam Houston State University; Ph.D., University of North Texas.

W

Wadsworth, Alyssa

Associate Professor of Economics; West Virginia University; Ph.D. in Economics Morgantown, WV; M.A. in Economics; Niagara University; B.S. in Economics Niagara University, NY; B.A. in Mathematics with Honors

Wagner, Paul A.
Professor of Philosophy and Educational Foundations; B.S., Northeast Missouri State University; M.Ed., M.A., Ph.D., University of Missouri-Columbia

Walker, L. Jean
Professor of Marketing; B.A., West Virginia University; MBA, Florida Atlantic University; Ph.D., Florida State University

Waller, Edward R.
Dean, College of Business and Professor of Finance; B.S., M.S., Georgia Institute of Technology; Ph.D., Arizona State University

Walther, Christine
Associate Professor of Psychology; B.A., Texas Tech University; M.S., Ph.D., University of Pittsburgh

Wandix-White, Diana
Assistant Professor of Multicultural Education; B.A., Washburn University; M.Ed., Prairie View A&M University; Ph.D., Texas A&M University

Wang, Daniel Zerong
Professor of Chemistry; B.A., Lanzhou University; Ph.D., Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Peoples Republic of China

Ward, Christopher P.
Chair, Department of Psychology, and Professor of Psychology; B.S., M.A., Ph.D., University of Southern Mississippi

Waters, Carol
Assistant Professor of Curriculum and Instruction; B.S., University of Houston-Clear Lake; M.S.T., Rice University; Ed.D., University of Houston-Clear Lake

Weaver, Laurie R.
Professor of Bilingual and Multicultural Education; B.A., Kalamazoo College; M.S., University of Houston-Clear Lake; Ed.D., University of Houston

Weerasinghe, Sadhana
Lecturer in Mathematics and Statistics; B.S., University of Colombo, Sri Lanka; M.S. University of Houston-Clear Lake

Wei, Wei
Program Chair of Computer Information Systems and Associate Professor of Computer Information Systems; B.S., Liaoning University of Petroleum and Chemical Technology; M.S., Beijing University of Chemical Technology; M.S., M.S., Ph.D., University of Arizona

White, Sharon A.
Program Chair of Software Engineering and Associate Professor of Software

Engineering; B.F.A., Northeast Louisiana University; M.S., Ph.D., University of Southwestern Louisiana

Whitworth, Jeff
Associate Professor of Finance; B.S., Oklahoma State University; Ph.D., Oklahoma State University

Williams, Melissa A.
Department Chair of Decision Sciences, Economics, Finance, and Marketing and Associate Professor of Finance; B.B.A., MBA, University of Central Arkansas; Ph.D., Texas Tech University

Williams-Duncan, Omah
Associate Professor of Curriculum and Instruction with STEM Emphasis; B.S., Spelman College; M.Ed., University of Houston; Ph.D., Texas A&M University

Willis, Jana
Department Chair of Literacy, Library, and Learning Technologies and Professor of Instructional Design and Technology; B.A., M.S., University of Houston-Clear Lake; Ph.D., Texas A&M University

Wilson, Maria I.
Assistant Professor of Social Work; B.S.W., University of Houston-Clear Lake; M.S.W., University of Houston; Ed.D., University of Houston

Withey, Paul A.
Program Chair of Physics and Associate Professor of Physics; B.Sc., University of Calgary; Ph.D., Texas Christian University

Woldu, Dawit
Associate Professor of Anthropology and Cross-Cultural and Global Studies; B.A., University of Asmara; M.A., Ph.D., University of Florida

Wooten, Kevin C.
UHCL Chief Strategy Officer and Professor of Management; B.A., M.A., University of Houston-Clear Lake; Ph.D., Tulane University

Wu, Michael Yu-Chi
Assistant Professor of Management Information Systems; B.S. E. E., New Jersey Institute of Technology; M. S. C.I.S., New Jersey Institute of Technology; M. S. E. E., New Jersey Institute of Technology; Ph. D. E.E., New Jersey Institute of Technology

X

Xu, Randall Zhaohui
C.P.A., Professor of Accounting; B.A., Army Foreign Languages University; MBA, MACCT, Tulane University; Ph.D., University of Alabama

Y

Yandell, Lauren
Senior Lecturer of Art and Design; B.F.A., Texas State University; M.F.A., Texas A&M University-Corpus Christi

Yang, Toneluh A. (Andrew)
Associate Professor of Computer Science and Computer Information Systems; B.Ed., National Taiwan Normal University; M.S., Ph.D., University of Minnesota

Yang, Xiaokun
Assistant Professor of Computer Engineering; B.S., Beihua University; M.S., Beihang University; M.S., Ph.D., Florida International University

Yang, Yipeng
Assistant Professor of Mathematics; B.E., B.S., M.E., Shanghai Jiao Tong University; M.S., Ph.D., North Carolina State University

Yi, Lin
Assistant Professor of Accounting; B.S., Hunan Normal University; M.S., Beijing Normal University; M.S., University of Kansas; Ph.D., University of Houston

Yi, Se-Hyoung
Associate Professor of Political Science; B.A., Hanyang University; M.A., Ph.D., University of Wisconsin-Madison

Young, Pearl J.
Assistant Professor of History; B.A., Emory University; M.A., Emory University; Ph.D., University of North Carolina at Chapel Hill

Yu-Buck, Fang
Assistant Professor of Marketing; Ph.D., Marketing, University of Utah, United States; MSc, Management, Brock University, Canada; MSc, Marketing, City University of Hong Kong, China; BA, Marketing, Jilin University of Finance and Economics, China

Yue, Kwok-Bun
Professor of Computer Science and Computer Information Systems; B.S., M.Phil, Chinese University of Hong Kong; M.S., Ph.D., University of North Texas

Yuvarajan, Elil
Clinical Assistant Professor of Health Service Psychology; B.A., Washington University; M.S., Purdue University; Psy.D., Baylor University

Z

Zalila, Faiza
Associate Professor of Decision Sciences; Bachelor Degree, Universite de Sfax; M.S., University of Illinois at Urbana-Champaign; Ph.D., University of Houston

Zhang, Chunlong (Carl)
Professor of Environmental Science, Environmental Chemistry; B.S., M.S., Zhejiang University; Ph.D., Louisiana State University

Faculty Emeriti

A

Allison, Richard
Professor of Environmental Management

B

Bell, Linda
Professor of Psychology

Bermudez, Andrea
Professor of Bilingual and Multicultural Education

Bilstein, Roger E.
Professor of History

Blanford, George E.
Professor of Physics and Astronomy

Bobbitt McCall, Donna M.
Associate Professor of Legal Studies

Bruder, Paul T.
Associate Professor of Healthcare Administration

Bruno, Joan D.
Professor of Accounting

C

Casserly, Dennis M.
Professor of Occupational Safety and Health

Chen, Edward C. M.
Professor of Chemistry

Chhikara, Raj S.
Professor of Mathematics and Statistics

Cloninger, Dale O.
Professor of Finance and Economics

Coleman, A. Eugene
Professor of Fitness and Human Performance

Collins, George C.
Associate Professor of Computer Engineering

Cummings, Wm. Theodore
Professor of Marketing

Czajkiewicz, Zbigniew
Professor of Systems Engineering

D

de Vries, Nick J.
Professor of Fine Arts

Dillner-Moore, Martha
Professor of Reading and Language Arts

Duncan, Shirley Paolini
Professor of Literature

Dupler, Terry
Associate Professor of Fitness and Human Performance

Durand, Roger E.
Professor of Management

E

Eisner, Howard C.
Associate Professor of Psychology

Erich, Stephen C. "Arch"
Professor of Social Work

Etnyre, Vance
Associate Professor of Management Information Systems

F
Ferebee, Robert N.
Associate Professor of Biology and Environmental Science

Fowles, Jib
Professor of Communication

Fryrear, Jerry L.
Professor of Psychology

G

Gallun, Rebecca A.
Professor of Accounting

Gorman, John T.
Professor of Literature

Grossman, Ellin
Associate Professor of Fine Arts and Art Education

H

Hall, Sharon K.
Professor of Psychology and Women's Studies

Hanna, Mike
Professor of Decision Sciences

Haworth, Daniel
Associate Professor of History

Hayes, Edward J.
Professor of Counselor Education

Heagy, Cynthia
Professor of Accounting

Hill, Margaret
Associate Professor of Reading and Language Arts

Houston, Glen
Professor of Computer Science and Statistics

Howard, Angela M.
Professor of History

Hu Pogue, Sandria
Professor of Art

Husband, Eldon W.
Associate Professor of Computer Engineering

K

Kajs, Lawrence
Professor of Educational Leadership

L

Lassiter, Carroll B.
Associate Professor of Biology

Lehmann, Constance
Professor of Management

Ley, Kathryn
Associate Professor of Instructional Design and Technology

Lowery, Marie J.
Associate Professor of Special Education

M

Malin, David
Professor of Psychology and Neuroscience

Malone, James F.
Associate Professor of Education

Marchesini, Roberto
Professor Emeritus of Economics

Markley, Oliver W.
Professor of Human Sciences and Studies of the Future

Mayo, Nolie B.
Associate Professor of Curriculum and Instruction

McClintock, Robert E.
Professor of Educational Foundations

McEnery, Lilian
Professor of Literacy, Language Arts and Literature Studies

McGlashan, Robert
Professor of Management

McIntyre, Scott
Professor of Industrial-Organizational Psychology

McKay, Charles W.
Professor of Software Engineering

McNamara, Kevin
Professor of Literature

Mezzino, Michael, Jr.
Professor of Mathematics

Mieszkowski, Gretchen
Professor of Literature

Mize, Leslye King
Professor of Family Therapy

N

Norwood, William "Dub"
Associate Professor, Clinical Psychology

P

Palmer, Bruce
Professor of History

Parsons, Keith
Professor of Philosophy and Humanities

Perkins Hall, Sharon
Professor of Computer Science and Computer Information Systems

Porter, Mattie C.
Professor of Accounting

R

Reynolds, Elizabeth G.
Associate Professor of Reading and Language Arts

S

Samuels, Barbara G.
Associate Professor of Reading and Language Arts

Sawyer, Cheryl
Professor of Counseling

Sherrill, James M.
Professor of Curriculum and Instruction

Short, Rick
Professor of Psychology

Staples, William A.
Professor of Marketing

Starling, Grover
Professor of Management and Public Policy

Sutter, Emily G.
Professor of School Psychology

T

Tombaugh, Jay
Associate Professor of Management

Tran, H. Van
Professor of Management Information Systems

V

Valenti, M. Alix
Professor of Legal Studies and Management

W

Weiser, Brenda
Associate Professor of Science Education

White, Craig
Professor of Literature

White, Elinor Maureen
Associate Professor of Learning Resources

White, Louis P.
Professor of Management

Wilson, Patricia J.
Associate Professor of Learning Resources

Z

Zophy, Jonathan
Professor of History

Neumann Library Professional Staff

Franz, Benjamin
Cataloging & Metadata Librarian; M.L.S., Indiana University-Purdue University Indianapolis; MFA, American University

Espinosa, Juliana C.
Student Success Librarian; M.A., Western Michigan University; M.L.I.S., San Jose State University; B.A., University of California, Santa Barbara

Ford, Linsey A.
Head of Scholarly Communications; M.L.S., University of North Texas; M.A., B.A., University of Houston-Clear Lake

Fridrick, Beth
Emerging Technology Librarian; M.L.I.S., Kent State University; B.S., Bowling Green State University

Goode, Cynthia
Research and Instruction Librarian; M.L.S., University of North Texas; B.F.A., Sam Houston University

Hilyer, Lee
Executive Director; M.Ed., University of Houston; M.L.I.S., University of South Carolina; BA, College of Charleston

Hood, Martha
Associate Director Evaluation and Assessment; M.S.L.S., University of North Texas; M.S., University of Houston; B.B.A., Stephen F. Austin State University

Kennedy, Alex
Research and Instruction Librarian; M.L.S, University of North Texas; B.S., Sam Houston State

Nanes, Robert
Archives Librarian; CA, Certified Archivist; M.L.S., University of North Texas; BA, Texas Tech University

Osborne, Virginia
Research Librarian; M.L.S., Texas Woman's University; B.A., University of Houston

Palmer, David
Interim Director, Library Communications and Operations; M.L.S., University of North Texas; B.A., University of Houston

Peek, Matthew M.

Associate Director, Archives and Special Collections; CA, Academy of Certified Archivists; M.A., Wright State University; B.A., Kentucky Christian University

Rodriguez, Theresa
Research & Instruction Librarian; M.L.S, Texas Woman's University; M.S., University of Houston Clear Lake; B.S., University of Houston Clear Lake

Sterling, Erin
Research Librarian; M.L.S., Texas Woman's University; M.A., University of Houston Clear Lake; B.A., University of Houston Clear Lake

Xiao, Jingshan
Associate Director, Technology and Resource Management; M.S.I.T., University of Central Missouri; M.L.S., Emporia State University; B.A., Hebei University of Economics and Business

UH System and University Administration

University of Houston System Board of Regents

Officers FY2022-2023

- Tilman J. Fertitta, Chairman, UH System Board of Regents
- Jack B. Moore, Vice Chairman, UH System Board of Regents
- Durga D. Agrawal, Secretary, UH System Board of Regents

Member(s) with terms set to expire Aug. 31, 2023

- Doug H. Brooks
- Jack B. Moore
- Gregory C. King

Member(s) with terms set to expire Aug. 31, 2025

- Durga D. Agrawal
- Alonzo Cantu
- John A. McCall, Jr.

Member(s) with terms set to expire Aug. 31, 2027

- Tilman J. Fertitta
- Beth Madison
- Ricky Raven

Member(s) with terms set to expire May 31, 2024

- Mielad Ziaee

University of Houston System Administration

Renu Khator
President

Raymond S. Bartlett
Senior Vice President for Administration and Finance

Diane Z. Chase
Senior Vice President for Academic Affairs and Provost

Bettina Beech
Chief Population Health Officer

Eloise Brice
Vice President for University Advancement and Alumni

Dona Hamilton Cornell
Vice President for Legal Affairs and General Counsel

Lisa K. Holdeman
Vice President for Marketing and Communications

Michael Johnson
Chief of Staff for President

Ramanan Krishnamoorti
Vice President for Energy and Innovation

Elwyn C. Lee
Vice President for Neighborhood and Strategic Initiatives

Daniel M. Maxwell
Interim Vice President for Student Affairs

Claudia Neuhauser
Interim Vice President for Research

Michael Pede
Associate Vice President for Alumni Relations

Chris Pezman
Vice President for Intercollegiate Athletics

David Shattuck
President, UH Faculty Senate

Jason Smith
Vice President for Government and Community Relations

Stephen J. Spann
Vice President for Medical Affairs and Founding Dean of the Tilman J. Fertitta Family College of Medicine

Community College Advisory Council

President, Alvin Community College
Robert Exley, Ph.D.

President, Brazosport College
Vincent Solis, Ed.D.

President, College of the Mainland
Warren Nichols, Ed.D.

President, Galveston College
W. Myles Shelton, Ed.D.

Chancellor, Houston Community College District
Cesar Maldonado, Ph.D., P.E.

Chancellor, Lone Star College System
Mario K. Castillo, J.D.

President, Lee College
Lynda Villanueva, Ph.D.

Chancellor, San Jacinto College District
Brenda Hellyer, Ed.D.

President, Wharton County Junior College
Betty A. McCrohan, M.Ed.

University of Houston-Clear Lake Administration

President
Richard Walker, Ed.D.

Chief of Staff/Chief Strategy Officer
Allison S. Gillespie, Ph.D., MCIS, M.S.Ed.

Associate Vice President and Chief Operating Officer, UHCL Pearland
Elizabeth Lewis, Ph.D.

Associate Vice President, Strategic Information Initiatives and Technology
Vacant

Title IX and Equal Opportunity Officer
David D. Brittain, Jr., J.D.

Executive Director, Hispanic Serving Institution (HSI) and Minority Serving Institution (MSI) Strategic Initiatives
Brice Yates, Ph.D., CDP

Executive Director, Strategic Partnerships
Natalie Pecknold, Ed.D.

Executive Director, Campus Operations, UHCL Pearland Campus
Vacant

Director, Professional/Continuing Education (PACE), UHCL Pearland Campus
Vacant

Vice President, Strategic Enrollment Management
Matt Aschenbrener, Ed.D.

Executive Director of Recruitment and Admissions
Kara Hadley-Shakya, M.S.

Director, Admissions, Undergraduate Recruitment
Brandon Byrd, M.S.

Director, Admissions-Processing
Miltonieka Gray-Bell, MBA

Registrar
Andrea Celestine, M.A.

Executive Director, Financial Aid
Holly A. Nolan, M.A.

Lead Functional Analyst
Sandy Ng, Ph.D.

Director, International Admissions and Services
Johna McClendon, Ed.D.

Senior Vice President, Academic Affairs and Provost
Christopher Maynard, Ph.D.

Vice Provost
Kathryn I. Matthew, Ed.D.

Executive Director, Academic Planning and Assessment
Pamela Shefman, Ph.D.

Executive Director, Center for Faculty Development
Marci McMahon, Ph.D.

Interim Executive Director, Sponsored Prgrams
Glen Houston, Ph.D.

Executive Director, Education Abroad and Scholar Services
Bianca Schonberg, Ph.D.

Senior Associate Vice President, Information Technology/Chief Information Officer
LeeBrian E. Gaskins, Ph.D.

Director, Applications and Systems Infrastructure
Mike Livingston, B.B.A.

Interim Director, Technology and Project Management
Sheeba Thomas, BEng, PMP

Director, Information Technology Infrastructure
John L. Rodriguez, EMBA

Director, Database Operations and Applications
Sai Sreerama, M.A., M.S., MBA

Director, Technology Learning Services
Jenny Willis-Opalenik, Ph.D.

Director, Academic Technologies/Support Services
Sana Zeidan, M.S.

Director, Institutional Research
Miriam Qumsieh, MBA

Executive Director, Neumann Library
Lee Andrew Hilyer, MLIS, M.Ed., PMP

Interim Director, Library Communications and Operations
David Palmer, MLS

Associate Vice President, Student Success and Initiatives
Timothy Richardson, Ph.D.

Director, Testing Center
Diana Nores, M.Ed.

Director, Academic Advising Center
Mary Ramos, M.S.

Director, Academic Transfer Advising
Kristi Rickman, M.S.

Director, Writing Center
Regan Joswiak, M.S.

Director, Accessibility Support Center
J'Naudia Hunter-Phillips, M.S.

Director, Student Success Center
Dorsey Thomas, M.S.

Director, Academic Advising - College of Business
Twana Walker, M.S.

Director, Student Relations - College of Education
David Benz, M.A., M.S.

Director, Academic Advising - College of Human Sciences and Humanities
Erick Ortiz, M.P.H.

Director, Academic Advising - College of Science and Engineering
Vacant

Chief Business Administrator
DeAngel Bonilla, M.A.

Executive Director, Environmental Institute of Houston
George Guillen, Ph.D.

Vice President, Administration and Finance
Mark Denney, B.S., MBA

Executive Director, Public Safety
Russell Miller

Director, Environmental Health and Safety and Emergency Management
Albert Black

Associate Vice President, Business Operations
Sherry Hawn, M.Ed., MBA, JD, CPA

Executive Director, Procurement and Payables
Debbie Carpenter, B.B.A.

Associate Director, Procurement/Contract Administration
Lidia Quiroga, B.B.A.

Director, Student Business Services
Melissa Hernandez, B.B.A.

Director, General Accounting
Mila Bautista, B.S., B.B.A.

Director, Accounts Payable
Rosie Pineda

Director, Planning and Budget
Deja Sero, M.P.A.

Interim Associate Vice President, Facilities Management and Construction
Bubba Jones, B.S.

Associate Vice President, Human Resources
Yolanda Edmond, M.P.A.

Director, Human Resources Operations
Erika De Leon, M.A.

Director, Human Resources Services
Abby Varela, M.A., SHRM-CP

Vice President, Division of Student Affairs
Tina Powellson, Ed.D.

Assistant Vice President, Student Engagement
Andrew Wiemer, Ph.D.

Executive Director, Student Involvement and Leadership
Patrick Lawrence Cardenas, M.A.

Director, Student Diversity, Equity and Inclusion
Vacant

Executive Director, Counseling and Mental Health Center
Cindy Cook, Ph.D.

Director, Career Services
Charles Crocker, M.Ed.

Executive Director, Veteran Services and Community Engagement
Jason Babin, Ph.D.

Director, Campus Recreation and Wellness
Michelle Mirpuri, M.A.

Director, Orientation and New Student Programs
Vacant

Director, Student Housing and Residential Life
Matthew Perry, M.S.

Director, Health Services
Regina Pickett, R.N, M.S.N.

Dean of Students
David Rachita, M.A.

Interim Dean of Students
Matthew Perry, M.S.

Assistant Dean, Office of Student Advocacy
Kristi Randolph Simon, M.S.

Vice President, University Advancement
Joseph L. Staley, MBA

Executive Director, University Advancement
Elbby Antony, B.A.

Assistant Vice President, Marketing and Communications
Daniel Ramirez, M.S.

Director, Theater and Cultural Arts
Eric Despard, MM. Mus

Director, Advancement Services
Vacant

Director, Alumni Relations
Kendra Hakanson, MBA

Director, Special Events
Lori Lopez, BBA

Sr. Development Officer, Academic Programs
Richard Zalesak, M.A.

College Deans

Dean, College of Business
Edward R. Waller, Ph.D.

Associate Dean, College of Business
Troy A. Voelker, Ph.D.

Dean, College of Education
Joan Pedro, Ph.D.

Associate Dean, College of Education
Terry Shepherd, Ed.D.

Dean, College of Human Sciences and Humanities
Glenn M. Sanford, J.D., Ph.D.

Associate Dean, College of Human Sciences and Humanities
Shreerekha Subramanian, Ph.D.

Interim Dean, College of Science and Engineering
Robert Phalen, Ph.D.

Associate Dean, College of Science and Engineering
David Garrison, Ph.D.