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CATALOG

The Catalog contains all programs offered by The University of Texas Health Science Center at San Antonio, called UT Health San Antonio, providing applicants and enrolled students with the information they need regarding the academic careers available to them and the resources needed to succeed in those.

DISCLAIMER
This University of Texas Health Science Center Course Catalog is published in compliance with the Southern Association of Colleges and Schools Commission on Colleges accreditation standards and the University of Texas System. The intent of this course Catalog is to assist current and prospective students on academic matters. All current and prospective students are advised to direct any inquiries to either the specific school or the Health Science Center Office of the University Registrar.
GENERAL INFORMATION

The University of Texas Health Science Center at San Antonio
2019-2020 Catalog

This catalog is a general information publication only. It is not intended to, nor does it, contain all regulations that relate to students. The provisions of this catalog do not constitute a contract, expressed or implied, between any applicant, student or faculty member and The University of Texas Health Science Center at San Antonio, now called UT Health San Antonio, or The University of Texas System. UT Health San Antonio reserves the right to withdraw courses at any time, and to change fees, tuition, calendars, curriculum, degree requirements, graduation procedures and any other requirements affecting students. Changes will become effective whenever the proper authorities so determine and will apply to both prospective students and those already enrolled.

Correspondence
Inquiries about admission or any other information should be addressed to:
The University of Texas Health Science Center at San Antonio
Office of the University Registrar
Mail Code 7702
7703 Floyd Curl Drive
San Antonio, Texas 78229-3900

UT Health San Antonio and all of its activities are subject to the Rules and Regulations of the Board of Regents of The University of Texas System.

The university is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award certificates and baccalaureate, masters, doctoral and professional degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, or call 404-679-4500 for questions about the university’s accreditation. Our SACSCOC accreditation has been reaffirmed through 2028.

As per Public Law 101-542, The Student Right to Know and Campus Security Act, information on the graduation rate is available on request from the registrar. All students who enroll are required to be adequately immunized prior to registration. Students applying for admission may review institutional accreditation documents of UT Health San Antonio by contacting the Office of the Vice President for Academic, Faculty and Student Affairs. Information about program level accreditation may be obtained at each school at UT Health San Antonio. Information regarding campus security and crime statistics is available from University Police.

To the extent provided by applicable law, no person shall be excluded from participation in, denied the benefits of, or be subject to discrimination under any program or activity sponsored or conducted by the UT System or any of its component institutions on the basis of race, color, national origin, religion, sex, age, sexual orientation, veteran status or disability. The component institutions of the UT System will make maximum use of resources, consistent with standards of appropriate accrediting bodies and enrollment and admissions policies approved by the Board, to admit and educate as many qualified students as possible.
David L. Lakey, M.D., Vice Chancellor for Health Affairs and Chief Medical Officer

Stacey Napier, Vice Chancellor for Governmental Relations

Randa S. Safady, Ph.D., Vice Chancellor for External Relations, Communications, and Advancement Services

Daniel H. Sharphom, J.D., Vice Chancellor and General Counsel

**UT Health Science Center Executive Leadership**

President: William L. Henrich, M.D., MACP

Senior Executive Vice President and Chief Operating Officer: Andrea Marks, M.B.A., CPA

Dean, School of Nursing: Eileen T. Breslin, Ph.D., RN, FAAN

Dean, Joe R. & Teresa Lozano Long School of Medicine: Robert A. Hromas, M.D., FACP

Dean, School of Dentistry: Peter M. Loomer, B.Sc., D.D.S., Ph.D., MRCD(C), FACD

Dean, School of Health Professions: David C. Shelledy, Ph.D., RRT, FAARC, FASAHP

Dean, Graduate School of Biomedical Sciences: David S. Weiss, Ph.D.

Vice President and Chief Marketing and Communications Officer: Heather Adkins, M.S.

Vice President and Chief Information Officer: Yeman Collier, B.S.

Vice President and Chief of Staff, Office of the President: Mary G. DeLay, M.B.A.

Vice President for Governmental Relations: Armando Diaz, M.Ed.

Vice President for Research: Andrea Giuffrida, Ph.D.

Executive Vice President for Facilities Planning and Operations: James D. Kazen, B.A.

Vice President and Chief Financial Officer: Ginny Gomez-Leon, M.B.A., CPA

Vice President for Academic, Faculty and Student Affairs: Jacqueline Lee Mok, Ph.D.

Vice President for Institutional Advancement and Chief Development Officer: Deborah H. Morrill, M.S.

Vice President and Chief Human Resources Officer: Amy S. Tawney, M.B.A., SPHR, SHRM-SCP

**Health Science Center**

The University of Texas Health Science Center at San Antonio, now UT Health San Antonio, is one of 14 institutions in the University of Texas System (http://www.utsystem.edu). UT Health San Antonio includes five schools that offer programs of study in a variety of health care professions from the undergraduate to post-doctorate level. Select any school or degree level from the lists available for more information on the programs offered.

For more general information about UT Health San Antonio, visit the institution’s website (http://www.uthscsa.edu).

**Mission Statement**

The mission of The University of Texas Health Science Center at San Antonio (http://www.uthscsa.edu), called UT Health San Antonio, is to make lives better through excellence in education, research, health care and community engagement.

Strategies for achieving this mission are:

- Educating a diverse student body to become excellent health care providers and scientists.
- Engaging in research to understand health and disease.
- Commercializing discoveries, as appropriate, to benefit the public.
- Providing compassionate and culturally proficient health care.
- Engaging our community to improve health.
- Influencing thoughtful advances in health policy.

(Approved by The Texas Higher Education Coordinating Board on April 25, 2012 and reaffirmed by The University of Texas System Board of Regents at the August 24-25, 2017 Board meeting.)

**Purpose**

The purpose of The University of Texas Health Science Center at San Antonio, called UT Health San Antonio, (http://www.uthscsa.edu) is to provide the best in health careers education, biomedical research, patient care and community service to San Antonio and the South Texas border region. Through undergraduate, graduate, postgraduate and professional programs, the faculty is committed to educating health professionals who will provide excellent patient care and research that can be applied to treat and prevent disease.

**Research and Teaching**

Faculty excellence at The University of Texas Health Science Center at San Antonio, called UT Health San Antonio, (http://www.uthscsa.edu), is demonstrated by faculty members’ participation on many national advisory and governing boards and by their election to high offices in national and professional societies. Faculty recruitment efforts emphasize research as well as teaching. The university receives millions of dollars annually in new research, training and public service grants and contracts for hundreds of projects. The university endowment is growing at an impressive rate.

With the cooperation of medical institutions in the area, basic and clinical research are both underway in such fields as cancer, aging, genetics, immunology, cardiovascular disorders, nutrition, arthritis, osteoporosis, psychiatric disorders, AIDS, new drug development and reproductive biology. UT Health San Antonio partners include The University of Texas at San Antonio (http://www.utsa.edu) (UTSA), the Audie L. Murphy Division of the South Texas Veterans Health Care System (http://www.southtexas.va.gov), Trinity University (http://www.trinity.edu), St. Mary's University (http://www.stmarytx.edu), the Texas Biomedical Research Institute (https://www.txbiomed.org), Southwest Research Institute (http://www.swri.org), the 311th Human Systems Wing at
There are several university institutes devoted to research, teaching and patient care. These include the Sam and Ann Barshop Institute for Longevity and Aging Studies (http://www.barshop.uthscsa.edu), the Institute for Drug Development and the recently established Glenn Biggs Institute for Alzheimer's and Neurodegenerative Diseases (https://biggsinstitute.org). In 2017, the university broke ground on a new location for the Barshop Institute at the corner of Floyd Curl and Charles Katz drives in the South Texas Medical Center, and is expected to open December 2019.

The Robert F. McDermott Clinical Science Building, on the Greehey Academic and Research Campus, houses the Research Imaging Institute (http://ric.uthscsa.edu) as well as research labs and teaching facilities for the clinical pharmacology and clinical pharmacy programs, and the ophthalmology department.

The Greehey Children’s Cancer Research Institute (GCCRI) (http://ccri.uthscsa.edu) is a unique and specialized cancer research center located at UT Health San Antonio’s Greehey Academic and Research Campus. The mission of the GCCRI is to advance scientific knowledge relevant to childhood cancer and to accelerate the translation of knowledge into novel therapies. Through discovery, development and dissemination of scientific knowledge with relevancy to childhood cancer, the overarching aim of the GCCRI is to impact the problem of cancer at all ages.

The Mays Cancer Center (http://www.uthscsa.edu/patient-care/ cancer-center), home to UT Health San Antonio MD Anderson Cancer Center, is one of the elite academic cancer centers in the country to be named a National Cancer Institute-Designated Cancer Center, and is one of only four in Texas. A leader in developing new drugs to treat cancer, the Institute for Drug Development conducts one of the largest oncology Phase I clinical drug programs in the world, and participates in development of cancer drugs approved by the Food and Drug Administration.

The Medical Arts & Research Center (http://www.uthscsa.edu/patient-care/physicians/facility/Medical-Arts-Research-Center---MARC) is home to UT Health Physicians, the clinical practice of the university’s Long School of Medicine. With more than 700 doctors—all faculty members from the Long School of Medicine—it is the largest medical practice in Central and South Texas, practicing in more than 140 medical specialties and subspecialties. Located in the South Texas Medical Center at 8300 Floyd Curl Dr., the facility features state-of-the-art clinics, diagnostic imaging, an ambulatory center, endoscopic suites, operating rooms, physicians’ offices and a pharmacy. It complements community physicians who are invited to refer complex cases to UT Health San Antonio specialists and subspecialists.

The South Texas Research Facility (STRF) (http://research.uthscsa.edu/strf), completed in 2011, houses the university’s state-of-the-art Optical Imaging Core Facility and the Bioanalytics & Single Cell Core Lab, as well as the Office of Technology Commercialization.

The Center of Oral Health Care & Research (http://dental.uthscsa.edu/CFOHCR), completed in 2015, is located next door to UT Health San Antonio’s Medical Arts & Research Center and is the home of the School of Dentistry’s (https://www.uthscsa.edu/academics/dental) patient practice, UT Dentistry (https://www.uthscsa.edu/patient-care/dental). The 198,000-square-foot facility provides for all aspects of students’, residents’, faculty and patients’ clinical experiences and creates an environment that supports the finest in comprehensive and multi-specialty patient care.

The Academic Learning & Teaching Center (ALTC) is the newest building on the university’s Long campus. Dedicated in 2016, the 130,000-square-foot ALTC features more than 33 ultra-modern classrooms and strategic learning spaces, and a state-of-the-art digital anatomy laboratory with 3D interactive imaging capabilities. The largest ALTC classrooms can accommodate 280 students, and smaller seminar rooms seat 12-18. In every room, the technology and furniture design encourages active learning.

Size and Location

The University of Texas Health Science Center at San Antonio, called UT Health San Antonio, (http://www.uthscsa.edu) has one central campus, as defined by the Commission on Colleges of the Southern Association of Colleges and Schools. However, in order to provide clarity for the general public and consumers of the university’s patient, educational or community services, the university’s central campus is consistently described to include multiple campus identities in all marketing, communications and advertising collateral. In San Antonio, Texas, they are the Joe R. & Teresa Lozano Long Campus and the Greehey Academic & Research Campus. In Laredo, Texas, is the regional campus, called the Regional Campus at Laredo.

Joe R. & Teresa Lozano Long Campus

The Joe R. & Teresa Lozano Long School of Medicine (http://som.uthscsa.edu), School of Dentistry (http://www.uthscsa.edu/academics/dental), School of Nursing (http://nursing.uthscsa.edu), School of Health Professions (http://www.uthscsa.edu/academics/health-professions) and the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu) are based on the Joe R. & Teresa Lozano Long central campus, as are the Dolph Briscoe Jr. Library (http://library.uthscsa.edu) and most of the university’s administrative offices. Physical address: 7703 Floyd Curl Dr., San Antonio, Texas 78229-3900

Greehey Academic & Research Campus

A mile away from the Long central campus, at 8403 Floyd Curl Dr., is the Greehey Academic & Research Campus (http://ccri.uthscsa.edu). This campus houses the Greehey Children’s Cancer Research Institute, dedicated in 2004 and home to faculty researchers studying cancer; the Robert F. McDermott Clinical Science Building, home to the Research Imaging Center; the Research Administration Building that houses the Human Research Protection Programs, as well as the Biomolecular NMR Spectroscopy core facility; and the South Texas Research Facility (STRF), a state-of-the-art research facility that opened in 2011 and holds the Optical Imaging Core Facility and Bioanalytics & Single Cell Core Lab. The campus also includes the Mays Cancer Center, home to UT Health San Antonio MD Anderson Cancer Center, located at 7979 Wurzbach Road, and one of only four National Cancer Institute-Designated Cancer Centers in Texas; the Medical Arts & Research Center, the flagship clinical and research facility of the Long School of Medicine’s faculty practice, UT Health Physicians (http://www.uthscsa.edu/patient-care/utmedicine), located at 8300 Floyd Curl Dr.; the Center for Oral Health Care & Research (http://www.uthscsa.edu/patient-care/dental), located at 8210 Floyd Curl Dr., which houses more than 100 School of Dentistry faculty experts, in addition to 616 dental residents and students; and the Sam and Ann Barshop Institute for Longevity and Aging Studies (https://barshopinstitute.uthscsa.edu), which brings together the world’s
leading scientists in aging and longevity research and will reside at the corner of Floyd Curl and Charles Katz drives.

Regional Campus at Laredo
The Regional Campus at Laredo (http://laredo.uthscsa.edu) came to fruition in December 2002 with the dedication of the D.D. Hachar Building. Physical address: 1937 Bustamante St., Laredo, Texas 78041-5416

The Libraries
The UT Health Libraries promote learning, inspire discovery, and connect with the communities they serve. To achieve this mission library staff deliver resources for teaching, learning, and research; provide expert information and instructional services; develop innovative physical and virtual spaces; strengthen existing partnerships; and seek new collaborations. The Libraries include:

• Dolph Briscoe, Jr. Library at the Joe R. and Teresa Lozano Long Campus
• Laredo Regional Campus Library

Most library resources are available electronically, enabling students in San Antonio as well as distance and off-site students to access them from any location. Computers, study carrels, collaborative and individual study tables and comfortable seating can be found throughout the library. Use of library computers or Wi-Fi requires a campus network login or a guest login available upon request. Staff assistance can be requested at the Circulation Desk. Inquiries can be made in person, by email and by telephone. Liaison librarians assigned to each school provide one-on-one research assistance to drop-in students and by appointment.

• Hours: The Briscoe Library is open 24/7 with Health Science Center ID card access. Library staff are available to assist users during regular hours (http://library.uthscsa.edu/2011/09/hours-locations).
• Catalog (http://briscoe.uthscsa.edu.libproxy.uthscsa.edu/cgi-bin/koha/opac-main.pl): The library’s catalog provides information about the collections. Off-campus access to e-journals and e-books is restricted to Health Science Center ID holders and University Health System house staff.
• Circulation (http://library.uthscsa.edu/2011/10/circulation-policies-and-privileges): All university students, faculty, staff, residents, fellows, and University Health System ID holders may check out materials. Registration (http://briscoe.uthscsa.edu.libproxy.uthscsa.edu/cgi-bin/koha/opac-memberentry.pl) is required to borrow library materials.
• Reserve Collection: A core collection of text books, selected by faculty or due to the significance of the items, is available for limited checkout periods. Electronic course reserve materials are managed by individual faculty through the university’s course management system, Canvas.
• Study Room Reservations (http://library.uthscsa.edu/room-reservation): Group study rooms and meeting rooms may be reserved for student use. Rooms are equipped with whiteboards, and most rooms have a large screen monitor for shared projects. Individual study rooms are available on a first-come-first-served basis.
• Information and Reference Services (http://library.uthscsa.edu/2011/10/get-help): The Library is staffed with professional librarians and library assistants who provide information assistance in person and via telephone, chat, and email.

• Literature Search Services (http://library.uthscsa.edu/2011/12/literature-search-services): Librarians provide a mediated database search service for health sciences related topics, customizing search strategies and printing or emailing citations. Requests can be made using an online form. Librarians also collaborate with students and faculty on systematic reviews and meta-analyses. These services are available to UT Health faculty, staff and students, to health care professionals and students in South Texas, and to the general public. Non-Health Science Center requesters are charged a fee.
• Instructional Services (http://library.uthscsa.edu/2011/11/attend-a-library-class): Librarians provide orientations for new students, faculty and staff and classes on databases, searching the Internet, finding evidence-based resources, and citation management.
• Library Guides (http://libguides.uthscsa.edu): Librarians have developed a series of web-based guides with links to subject-specific resources that provide point of need information.
• Interlibrary Loan (http://library.uthscsa.edu/2013/04/interlibrary-loan): Library users from the Health Science Center may request and receive materials not owned by the Library through this fee-based service. Other libraries may request to borrow books or receive articles from our collection.
• Photocopy/printing services (http://libguides.uthscsa.edu/Print-Copy-Services): Library users may photocopy or print at the Briscoe and Laredo libraries at a cost of 10 cents per page for black and white, 50 cents per page for color prints.
• Liaison Librarians (http://library.uthscsa.edu/2011/10/get-help): Librarians are designated as a single point of contact at each school for library instruction and research services. The liaison librarians have office hours when students can drop by for assistance. They work with the faculty, instructional designers, and program directors to plan and develop curriculum-integrated courses on use of library databases, evidence-based practice health information, and citation management. They participate on curriculum committees as well as other campus groups. The liaison librarians participate in systematic reviews and meta-analyses, and provide reference services and customized instruction.
• Services for Distance and Off-Site Students (http://libguides.uthscsa.edu/distance_learning): Students who are enrolled in distance programs or are unable to get to the Library in person are still able to take advantage of the library’s collections and services. The collection of books and journals is over 95% online and accessible from anywhere with a network login. Students can request copies of print books and journal articles through the Interlibrary Loan service at no charge, and can return them with postage paid by the Library. Distance students can interact with librarians by telephone, chat, and email if they need assistance. With the TexShare program, they are able to borrow materials from academic libraries in their local area.
• Learning Technology: The library has designated a space called The Hub that uses technology to enhance teaching and learning. Equipment includes digital and virtual reality anatomy programs, software for students to create and edit presentations and videos, and a 3D printer and scanner.
• Outreach and Community Engagement: In keeping with the university’s mission to engage our community to improve health, we offer access to library services such as reference, clinical information, database searches, and document delivery to licensed area health professionals. Librarians collaborate with area libraries and health care organizations to develop programs with an emphasis on access to consumer health information and health information literacy.
The South Texas Veterans Health Care System pavilion opened on the Robert B. Green campus in 2013. University Health System's Robert B. Green Campus, located just west of downtown, is an ambulatory health center featuring more than 103 subspecialty residencies and fellowships. University Hospital is UT Health San Antonio's main teaching affiliate and is staffed predominantly by faculty of the Joe R. & Teresa Lozano Long School of Medicine (http://som.uthscsa.edu). The hospital, which serves as one of two Level I Trauma Centers in the region, is owned and operated by Bexar County's University Health System (http://www.universityhealthsystem.com). The hospital is located adjacent to the Long School of Medicine. The 498-bed facility significantly expanded in 2014, with the new 10-story tower connected to the existing hospital buildings. The tower includes an 88-bed Emergency Center, two floors of operating suites and six floors of private patient rooms. University Hospital has post-graduate training programs in anesthesiology, surgery, internal medicine, obstetrics/gynecology, ophthalmology, orthopedic surgery, otolaryngology/head-and-neck surgery, neurology, neurosurgery, thoracic surgery, pathology, pediatrics, rehabilitation medicine, psychiatry, radiology, urology and family practice, as well as more than 20 additional subspecialty residencies and fellowships.

University Health System's Robert B. Green Campus, located just west of downtown, is an ambulatory health center featuring more than 103 primary, specialty and urgent care clinics. More than 300,000 outpatient visits are conducted there each year. A six-story advanced clinical pavilion opened on the Robert B. Green campus in 2013. The South Texas Veterans Health Care System (https://www.va.gov/directory/guide/facility.asp?id=115) (STVHCS) is comprised of two inpatient campuses: the Audie L. Murphy Memorial VA Hospital in San Antonio and the Kerrville VA Hospital in Kerrville, Texas. The South Texas Veterans Health Care System provides medical, surgical and psychiatric health services for approximately 100,000 veterans. The VA hospital in San Antonio is physically linked to University Hospital by a crosswalk. The Audie L. Murphy facility serves as an additional teaching hospital for medical students and many UT Health San Antonio residency programs. The physicians who practice at this facility are a combination of VA-employed providers and faculty from the Long School of Medicine.

CHRISTUS Santa Rosa (http://www.christussantarosa.org) is a Catholic, faith-based, nonprofit health and wellness ministry. As one of the top health care organizations in South Central Texas, CHRISTUS Santa Rosa has five hospital campuses located in the South Texas Medical Center, Westover Hills and in New Braunfels, Texas, and it also operates a short-stay surgical hospital in Alamo Heights. CHRISTUS Santa Rosa has an extensive network of primary care physicians supplemented by a broad range of specialty providers serving their many locations. In addition, it offers numerous programs to serve the community. UT Health San Antonio has very limited clinical and teaching activity at these sites.

San Antonio Military Medical Center (SAMMC) (https://www.bamc.health.mil), located at Fort Sam Houston in San Antonio, is the largest inpatient medical facility in the Department of Defense (DoD). It plays a critical role in graduate medical education, research and patient care, particularly for wounded service members. SAMMC is home to the DoD's only U.S. Army Institute for Surgical Research Burn Center and the only DoD Level 1 Trauma Center in the U.S. The hospital staff provides inpatient care in a 2.1 million-square-foot, 425-bed state-of-the-art medical treatment facility. The hospital, formerly known as Brooke Army Medical Center (BAMC), is the largest of the six treatment facilities in San Antonio under the unified command. Other facilities falling under SAMMC include the Center for the Intrepid, Fort Sam Houston Clinic, McWethy Troop Medical Clinic, Taylor Burk Clinic at Camp Bullis, and the Schertz Medical Home. SAMMC supports more than 89 accredited educational programs. There is extensive collaboration between the Long School of Medicine and SAMMC in regards to education of medical students and residents.

Baptist Health System (https://www.baptisthealthsystem.com) (BHS) is a local for-profit institution owned by Tenet Healthcare. BHS includes five acute-care hospitals (Baptist Medical Center, Mission Trail Baptist Hospital, North Central Baptist Hospital, Northeast Baptist Hospital and St. Luke's Baptist Hospital), which offer 1,674 licensed beds. All five hospitals have earned Accredited Chest Pain Center designation, as well as Primary Stroke Center certification. The system also operates Baptist Regional Children's Center, Baptist Breast Center, Healthlink wellness and fitness center and the Baptist M&S Imaging Centers. It provides community health and wellness programs, and ambulatory and rehabilitation services. It owns or supports medical office buildings, San Antonio AirLIFE air medical transport, a School of Health Professions and other health-related services and affiliations. UT Health San Antonio physicians have limited clinical duties at some of the BHS locations.

The San Antonio Metropolitan Health District (http://www.sanantonio.gov/HEALTH)/Ricardo Salinas Clinic provides training opportunities for pediatric dentistry residents and dental students under the supervision of pediatric dentistry faculty. Pregnant women, young mothers and children are the primary users of medical and WIC facilities of the center. Close interactions between the medical and dental/WIC clinics promote a significant opportunity to emphasize the relationship between oral health and general health.

The Texas Diabetes Institute (http://www.universityhealthsystem.com/services/diabetes), another component of the University Health System (http://www.universityhealthsystem.com), is located in west San Antonio. The campus includes the Village of Hope, an ambulatory center for children with developmental disabilities, and an outpatient hemodialysis unit. The Texas Diabetes Institute, in conjunction with the diabetes division of UT Health San Antonio, offers all specialty services related to diabetes prevention and treatment, and is home to one of the nation’s leading diabetes research centers. University Health System's ambulatory network includes 16 other clinic locations throughout the community.

The University of Texas at San Antonio (http://www.utsa.edu) (UTSA) is one of eight academic universities and six health institutions in the UT System. Although part of the same educational system, UTSA and UT Health San Antonio are separate institutions. As a multicultural institution, UTSA aims to be a national research university providing access to educational excellence and preparing citizen leaders for the global environment. UTSA serves nearly 31,000 students in more than 130 degree programs. Its students and scholars often collaborate with
the UT Health San Antonio community through educational, research and community outreach projects in a variety of disciplines.

Clarity Child Guidance Center (http://www.claritycgc.org) (CGC) is a nonprofit mental health treatment center providing programs designed specifically for children ages 3-17 suffering from emotional and behavioral difficulties. The facility includes a 52-bed psychiatric hospital and separate outpatient treatment center to provide acute and crisis assistance 24 hours a day, seven days a week; sub-acute residential and day treatment; child, adolescent and family therapy; medication management; psychological assessments; psychiatric evaluations; developmental assessments; neuropsychological assessments; and substance abuse evaluations. Clarity CGC incorporates a multidisciplinary team approach, including board certified child/adolescent psychiatrists, nurses, psychologists, social workers, therapists, teachers and aides. Through an affiliation agreement with UT Health San Antonio, Clarity CGC is a training site for child psychiatry residents and clinical psychology residents. Social workers and special education and nursing students from several area universities gain clinical experience at this facility as well.

An affiliation agreement is maintained between UT Health San Antonio and the Texas Biomedical Research Institute (https://www.txbiomed.org). This agreement allows the two institutions to share facilities and faculty. The Texas Biomedical Research Institute staff works primarily in the fields of genetics, virology and immunology, and animal models of human diseases. The institute has 527,000 square feet of offices, laboratories and animal space. A large indoor and outdoor animal facility houses a primate colony and other animals to support the biomedical research effort.

An agreement between UT Health San Antonio and the Southwest Research Institute (http://www.swri.org) allows cooperation in research. The Southwest Research Institute, an independent, nonprofit, applied engineering and physical sciences research and development organization, has its headquarters in San Antonio.

The School of Dentistry (http://www.uthscsa.edu/academics/dental) is affiliated with a number of federally qualified community health centers, local health departments, hospitals, school districts, mental health facilities, military facilities, homeless facilities, faith-based clinics and nursing homes in San Antonio, Bexar County and South Texas, as well as U.S. Department of Health and Human Services Indian Health Service (https://www.ihs.gov) facilities located throughout the United States. These serve as clinical training sites in primary care, preventive dentistry, pediatric dentistry, emergency care and hospital dentistry, alternative dental care delivery using mobile and portable dental equipment at outreach sites, and practice management training in the offices of private practitioners. Predoctoral dental students receive training (required and elective) at the various sites, where they are supervised by full- and/or part-time faculty as well as adjunct faculty. Postdoctoral dental students from the various general and specialty residency programs receive training in affiliated hospitals and private practices in Texas.

The School of Nursing (http://nursing.uthscsa.edu) is affiliated with more than 300 community facilities that serve as practice sites for graduate and undergraduate students.

**Other Affiliated Institutions and Programs**

The goal of the South Texas Area Health Education Center (AHEC) (https://stahec.uthscsa.edu/ahec) is to increase the number of primary care physicians and other health professionals by developing strong “pipeline” programs in the primarily underserved 38-county region of South Texas. AHEC recruits minority students from disadvantaged backgrounds to participate in mentoring and educational activities designed to prepare and inspire them to enter into the health care field. Programs aim to strengthen science skills and increase the competitive applicant pool of minority students to pursue health professions education. The mission is to improve access to culturally competent and quality primary care through appropriate preparation, composition and distribution of the health professional workforce in South Texas. AHEC is committed to improving the health status and quality of life for residents of South Texas.

**Academic Calendars**

UT Health San Antonio maintains multiple academic calendars to accommodate the professional and clinical needs of programs within the five schools. These are created as a result of collaboration between the academic programs, deans’ offices, and Office of the University Registrar. Current, past, and future tentative academic calendars are published on the Office of the University Registrar website (http://students.uthscsa.edu/registrar/2013/04/academic-calendar).

**Programs of Study**

The Health Science Center offers degrees in health-related fields across five schools: The School of Dentistry, Graduate School of Biomedical Sciences, School of Medicine, School of Health Professions, and School of Nursing.

**School of Dentistry**

**Bachelor of Science**

- Dental Hygiene

**Certificates**

- Advanced Education in General Dentistry
- Dental Public Health
- Endodontics
- Oral and Maxillofacial Radiology
- Oral and Maxillofacial Surgery
- Orthodontics and Dentofacial Orthopedics
- Pediatric Dentistry
- Periodontics
- Prosthodontics

**Professional**

- Doctor of Dental Surgery
- Doctor of Dental Surgery/Doctor of Philosophy
Graduate School of Biomedical Sciences

Certificate
- Cancer Prevention
- Translational Science

Master of Science
- Biomedical Engineering
- Cell Systems and Anatomy
- Clinical Investigation and Translational Science
- Dental Hygiene
- Dental Science
- Immunology and Infection
- Medical Health Physics
- Medical Physics
- Microbiology and Immunology
- Personalized Molecular Medicine
- Radiological Sciences

Doctor of Philosophy
- Biomedical Engineering
- Integrated Biomedical Sciences
- Nursing Science
- Radiological Sciences
- Translational Science

Professional
- Doctor of Medical Physics (DMP)

School of Health Professions

Bachelor of Science
- Medical Laboratory Science
- Emergency Health Sciences
- Respiratory Care

Certificates
- Emergency Medical Technician-Basic
- Emergency Medical Technician-Paramedic

Master's Level
- Medical Laboratory Sciences (MS)
- Occupational Therapy (MOT)
- Physician Assistant Studies (MPAS)
- Respiratory Care (MS)
- Speech Language Pathology (MS)

Professional
- Doctor of Physical Therapy (DPT)
- Doctor of Occupational Therapy (OTD)

Joe R. and Teresa Lozano Long School of Medicine

Professional
- Doctor of Medicine
- Doctor of Medicine/Doctor of Philosophy
- Doctor of Medicine/Master's of Public Health
- Doctor of Medicine/Oral and Maxillofacial Surgery Certificate

Master's Level
- Deaf Education and Hearing Science

School of Nursing

Bachelor of Science
- Nursing - Accelerated Track
- Nursing - Traditional Track

Post Graduate Certificates
- Adult-Gerontology Acute Care Nurse Practitioner
- Family Nurse Practitioner
- Nursing Education
- Pediatric Nurse Practitioner Primary Care
- Psychiatric Mental Health Nurse Practitioner

Master of Science in Nursing
- Administration Management
- Clinical Nurse Leader
- Family Nurse Practitioner
- Pediatric Nurse Practitioner
- Psychiatric/Mental Health Nurse Practitioner

Professional
- Doctor of Nursing Practice (DNP)

University Admissions Policy

UNIVERSITY DECISION

It is the policy of the Health Science Center to admit applicants who declare their intention to enroll in a school upon satisfactory completion of all admission requirements set forth by the institution and schools. Schools admit qualified applicants into the term for which they applied at their discretion, based on admission requirements and other standards they deem appropriate.

Each school's admission policy and its formal application process may be found at each school’s website and through its Office of the Dean. General information about university processes can be obtained through the Office of the University Registrar at the Health Science Center.

Revisions to admission policies are reflected in the “Admissions Criteria Report,” submitted annually to The University of Texas System Board of Regents in accordance with Texas Education Code 51.352 (http://www.statutes.legis.state.tx.us/Docs/ED/htm/ED.51.htm) which requires the governing board to “set campus admission standards consistent with the role and mission of the institution,” and with Texas Education Code, 51.808 (http://www.statutes.legis.state.tx.us/Docs/ED/htm/ED.51.htm), which requires each institution to adopt written admission policies. The Health Science Center admission policies are consistent with the requirements of these laws, other applicable federal and state laws, and
As defined by the Texas Education Code 61.821, the Academic Texas Core Curriculum granting program. A student who has been accepted into and has enrolled in a degree program located under the school's section of this Catalog without exception. Each school’s and program’s admissions requirements are a matriculated student, they must follow the admission requirements they are compatible with the role and mission of the Health Science Center. When a student wishes to become a matriculated student, they must follow the admission requirements they are compatible with the role and mission of the Health Science Center. Each school’s and program’s admissions requirements are located under the school’s section of this Catalog.

DEFINITION OF TERMS

Academic Texas Core Curriculum
As defined by the Texas Education Code 61.821 (http://www.statutes.legis.state.tx.us/Docs/ED/htm/ED.61.htm), it is "the curriculum in liberal arts, humanities, and sciences and political, social and cultural history that all undergraduate students of an institution of higher education are required to complete before receiving an academic undergraduate degree.”

General education requirements completed at private or out-of-state institutions may not be equivalent of, or may not fulfill the requirements of, and may not excuse a student from completing the core curriculum.

Degree-Seeking Student
Students enrolled in courses for credit who are recognized by the institution as seeking a degree or formal award.

Exceptional Admission Student
Students admitted who do not meet the requirement for admission as Regular Students, but can present sufficient evidence indicating their capability to do university level work.

Non-Degree Seeking Student
A student enrolled in courses for credit who is not recognized by the institution as seeking a degree or formal award.

Matriculation
In its broadest sense, it means to be registered or added to a list. It refers to the formal process of entering a university, or of becoming eligible to enter by acquiring the prerequisites. When a student wishes to become a matriculated student, they must follow the admission requirements without exception.

Matriculated
A student who has been accepted into and has enrolled in a degree-granting program.

Regular student
A person who is enrolled or accepted for enrollment at an institution for the purpose of obtaining a degree, certificate, or other recognized educational credential offered by that institution.

Texas Success Initiative (TSI)
TSI is a state-legislated program designed to improve student success in college. It consists of two components: an assessment to diagnose basic reading, writing, math skills and developmental instruction to strengthen academic skills needing improvement.

ADMISSIONS CATEGORIES

Prospective applicants may be admitted to any Health Science Center school as regular students under the following conditions:

1. High School Graduate – Graduation from a high school accredited by a state department of education and/or recognized regional accrediting association.
2. GED – Successful completion of the General Education Development test (GED) as certified by a state education agency
3. College/University Transfer – Prior attendance at a regionally accredited college or university. Under this condition, applicants will not be accepted if they are ineligible to enroll at their previous institutions.

ADMISSIONS/MATRICULATION PROCEDURES

First-Time Applicants
Prior to enrollment at the Health Science Center, prospective students must complete the following Admission Enrollment Procedures. All applications and supporting documents submitted become the property of the Health Science Center and are not returned to the student.

1. Applicant must submit the official admission application through the designated application service. Those may include the following:
   - Allied Health Centralized Application Service (AHCAS (https://ahcas.liaisoncas.com/applicant-ux/#/login))
   - American Medical College Application Service (AMCAS (https://www.aamc.org/students/applying/amcas))
   - Apply Texas

   • An undergraduate applicant may file, and each institution requiring an applicant to submit additional information through the Texas Education Code 51.762 and 51.763 (http://www.statutes.legis.state.tx.us/Docs/ED/htm/ED.51.htm).
   • The form used to apply to a general academic teaching institution may be filed in either electronic or printed format. An institution of higher education is not prohibited from requiring an applicant to submit additional information within a reasonable time after the institution has received an application using a form adopted under this section.

   • A common application form for undergraduate and graduate applicants to particular programs is available electronically through Apply Texas (http://www.applytexas.org).

   • In addition to other information considered appropriate by the board, the board by rule shall require each institution to collect information regarding gender, ethnicity, and date
of birth as part of the application process and report this information to the board.

- Associated American Dental Schools Application Service (AADSAS)
  - Non-Texas residents applying to Dental School may apply through AADSAS (https://portal.aadsasweb.org), although they may also apply to TMDSAS (https://www.utsystem.edu/tmdsas) if they prefer.
- Centralized Application Service for Physician Assistants (CASPA)
  - CASPA (https://portal.caspaonline.org) is an online application used to apply for the Physician Assistant Program at the Health Science Center.
  - All prospective applicants for this program must apply online using this application service.
- Embark
  - Embark (http://gsbs.uthscsa.edu/prospective_students/gsbs-application) is an online application for all applicants for the Graduate School of Biomedical Sciences for the exception of the M.D./Ph.D. program.
  - The joint M.D./Ph.D. degree program available to Medical students uses the American Medical College Application Service (https://www.aamc.org/students/applying/amcas) (AMCAS) to apply for this program. Please refer to the website listed above for AMCAS.
- Dental Hygiene Centralized Application Service (DHCAS (http://www.adea.org/dhcas.aspx))
- Institutional Paper Applications. Due to the nature and requirements of some programs, paper applications or electronic applications in the form of Word or PDF documents may be used. Programs that use alternate applications include the following, although it may not be all inclusive:
  - International Dentist Education Program (http://dental.uthscsa.edu/admissions/IDEP.php)
  - Advanced Standing medical students with previously-earned professional degrees at accredited dental schools continuing studies in Oral and Maxillofacial Surgery
  - Advanced Dental certificate programs
  - Certain non-degree seeking students, including Nursing and Graduate School of Biomedical Sciences students
  - Emergency Medical Technicians, either Basic or Paramedic level, participating in the program through the City of San Antonio
- Nursing Centralized Application Service (NCAS)
  - Applicants for the baccalaureate, Master’s & DNP program for Nursing School should apply use the online application provided by NCAS (http://www.nursingcas.org).
  - Any Ph.D. applicants for nursing should apply online using Embark (See above.)
- Occupational Therapist Centralized Application service (OTCAS (https://otcas.liaisoncas.com/applicant-ux/#/login)
- Physical Therapy Centralized Application Service (PTCAS (http://www.ptcas.org/home.aspx))
- Texas Medical and Dental Schools Application Service (TMDSAS (https://www.tmdsas.com))
  - This service is utilized by applicants to medical and dental schools in Texas. All applicants to the School of Medicine must apply through TMDSAS (http://www.tmdsas.com).
  - Applicants to the M.D./Ph.D. program must apply through AMCAS (https://www.aamc.org/students/applying/amcas) as well.
  - All applicants to the School of Dentistry who are Texas residents must also apply through TMDSAS. Non-Texas residents interested in applying to the School of Dentistry may apply through AADSAS if they prefer.

2. Schools may require a supplemental application with application fee which will include Texas Core, Residency Questions, requests for social security numbers, and other identifying information.

3. Applicant must submit official copies of transcripts from all previously attended institutions of higher education to include Technical and Vocational Schools and Community Colleges.
   a. Credit will be considered and may be awarded for courses deemed by the Office of the University Registrar to be equivalent in course content and learning outcomes to other similar bona fide college level courses.
   b. If a previous degree was awarded, the degree must be posted on the Official Transcript.
   c. If transcripts are obtained from international institutions of higher education, they must be evaluated by an approved Foreign Credentialing Agency. Acceptable agencies include current members of National Association of Credential Evaluation Services (http://www.naces.org) (NACES).

4. Students entering college for the first time, also referred to as first-time-in-college, must submit official transcripts from the last high school attended with date of completion, GED, or an original copy of their home school transcript.

5. Applicants are required to provide authorization for a security background and sanction check for evaluation by their respective dean’s office. Applicants are responsible for the cost incurred in obtaining criminal background checks per instructions from their dean’s offices.

6. All students must possess continuous comprehensive health insurance while enrolled at the Health Science Center, including international students.

7. Excess Hours: Texas Education Code and rules of The Texas Higher Education Coordinating Board dictate the maximum number of hours students may complete in pursuit of certain degrees. Undergraduate students may not exceed specific totals of combined semester credit hours based on their degree program, as well as their first year of admission to a college or university, in pursuit of their first baccalaureate degree. Graduate students may not exceed 130.0 semester credit hours in pursuit of a Ph.D. In both cases, the penalty for exceeding the maximum number of hours is assessment of non-Texas resident tuition without options for tuition waivers. See the Excess Hours Policy (p. 20) in this Catalog for details.

8. All accepted applicants intending to enroll are required to have completed immunizations requirements. Each student must submit written and signed documentation by a licensed healthcare provider (M.D., D.O., N.P., or PA) verifying their vaccination status. These are assessed and verified by the Student Health Clinic.

9. All applicants will have holds placed on their records prohibiting registration. These holds exist to ensure the institution’s receipt of critical documentation, including, but not limited to, updated immunization records, final and official transcripts from previous institutions attended, criminal background checks, and proof of citizenship. Holds may only be removed by designated officials in the various offices ultimately responsible for tracking and verifying the documentation sought. Documentation may need to be updated
10. As of September 1, 2017, HB 1508 requires educational programs that prepare individuals for issuance of an initial occupational license to notify each applicant and enrollee of certain information related to their occupational license. Applicants to the Health Science Center with a criminal history could potentially be ineligible for a license, and other certain guidelines and restrictions. Additional information pertaining to HB 1508 may be found at: http://www.legislative.state.tx.us/tlodocs/8SR/billtext/pdf/HB01508F.pdf

Deferred Admission
Applicants who are offered admission may be granted deferred admission to the subsequent term by the admissions office under the school to which they applied. Under deferred admission, applicants must re-apply to the new term using the same application service and method, re-pay any application fees, and submit updated supporting documentation. Under no circumstances will applications be transferred electronically from one term to the next, nor will new, added or increased application fees be waived. Applicants under deferred admission who fail to re-apply using the same application service and re-pay application fees will not be matriculated into the new term.

Declined Admission
Applicants who are offered admission but decline the offer must re-apply to any subsequent term using the same application service and method, re-pay any application fees, and submit updated supporting documentation. This applies regardless of whether the applicant applies to the same program, or a different one. Under no circumstances will applications be transferred electronically from one term to the next, nor will new, added or increased application fees be waived. Applicants who decline an initial offer of admission must re-apply using the appropriate application service and re-pay any application fees in order to be matriculated into the new term, provided an offer of admission is extended under the new application.

Erroneous Applications
Applicants who apply to a program and/or particular term in error must re-apply to the intended program and/or term at their expense and in accordance with specified deadlines. Under no circumstances will applications be transferred electronically from one term to the next, nor will new, added or increased application fees be waived. Supporting documentation must be resubmitted with the new application. Deadlines will not be extended to accommodate the corrected application. In cases where deadlines cannot be met or have passed, applicants must apply to the next available term.

Re-Admission
It is the student’s responsibility to re-apply for admission to the Health Science Center after an interruption of enrollment of more than one year prior to enrolling for classes. Interruption may occur as a result of inactivity and/or failure to register, administrative or voluntary leaves of absence, withdrawal, or dismissal.

In general, an application for readmission by a student who has previously withdrawn or has been dismissed is subject to the same requirements, procedures, and acceptance considerations that apply to first-time applicants. Students will be asked to submit a current, updated criminal background check to their designated student affairs dean or other designated official at their own cost. Students may also be asked to submit new official transcripts from any colleges or universities attended since the time of the previous enrollment as well as provide other recent documents required by the schools. Individuals who have completed the first year of a program may be readmitted, at the discretion of the faculty, on a space-available basis.

If the student does not return until one year has elapsed regardless of the reason, he or she will have to re-apply for admission with the burden of proof for eligibility resting on the student. He or she will be competing for admission against students who have formally applied and been granted a bona fide leave of absence by the respective school prior to their absence; and/or all new applicants for admission.

Re-Admission Appeal: Should a student be denied re-admission under this policy, the student may appeal her/his denial of re-admission following the written re-admit appeal policy established by the affected school.

When students interrupt their enrollment at the Health Science Center and return later to complete their plan of study, major curriculum changes may have occurred, affecting the student’s ability to graduate with requisite competencies/knowledge currently implied by the degree or certificate sought.

1. If there have been no curricular changes in the program during the non-enrollment period, the student may remain under the student’s original degree plan. School of Medicine and School of Dentistry only recognize official Leave of Absence as interruptions to enrollment. Dismissals and withdraws, requested or required, would be treated under re-admission. Students that are re-admitted must start the curriculum with the class they are entering with, not the class they were in previously. The School of Medicine or School of Dentistry will determine the conditions under which a student may return to school from an official Leave of Absence.

2. When a student re-enrolls after an interruption of enrollment of more than one year (4 consecutive terms) but less than six years, a conference shall be held between the student and the student’s Program Faculty Advisor or other designated official to determine whether changes in the student’s degree plan are necessary to acquire the competencies and knowledge required by the current degree or certificate:
   a. If course content has changed during the period of non-enrollment, even though course titles have not, the student may be required to repeat such courses, if essential new competencies/knowledge must be acquired.
   b. If program curricula have changed during the period of non-enrollment, the student may be required to follow the current degree plan.
   c. If the student re-enrolls in a different program than the one in which the student was previously enrolled, the student’s new degree plan shall be governed by the degree or certificate requirements in the newly selected program that are in effect at the time of re-enrollment.
   d. It is recommended that, prior to the conference with the student; the person responsible for this function should obtain a copy of the student’s current transcript and current degree audit record to determine the remaining courses that are necessary to omit the requirements of the original degree plan.

Although the university is under no obligation to readmit any student who has withdrawn or has been dismissed, a student may seek readmission for further study by petitioning the school. Whether readmission will be
considered at the entry level or an advanced level will be determined on an individual basis and by the school.

Re-Admission – Military Service

In accordance with Section 51.844 of the Texas Education Code (http://www.statutes.legis.state.tx.us/Docs/ED/htm/ED.51.htm), a student who withdraws from the university in order to perform active military service will be readmitted for any semester or summer session that begins within a year after the student’s release from active service. The student is not required to apply for readmission or pay an application fee, but he or she must be eligible to register for classes the semester or summer session for which readmission is requested. This policy applies to students who withdraw for service with the United States armed forces or a Texas national guard; however, it does not apply to students who withdraw solely to perform one or more training exercises as members of a Texas national guard.

For information on educational opportunities for veterans, please contact the Veterans Education Counselors Program (https://www.tvc.texas.gov/contact).

International Students

Prospective students who are not U.S. citizens and do not have permanent resident status are subject to the same requirements, procedures, and acceptance considerations that apply to first-time applicants. Additionally, students will have to meet specified requirements by the Office of International Services (http://www.uthscsa.edu/ois) (OIS).

Only degree-seeking applicants are eligible to apply for a student visa status.

Applicants from countries where English is not the native language are required to submit scores on the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). Please refer to each school's admissions requirements for minimum TOEFL scores.

Scores on TOEFL and IELTS tests taken more than two years prior to the date of application are not acceptable.

• Countries exempted from the TOEFL and/or IELTS requirement:
  American Samoa, Australia, Bahamas, Barbados, Belize, Canada (except Quebec), Cayman Islands, Dominica, Federated States of Micronesia, Grenada, Guam, Guyana, Jamaica, Liberia, New Zealand, United Kingdom (all), Trinidad-Tobago, and Virgin Islands.

Transcripts from all previous educational experiences (from secondary schools through any post-secondary educational institutions) that are published in a language other than English language must be accompanied with an attachment which translates verbatim the wording on each document into the English language. Transcripts must be evaluated by an approved current NACES member (http://www.naces.org/members.htm) or AACRAO.

Joint Admissions

Joint Admission is a special alliance between a community college/university and the Health Science Center. This partnership is developed to make the student’s transition to the university as smooth as possible. As a community college/university student, joint admission participants can access many of the resources available to university students and receive some university perks before the student actually enrolls at that university.

The benefits to establishing joint admission process are to:

• Often reduce or have no university application fee
• Academic advising from both campuses to ensure the most effective and efficient path to graduation
• Often a university ID; this card will also give the student access to the university library
• Often a free university email account that can be used anywhere
• Easy transferability of courses between the two schools enabling the student to be awarded a degree after leaving the community college/university.

Students must complete an Intent To Enroll Form when they are ready to transfer from the community college/university and provide official transcripts from the community college/university to the Office of the University Registrar.

Non-Degree Seeking Admissions

An individual who wishes to enroll in courses offered by the School without entering a certificate or degree program must apply for admission as a non-degree student. In general, a non-degree seeking student will have an academic background similar to those ordinarily admitted to the School as a first time student; course prerequisites and minimum grade point averages (GPA) are generally consistent with the published admissions criteria for each School. Permission to enroll as a non-degree seeking student may be granted by the Dean, Associate Dean, or Department Chair and will be enrolled only if space is available. Currently enrolled students have priority for courses.

Students seeking non-degree student status must:

• Communicate their desire to enroll as a non-degree seeking student to the school.
• Students must receive approval by the school.
• A student may register as a non-degree student for a maximum of four semesters. Exceptions to this rule will be decided by the school.
• Students who seek future enrollment in a Certificate or Degree Program may enroll for a maximum of 12 semester credit hours.
• Non-degree seeking students who seek future enrollment in a school's program may transfer course hours taken as a non-degree student with the approval of the appropriate Director.
• Non-degree seeking students who wish to transfer courses to degree-seeking programs at a later date must do so within five years of completing the non-degree coursework.
• It is the student's responsibility to determine if the course is transferable to her or his school.

Students must go through the appropriate non-degree seeking student admissions process, please communicate directly with the school. Students do not have to register consecutively for classes each semester but may skip a semester without penalty.

Course grading policies and standards for non-degree status students are the same as those for regular students. All grades received as a non-degree status student will be included on the student's transcript and used for computing the cumulative GPA if the student is subsequently admitted to a certificate or degree program.
Admissions - Children of Public Servants

An applicant for undergraduate admission is entitled to automatic admission if the applicant meets any minimum admissions requirements established by this institution and is a child of certain public servants who were killed or sustained a fatal injury in the line of duty.

ADDITIONAL ADMISSIONS CONSIDERATIONS

Student admissions committees throughout the university may consider several elements or personal characteristics in the selection of students. The specific elements to be used and the weight applied to each element in the selection of an applicant are the prerogative of the admissions committee of each school or program. It has been clearly documented and widely understood that admissions processes emphasizing performance of applicants on standardized test scores and grade point averages alone do not necessarily result in the admission of a diverse student body. Whenever desired by the schools, candidates will be interviewed prior to making admissions decisions. Elements that may be included in consideration of applicants are:

- Applicant’s goals for future (written personal statement or at interview)
- Awards and honors for academic achievement
- Awards and honors of distinction for humanitarian service
- Awards and honors for public speaking and communication skills
- Race and ethnicity
- Bilingual language ability
- Commitment/desire to serve in a medically underserved region of the state following graduation (written personal statement or at interview)
- Educational attainment of the applicant’s family
- Employment history, especially as it occurred simultaneously with undergraduate academic preparation
- Extracurricular activities
- GPA and standard test scores
- Hometown or county of residence is from medically underserved and/or health professional shortage areas, with particular emphasis on South Texas
- Leadership potential
- Personal interview
- Prior experience in providing health care related services
- Prior military service with training and experience in health-care related area
- Public/community service volunteer activities
- Reference letters or recommendations
- Research accomplishments
- Socioeconomic history (educationally and/or economically disadvantaged)
- Standardized entrance exams (e.g. Graduate Record Examination [GRE]; Medical College Admissions Test [MCAT]; Dental Admissions Test [DAT])
- Successful experience in overcoming adverse personal, family, or life conditions/experiences
- Successful graduation from another nationally accredited health-care-related curriculum. (For example, a respiratory therapist might apply for admission to medical school; or a dental hygienist for admission to dental school, or a surgical technician might apply for admission to nursing school; an Emergency Medical Technician may potentially apply to Physician’s Assistant program, medical school, nursing school, etc.)
- Texas residency status, including permanent residency status in some programs
- Volunteer activities in healthcare-related areas and/or the community

EQUAL OPPORTUNITY

Admission to and participation in the educational programs and activities of the Health Science Center shall be open to all qualified individuals regardless of race, color, religion, sex, national origin or disability. Preference should be given to Texas residents over non-residents.

To the extent provided by applicable law, no person shall be excluded from participation in, denied the benefits of, or be subject to discrimination under, any program, or activity sponsored or conducted by The University of Texas System or any of its institutions on the basis of race, color, national origin, religion, sex, age, veteran status, or disability.

Race and Ethnicity in Admissions

As authorized by The University of Texas System Board of Regents, race and ethnicity have been added to the pool of non-cognitive factors considered for admissions decision to Health Science Center academic programs. As state law requires one-year notification of changes to admissions criteria prior to their use in admission decision, the addition was effective beginning with academic year 2006-2007.

DIVERSITY STATEMENT

The Health Science Center’s educational programs are designed to meet the health work force needs of Texas. Health Science Center admissions criteria are aligned to foster the graduation of health professionals who will be responsive to the needs of the increasingly diverse population of the state. The Health Science Center is committed to the importance of diversity in the recruitment and education of future health professionals and holds that diversity enhances the delivery of care and service to communities across a broad range of racial and ethnic groups, and promotes efforts to reduce health disparities among these groups. A diverse student body raises the cultural competence of all health professional students. Diversity is not solely limited to race and ethnicity, but it also encompasses talents, life skills and special attributes. This commitment to diversity is expressed through the identification, recruitment, selection, matriculation and graduation of qualified health professions students from different racial, ethnic and/or disadvantaged backgrounds. Our goals are for the Health Science Center student body to mirror the growing diversity of the Texas population and the promotion of understanding, among our students and graduates, of the multiple and varied needs of the individuals and communities that comprise the population of Texas.

ACADEMIC TEXAS CORE CURRICULUM

In compliance with Texas Education Code 61.821 - 61.83 (http://www.statutes.legis.state.tx.us/Docs/ED/htm/ED.61.htm), all undergraduate degree programs at the Health Science Center (i.e., health professions, dental hygiene and nursing) require completion of the Health Science Center Core Curriculum.

The Texas Core Curriculum describes the general education requirements that all first time college graduates must complete as part of their degree program. The core curriculum may be completed at another institution prior to enrolling at the Health Science Center. Upon initial transfer or
subsequent re-admission after one full year or more of non-attendance at the Health Science Center is considered core curriculum complete by another Texas public institution of higher education as noted on the student’s official transcript from that institution, they are considered core curriculum complete that the Health Science Center.

If the Texas Core Curriculum is completed at another college or university, the Health Science Center will consider this complete if completion of the core is documented on that transcript.

Any student concurrently enrolled at more than one institution of higher education must follow the core curriculum of the institution in which they are classified as a degree-seeking student. Accordingly all degree-seeking students at the Health Science Center must meet the core curriculum requirement set forth by the Health Science Center to be considered core complete. Students who complete core curriculum of another institution while enrolled at the Health Science Center as a degree-seeking student are, regardless of their status with the other institution, only considered core complete if their coursework satisfies all core curriculum requirements at the Health Science Center.

The Texas Core Curriculum includes courses such as history, government, fine arts, the sciences, communication and mathematics. It is recommended that the Texas Core Curriculum be completed prior to entry into the Health Science Center; however select courses may be taken during the first semester.

For detailed information about the Academic Core Curriculum please reference the Academic Texas Core Curriculum Policy (p. 33) in this Catalog.

**STANDARDIZED TESTS**

An applicant’s performance on a standardized test may not be used in the admissions or competitive scholarship process for a graduate or professional program as the sole criterion for consideration of the applicant or as the primary criterion to end consideration of the applicant. If an applicant’s performance on a standardized test is used in the admissions or competitive scholarship process, the applicant’s performance must also be used to compare the applicant’s test score with those of other applicants from similar socioeconomic backgrounds to the extent that those backgrounds can be properly determined and identified based on information provided in the institution’s admissions or competitive scholarship process. This does not apply to a standardized test used to measure the English language proficiency of a student who is a graduate of a foreign institution of higher education.

The university may not assign a specific weight to any one factor being considered in the admissions or competitive scholarship process for a graduate or professional program.

In addition to current university requirements for admission, Schools may require that applicants have either:

1. Successfully completed the curriculum requirements for the recommended or advanced high school program or its equivalent
2. Satisfied ACT’s College Readiness Benchmarks on the ACT assessment applicable to the applicant or earned on the SAT assessment a score of at least 1,500 out of 2,400 or the equivalent.

The above requirement may be satisfied if the applicant’s official high school transcript or diploma states that the applicant completed the portion of the recommended or advanced curriculum or its equivalent that was available to the applicant, but was unable to complete the remainder of the curriculum solely because courses necessary to complete the remainder were unavailable to the applicant at the appropriate times in the applicant’s high school career as a result of course scheduling, lack of enrollment capacity, or another cause not within the applicant’s control.

**TEXAS SUCCESS INITIATIVE**

The Texas Success Initiative (http://www.thecb.state.tx.us/index.cfm?objectid=DB386300-1C05-11E8-BC500050560100A9) (TSI) was instituted to ensure that students enrolled in Texas public colleges and universities possess the necessary academic skills to perform effectively in college. As a transfer student, applicants to the undergraduate programs must submit qualifying scores on tests acceptable to the THECB if they were so required when entering their undergraduate institutions. Established cutoff scores on the SAT, ACT or TAKS tests qualify students for exemption. Proof of these scores must be submitted in place of scores on qualifying tests mentioned earlier. Alternative test scores accepted by the THECB may be provided as proof of compliance with academic skills regulations. Applicants from out-of-state colleges or private colleges who have never been required to take a qualifying test must take the test prior to acceptance for admission. Additional criteria exist to fulfill the TSI requirement. Non-resident students should contact the college for additional information. Request that test scores be sent to the Office of the University Registrar at the Health Science Center directly from the testing agency.

**TRANSFER OF CREDIT**

Transfer credit will be determined by the staff of the Health Science Center at the Office of the University Registrar (http://students.uthscsa.edu/registrar) in conjunction with the schools, on a course-by-course basis from official transcripts submitted in the competitive admissions process. Course content will be determined by catalog course description or course syllabus. Course acceptability is guided by these criteria:

1. Courses can be considered for transfer if:
   a. They are acceptable as credit for a bachelor’s degree at a regionally accredited institution.
   b. Students may request transfer credit from another institution regardless of its regional accreditation status. These requests are submitted in writing for evaluation by the Office of the University Registrar and the academic department.
   c. Course content is at or above the level of courses specified in the Health Science Center requirements for admission.
2. Courses intended for use in a vocational, technical or occupational program normally do not transfer; general courses within this type of program may transfer.
3. Credit on the transcript must appear in semester hours or credits that may be converted to semester hours.
4. Credit by examination courses will not be transferred.
5. Equivalency of course work is determined by content found in catalog course descriptions or syllabi of courses. In case of doubt, departmental faculty will determine equivalency. The final determination is left to the director of the Department.
6. As a general policy, course work with a passing grade may be transferred, but the applicant must keep in mind that admission to the program is on a competitive basis and grades of “F” are calculated into the grade point average.
Exceptions to this law include:

7. Course hours will be evaluated on a course-by-course basis, but will be transferred as a block of hours and the grades do not calculate into the GPA for the program.

8. Credit will be given for UT System online consortium correspondence courses on a select basis.

For detailed information about the transfer credit please reference the Credit Hours Policy (p. 35).

EXCESS SEMESTER CREDIT HOURS

The State of Texas does not provide funds to the Health Science Center for semester credit hours (SCH) earned by resident Texas students (in-state) that exceed certain limits. To offset this loss, the Health Science Center, as permitted by law, will charge tuition at the higher, nonresident (out-of-state) rate to all Texas resident students that exceed these limits.

For detailed information about Excess Hours please reference the Excess Hours Policy (p. 20).

SIX-DROP RULE

Under Section 51.907 of the Texas Education Code (http://www.statutes.legis.state.tx.us/Docs/ED/htm/ED.51.htm#51907) and 19 Texas Administrative Code § 4.10 (http://bit.ly/1PmFmSy), "an institution of higher education may not permit a student to drop more than six courses, including any course a transfer student has dropped at another institution of higher education." This statute was enacted by the State of Texas in spring 2007 and applies to students who enroll in a public institution of higher education as first-time freshmen in fall 2007 or later. Any course that a student drops is counted toward the six-course limit if:

1. The student was able to drop the course without receiving a grade or incurring an academic penalty.
2. The student's transcript indicates or will indicate that the student was enrolled in the course.
3. The student is not dropping the course in order to withdraw from the institution.

Courses taken at a private institution or out-of-state do not count toward the six-course limit. Some exemptions for good cause could allow a student to drop a course without having it counted toward this limit, but it is the responsibility of the student to establish that good cause. Contact the Office of the University Registrar for more information before you drop a course.

A Health Science Center undergraduate student affected by this statute that has attended or plans to attend another institution of higher education should become familiar with that institution's policies on dropping courses.

THREE-PEAT RULE

Undergraduate hours earned in a course taken by a student more than twice (known as the "Three-Peat" rule) exceeds the limits set by state law and may not be reported by the Health Science Center for state funding.

Exceptions to this law include:

2. Courses that may be repeated for credit because they involve different or more advanced content each time they are taken.
3. Independent study courses.
4. Special topics and seminar courses.

ACADEMIC FRESH START

The Texas Education Code, Section 51.931 (http://www.statutes.legis.state.tx.us/Docs/ED/htm/ED.51.htm), entitled "Academic Fresh Start" allows a person who is a resident of Texas to apply for undergraduate admission without consideration of previous coursework. Specifically, coursework completed 10 or more years prior to the date of anticipated enrollment will not be considered in the admission decision, nor in evaluation of excess hours under Texas Education Code §54.068 and §61.0595. This allows the student to begin a new course of study without consideration of or penalty for previous college coursework.

An applicant who has earned a baccalaureate degree under Academic Fresh Start and applies for admission to a postgraduate or professional program will be evaluated on only the grade point average of the coursework completed for that baccalaureate degree, as well as other criteria stated herein for admission to the postgraduate or professional program.

1. This is an all-or-nothing option. Students are not able to pick and choose which courses to ignore and which courses to count. This option allows for omission of the student's academic record only. If the student chooses the "Academic Fresh Start" option, the student does not receive any credit for any courses taken 10 or more years prior to re-enrollment. This means that:
   a. Courses taken previously cannot be used to fulfill new prerequisite requirements.
   b. Courses taken previously cannot be counted towards a new degree.
   c. Courses taken previously will not be counted in the student's GPA calculation.

2. The student must still complete the usual admissions process, including providing information on all colleges or universities previously attended and provide official copies of transcripts from all schools attended.

3. Once the "Right to an Academic Fresh Start" provision has been claimed, and the student has enrolled, the provision cannot be reversed.

4. To request an Academic Fresh Start Form an applicant must submit a complete Admissions Application, a written petition for an Academic Fresh Start and all official transcripts to the Office of the University Registrar.

STUDENT HEALTH INSURANCE

Students who matriculate at The Health Science Center are required to obtain medical health insurance coverage, whether privately or through the institution. Confirmation of health insurance coverage is required at the time of registration each term in My Student Center via students.uthscsa.edu. Additional information regarding health insurance coverage can be obtained from the website (http://students.uthscsa.edu/studentlife/2013/03/health-insurance) of the Office of Student Life (http://students.uthscsa.edu/studentlife/2013/03/health-insurance).

IMMUNIZATIONS

Immunizations are required of all students. The Board of Regents may require immunizations against additional diseases for some students. Further immunizations may be required by the Board of Regents in times
of emergency or epidemic. For a list of required immunizations, reference the Immunizations section of this catalog (http://catalog.uthscsa.edu/generalinformation/institutionalpolicies/immunizations).

RESIDENCY CLASSIFICATION FOR TUITION PURPOSES
Texas law classifies each person who applies for admission to a Texas public college or university as a resident of Texas, a non-resident, or a foreign (international) student. The Office of the University Registrar will classify the student based on the Core Residency Questions. How students are classified is important because it determines whether they pay non-resident tuition rates or in-state rates, which are lower.

Independent students who have resided and established domicile in the state of Texas for 12 consecutive months may be eligible to be considered residents of Texas for tuition purposes. Dependent students may base residency on a parent, court-appointed legal guardian or spouse. The parent, court-appointed legal guardian or spouse, however, must have resided and established domicile in Texas for 12 consecutive months. Additionally, if utilizing the spousal option, the student must document that the marriage occurred on or before 12 consecutive months before the census date. When applying for a Residency Reclassification, please submit a completed and signed questionnaire, and required supporting documents as listed on the questionnaire. If you are basing residency on a parent, court-appointed legal guardian or spouse, students must submit documents pertaining to the person for which residency is based on. Failure to submit supporting documents will result in a delayed decision.

Individuals who hold eligible visas may also qualify for in-state tuition.

A student who believes the initial classification to be in error, or who believes that residency for tuition purposes has been established subsequent to the initial classification, may request a review by submitting a Residency Questionnaire (https://students.uthscsa.edu/registrar/2013/03/forms) to the Office of the University Registrar. The decision of the Registrar is final and is communicated to the student in writing as soon as possible following a decision.

RESIDENCY RECLASSIFICATIONS
Reclassification as a Non-resident
Persons who have been classified as residents of Texas will be reclassified as non-resident students whenever they report, or there is found to exist, circumstances indicating a change in legal residence to another state. If students who have been classified as residents of Texas are found to have been erroneously classified as a result of an omission or falsification, they will be reclassified as non-residents and will be required to pay the difference between resident and non-resident fees for the semesters for which they were erroneously classified.

Reclassification as a Resident
Persons classified as non-residents upon first enrollment may request reclassification. In order to have residence status reconsidered, students must complete the Core Residency Questions and submit it with the appropriate documentation regarding residency to the Office of the University Registrar prior to the first day of class of the semester for which the change is sought. After the form and documentation are reviewed, students are notified in writing by way of an electronic letter of the residence decision.

If students have been erroneously classified as non-residents and subsequently prove to the satisfaction of the University’s residency official that they should have been classified as resident students, they will be reclassified as residents of Texas and will be entitled to a refund of the difference between the resident and non-resident fees for the semesters in which they were erroneously classified.

All students are expected to pay the tuition assessed on or before the payment date for each semester as established by the University. All Residency Questionnaires and forms verifying non-resident tuition exemption status must be submitted prior to the first day of class of the term for which the change is sought. To prevent any delay in enrollment, students are encouraged to submit all forms at least two weeks before registration.

Non-compliance with Institutional Rules and Regulations.
If students have obtained residency classification by virtue of deliberate concealment of facts or misrepresentation of facts, they may be required to repay the difference in tuition rates and may be subject to appropriate disciplinary action, in accordance with the rules and regulations of the Health Science Center. Each situation will be evaluated by administrators of the Office of the University Registrar as well as The Vice President for Academic, Faculty and Student Affairs.

REVIEW OF ADMISSIONS
Each school’s admissions committee or equivalent group of officials must regularly review their respective admissions requirements for compliance and good practices within higher education. In accordance with accrediting standards under the Southern Association of Colleges and Schools Commission on Colleges and University of Texas System Regents Rules, admissions practices must be consistent and carried out based on best practices. Consistency includes holding all applicants to the same admissions requirements.

Excess Credit Hours Policy
UNIVERSITY DECISION
The Texas Education Code §54.068 and §61.0595, as well as Texas Administrative Code Chapter 13, Subchapter F, §13.102 through §13.108, indicates that the State of Texas will not provide funds to state institutions of higher education for excess semester credit hours earned by an undergraduate resident student. The Texas Education Code §54.012 specifies that doctoral students who exceed the critical number of semester credit hours are also not funded by the state. Therefore, it is the University’s decision to charge non-resident tuition to any undergraduate or graduate student who has excess credit hours regardless of the student’s residency status, appointment, fellowship or any other circumstance that would normally entitle the student to resident tuition rates, including tuition waivers.

PERTINENT INFORMATION
Undergraduate Students
If a student began undergraduate course work before Fall 1999, the student is exempt from excess hours legislation.

Undergraduate students who enrolled in Fall 2006 or subsequent semesters are considered to be in excess hours if their total attempted semester credit hours exceed more than 30 credit hours beyond the required number of hours for the completion of the degree program in which they are enrolled.

The following types of credit hours do not count towards the limit:
• Remedial or developmental courses
• Workforce education courses
• Dual credit courses (college level courses taken during high school), as well as Advanced Placement credits
• Hours for special topics and seminar courses
• Independent study courses
• Hours for courses that involve different or more advanced content each time they are taken, including but not limited to, individual music lessons, Workforce Education Courses, Manual Special Topics courses (when the topic changes), theater practicum, music performance, ensembles, certain physical education and kinesiology courses, and studio art
• Continuing Education Courses that must be repeated to retain professional certification
• Courses earned as part of a student's progression towards and completion of a previous bachelor's degree
• Hours earned by students at private or out-of-state institutions
• Hours earned by examination or similar method by which credit is earned without registering for a course for which tuition is charged

Graduate Students
Hours taken at the Health Science Center (other than those taken for the M.D./D.D.S. professional programs) that exceed the 99-hour or 130-hour limits at the doctoral level may not be reported by the Health Science Center for state funding. As such, all doctoral students exceeding this limit will be assessed the non-resident tuition rate regardless of their residency status or any appointment, fellowship, or other circumstance that would normally entitle them to resident tuition rates.

DEFINITION OF TERMS

Attempted Credit Hours
For doctoral students, attempted credit hour calculation includes all enrolled courses at the Health Science Center regardless of grade assignment. For example, if a student takes a course and receives a grade of "incomplete" or "unsatisfactory," the hours for that course count towards excess hours limits. If a student takes a course and drops it after the Census Date, the hours for that course will also be applied towards excess hour limits. If a student is registering for a dissertation course and gets a grade of "IP" (In Progress) at the end of the term, the hours associated with that course will also be counted towards excess hour limits.

Critical Number
For doctoral students in nursing the number is 99 credit hours; for other basic sciences, the number is 130 credit hours.

Semester Credit Hours
A semester credit hour is defined as nominally one hour of classroom time per week per semester. Thus a class which is held for three hours a week for one semester is a three semester-hour course. However, although most of the courses taken at university are of three semester hours, some may involve more contact time, as in the case of laboratory courses, and some less time, as may be the case in some seminar courses. Such courses carry the three semester-hour weight, but regardless of actual class time, should be considered as comprising one-fifth of the student's course load.

30-Hour Rule
Undergraduate students initially enrolled as undergraduates in an institution of higher education beginning the 2006 Fall semester and subsequent semesters may not exceed 30 hours more than the minimum number required for the completion of their degree program.

45-Hour Rule
Undergraduate students initially enrolling as undergraduate in an institution of higher education beginning the 1999 Fall semester, but no later than the 2006 Summer semester, may not exceed 45 hours more than the minimum number required for completion of their degree program.

99-Hour Rule
Graduate students enrolled in the Nursing Ph.D. program may not exceed total of 99 attempted hours (including earned) in pursuit of the degree. Hours beyond that critical number are unfunded by the state, and so the Health Science Center assesses non-resident tuition to recuperate the loss of funds and costs associated with educating these unfunded students.

130-Hour Rule
Graduate students enrolled in other Ph.D. programs, including those under The Graduate School of Biomedical Sciences, may not exceed total of 130 attempted hours (including earned) in pursuit of the degree. This includes dissertation and research hours, among others. Hours beyond that critical number are unfunded by the state, and so the Health Science Center assesses non-resident tuition to recuperate the loss of funds and costs associated with educating these unfunded students.

UNIVERSITY PROCEDURE

Students' Responsibilities
• Undergraduate students must submit all official transcripts from previously attended institutions as excess hours are not based on Health Science Center data but on statewide data. (Doctoral students must also provide transcripts although inter-institutional hours are not calculated. Rather, this is to meet other rules and regulations. See the Admissions Policy for more information.)
• To avoid being charged nonresident tuition, resident students must be aware of the number of credit hours required for their degree and avoid taking more than the maximum hours above the program requirement.
• Students should seek advisement from their respective department so that they may be assisted in creating a plan for degree completion, considering the impact of previous coursework, current semester credit hours attempted, and total allowable semester credit hours for attainment of the degree.
• If receiving Financial Aid, the student should seek advisement from The Office of Veteran Services and Financial Aid, as they have a separate hour limit for funded hours.

Students are encouraged to use the table below to identify the maximum number of hours that they can take based on the hours required for their degree. The hours required for the degree can be found in the appropriate program section of this Catalog. Students should use the 45-hour enrollment cap (second column) if they first attended college between fall 1999 and summer 2006. Students should use the 30-hour enrollment cap (third column) if they first attended college beginning
fall 2006. Graduate students should refer to the fourth and fifth columns based on their program of study.

### Undergraduate

<table>
<thead>
<tr>
<th>Hours Required for Degree</th>
<th>45 Hr. Enrollment Cap</th>
<th>30 Hr. Enrollment Cap</th>
<th>99 Hr. Enrollment Cap</th>
<th>130 Hr. Enrollment Cap</th>
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### Ph.D.

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<th>99 Hr. Enrollment Cap</th>
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### Excess Hours Appeals

Students have the right to appeal decisions that place them under penalty of non-Texas resident tuition rates following review of their coursework. Students must request an appeal in writing to the Registrar; a paper letter or email is sufficient. The Registrar or Designee will conduct a course-by-course review of the student’s college coursework from all institutions previously attended and/or those taken at the Health Science Center and seek opportunities for reconsideration of credit counted towards excess hours based only on those exemptions noted above.

The decision of the Registrar or Designee is final. Documentation related to the appeal, including the original request, will be scanned into the student’s electronic record.

### Financial Aid

#### FEDERAL FINANCIAL ASSISTANCE

All students applying for admission into Department of Education approved degree-seeking programs at UT Health San Antonio are eligible to apply for federal financial assistance if they meet the eligibility requirements as determined by the Department of Education. To apply for all forms of federal or state financial aid a student must complete the Free Application for Federal Student Aid (FAFSA) (https://fafsa.ed.gov) on an annual basis. Students wishing to apply for institutional scholarships must also complete an online scholarship application through My Student Center (https://students.uthscsa.edu) (after submission of the FAFSA for the new aid year). Texas residents that cannot complete a FAFSA, due to an ineligible citizenship status, may apply the TASFA (http://www.collegeforalltexas.com/index.cfm?objectid=D465D848-EA0F-C0EA-5209BC8C9262877) application for consideration of scholarships and/or other state aid.

The Veteran Services and Financial Aid (VSFA) website (http://students.uthscsa.edu/financialaid) is maintained and updated as needed to provide students with the most current information available and students are strongly encouraged to use it as their first source of information concerning VSFA policy and procedures.

UT Health San Antonio may require additional information to complete the application based on an evaluation of your FAFSA data. Students are encouraged to take seriously all correspondence requests for information from VSFA, as all documents are required by federal regulation to process your application. Students should only send documents requested by VSFA. Once all documents are received and processed, the application is considered complete and is ready for awarding. Awards for financial assistance are not made until mid-April for semesters beginning in the subsequent fall term, and may span the entire award year (fall, spring, and summer) as determined by the student's expected graduation term.

UT Health San Antonio awards students, who are ready for packaging, favorable aid such as grants/scholarships or work study funds on a first-come, first-served basis, using the date your FAFSA was electronically signed. Students are encouraged to apply as soon as possible each aid year and complete all required steps (http://students.uthscsa.edu/financialaid/2013/02/how-to-apply).

Students awarded Federal Direct Loans will be required to complete an Entrance Counseling Session (https://studentloans.gov/myDirectLoan/index.action) prior to receiving a disbursement from this program. Disbursement of financial aid occurs for students on or around 10 days prior to the first class day if it falls on a business day. Emergency loans will NOT be given in advance of a scheduled disbursement date as this is considered an advance of federal funds and is barred by regulation. Students that receive Federal Direct Loans will be required to complete an online Exit Counseling Session (https://studentloans.gov/myDirectLoan/counselingInstructions.action?counselingType=exit). Students that fail to complete it within 30 days of the initial notice will be emailed a link to the electronic Exit Counseling Guide (a copy can be found here (http://catalog.uthscsa.edu/generalinformation/financialaid/loan-exit-counseling-1_2018.pdf)).

#### SELECTIVE SERVICE REQUIREMENT

Students subject to selective service registration will be required to provide proof of registration, or proof the student is exempt from selective service registration, in order to be eligible to apply for federal or state financial aid and/or to receive exemptions and waivers from the State of Texas.

#### COMPETITIVE ACADEMIC SCHOLARSHIPS

UT Health San Antonio awards competitive scholarships on a school-by-school basis as funds allow. All matriculating students are eligible to apply for competitive scholarships by submitting the online scholarship application (http://students.uthscsa.edu/financialaid/2013/04/scholarships). Each school will develop specific guidelines and criteria for awarding the scholarships. The competitive scholarship must be recommended by the Loan and Scholarship Committee of each school. Applicants should contact the appropriate school within UT Health San Antonio for information about deadlines.

Non-resident students who are awarded a competitive scholarship of at least $1,000 for the academic year are entitled to pay the tuition and fees required of Texas residents for the duration of the scholarship or a period not to exceed one academic year. The total number of students at UT Health San Antonio paying resident tuition under the competitive scholarship criteria must not exceed five percent of the total number of enrolled students at UT Health San Antonio during the prior fall semester. Students must re-apply each academic year and complete the steps above - funds are not automatically renewable.
AIR FORCE RESERVE OFFICERS TRAINING CORPS PROGRAM

By agreement with UT Health San Antonio, a student may obtain a commission as an officer in the U.S. Air Force upon completion of a baccalaureate or master's degree at UT Health San Antonio and completion of the Air Force Reserve Officers Training Corps (ROTC) program at The University of Texas at San Antonio (UTSA) (http://www.utsa.edu). Scholarships are available on a competitive basis from UTSA and these scholarships provide tuition and fee assistance, a book allotment, and monthly subsistence allowance. UTSA program coordinators will notify the Bursar's office when a scholarship has been awarded and the amount received will be factored into the students aid package here at UT Health San Antonio.

In addition to courses, students are required to attend a weekly leadership laboratory and physical training. For more information contact Air Force ROTC at UTSA at 210-458-4624 or e-mail at afrotc@utsa.edu.

FEDERAL or STATE COLLEGE WORK-STUDY EMPLOYMENT

UT Health San Antonio has limited amounts of College Work-Study funds to award each year. Funds are awarded on a first-come, first-served basis to students who indicate they are "interested in Work-Study" on their FAFSA and have financial need. Students that are not initially awarded can request to be placed on the wait-list and will be awarded as funds become available. Candidates for State work study funds must also be classified as Texas residents. Students will earn these funds by working no more than 20 hours per week and can find potential employers by reviewing open positions on the VSFA website (http://students.uthscsa.edu/financialaid/2013/03/federal-work-study).

COST OF ATTENDANCE

The Cost of Attendance (COA) is determined by the Veteran Services & Financial Aid (http://students.uthscsa.edu/financialaid) office each year and is based on the estimated costs a student will incur for each semester. Included in the COA are estimates for actual tuition and fee costs, a book allowance, a room and board allowance including health insurance, transportation, and personal/miscellaneous expenses. Students required to purchase a laptop for entry into their program of choice will receive an allowance for the bundle with the least cost. Students purchasing more expensive bundles will need to follow the budget adjustment process to request an increase to their COA. Students not required to purchase a laptop from UT Health San Antonio, that wish to include the one-time cost of a computer/tablet, can submit an adjustment request form along with proof of purchase by the student here (http://students.uthscsa.edu/financialaid/2013/02/financial-aid-forms). See information online (http://students.uthscsa.edu/financialaid/2013/02/cost-of-attendance) for the components of the various Cost of Attendance budgets at UT Health San Antonio.

Tuition and Fees Policy

UNIVERSITY DECISION

Tuition and fees are collected by an institution of higher education from students attending the university as permitted by the Texas Education Code. However, the determination to increase the fees and charges are made by the University administration and The University of Texas System Board of Regents. Students are assessed tuition and fees based on the location and programs in which they are enrolled and the degrees being pursued. Students enrolled in programs and pursing degrees that are a partnership arrangement with another university may be assessed the tuition and fees approved by the partnership.

PERTINENT INFORMATION

By statutory provision, the Board of Regents has the authority and power to prescribe, regulate and otherwise engage in and control tuition and registration fees as well as non-resident fee exemptions. No student may attend class, laboratory, or clinic until the student is officially registered with tuition and fees (or an installment payment) paid. Registration is not complete until tuition and fees are paid by the last business day, before first class day.

When and if a student misses the official publicized tuition and fees payment deadline (known as Census Day as defined by the Texas Education Code), the student shall be removed from enrollment by the Office of the University Registrar as approved by the Deans’ Council on 10-20-2009.

UNIVERSITY PROCEDURE

1. Typically, at the first Board meeting of the calendar year, a schedule of tuition and fee rates will be presented to the Board of Regents for approval for the upcoming school year.

2. The annual Tuition and Fee schedule, once approved by the Board of Regents will be utilized by UT Health San Antonio as appropriate when registering students for the new school year.

3. The Tuition and Fee Schedule will remain in effect for the entire school year unless modified and approved by the Board of Regents.

4. Below is a definition and explanation of current existing tuition and fee items in effect at UT Health San Antonio:

Procedural Charges

Application Fee

UT Health San Antonio assesses a nonrefundable application fee that is required of all applicants. The amount to be charged depends upon the school the student wishes to apply for admission; information is available on the individual school web sites (http://uthscsa.edu/academics).

Auditing Charge

All auditors of courses must submit an Audit Course Form, with appropriate approvals, to the Office of the University Registrar. Students registered at UT Health San Antonio may with the approval of the instructor and Department Chair of the department in which the course is offered, audit courses by paying an auditing charge of $25 per course if students are not officially enrolled in UT Health San Antonio courses and $5.00 if they are officially enrolled. The audit charge is nonrefundable.

Credit Card Expense Charge

A charge of 2.9% of balances paid is assessed to all students electing to use a credit card for payment.

Duplicate Diploma Charge

A charge of $50 will be assessed for each request for a duplicate diploma. If the student requests a rush order a charge of $125 will be assessed.
Returned Check Charge
A fee authorized by Section 54.504 of the Texas Education Code, charged for checks returned due to non-sufficient funds.

Installment Plan Fee
A $15.00 fee will be charged per semester to students who elect to pay their tuition and fees on an installment basis.

Tuition and Mandatory Fees

Tuition
Pursuant to Subchapter B, Chapter 54, Texas Education Code (http://www.statutes.legis.state.tx.us/Docs/ED/htm/ED.54.htm), each student who registers at UT Health San Antonio is required to pay tuition according to the number of semester credit hours for which registration is completed and according to his or her residence classification.

1. Statutory Tuition – A tuition charge authorized under Texas Education Code (TEC) §54.051 in an amount determined by the Texas Legislature for resident or nonresident students. Currently, the university rate is set at $50 per semester credit hour (SCH) for resident students. Higher rates are charged for nonresident students.

2. Designated Tuition – As established by the local governing board for effective operation of the institution. TEC §54.0513 authorizes institutions other than public community colleges to impose on any graduate or undergraduate, resident or nonresident student, an additional tuition charge that the governing board of the institution considers necessary for the effective operation of the institution. The rate varies by institution.

3. Designated Tuition (Deregulated) – A tuition charge authorized under TEC §54.008 for graduate programs. Institutions can set tuition rates at least twice that of undergraduate tuition, and can set different rates among programs.

Online Instructional Fee
Students who reside outside of Texas and are enrolled in the Dental Hygiene distance education (online) course/program are assessed $250.00 per credit hour with no additional tuition or fees. Texas residents enrolled in a distance learning/online course pay regular in-state tuition and fees.

Computer and Technology Fee
A School of Nursing student who registers at UT Health San Antonio is required to pay a $15.00 per semester credit hour charge; all other students who register at UT Health San Antonio are required to pay a $10.00 per semester credit hour charge. This fee is to defray costs associated with managing, maintaining, upgrading, and general operations of the University’s technology infrastructure, electronic resources and online services.

Library Fee
A charge of $300.00 per academic year is assessed to all students enrolled at UT Health San Antonio to defray costs of providing library services.

Student Assistance Fee
A charge of $75.00 per semester is assessed for School of Health Professions, with the exception of Emergency Health Sciences programs.

Medical Services Fee
A charge of $193.20 per academic year is assessed to all students for medical services provided at the student health center and student counseling center.

Health Insurance Fee
Varies each year. Insurance is currently provided by Blue Cross Blue Shield.

Student Service Fee
A fee authorized by Section 54.503 of the Texas Education Code, charged for the provision of services that directly involve or benefit students. Services may include recreational activities, health and hospital services, medical services, intramural and intercollegiate athletics, artists and lecture series, cultural entertainment series, debating and oratorical activities, student publications, student government, the student fee advisory committee, student transportation services and other student activities and services specifically authorized and approved by the governing board of the institution of higher education. An annual compulsory student services fee of $220.00 is charged to all students.

Lab Fee
A fee authorized by Section 54.501 of the Texas Education Code, the fee varies by course.

Parking Fee
A fee authorized by Section 54.505 of the Texas Education Code, charged for parking of one’s motor vehicle on campus property. This is a varied fee.

Student ID Card Fee
A fee authorized by Section 54.504 of the Texas Education Code, charged a student the first time attending UT Health San Antonio is registered to defray the cost of preparing student ID cards. An additional fee for the replacement of lost cards will be charged.

Fitness Center Fee
A fee authorized by Section 54.515 of the Texas Education Code, charged to defray expenses associated with Fitness Center operations or this fee helps to defray the cost of operating and maintain a student fitness center. An annual $480.00 is assessed to students.

 Liability Insurance Fee
A fee charged to students to cover the cost of malpractice insurance for students who are involved in direct patient care. The fee varies by school.

Installment Late Fee
A $10.00 fee charged for late payment of an installment payment due.

Transcript Fee
A fee charged for transcripts and charges to produce a copy of student’s account.

Exceptions to Mandatory Fees
There may be limited exceptions for the removal of mandatory fees:

1. for those students who are in a joint degree program covered through an institutional memorandum of understanding between the two (or more institutions) and who pay the mandatory fees to their home institution;

2. for those students who are in an exclusive online degree program.

In both instances, students in the above categories must seek the support from their associate dean for academic affairs at their school, who would then submit requests for approval to the Vice President of Academic Faculty and Student Affairs, requesting an exemption from these fees.
ADDITIONAL COLLEGE, COURSE FEES AND INCIDENTAL CHARGES

Graduation Fee
A fee authorized by Section 54.504 of the Texas Education Code, charged to defray the expense of preparing student's diploma and services related to graduation. A $100.00 is assessed for the first degree and an additional $50.00 is assessed for additional degrees earned.

EQUIPMENT AND MATERIALS FEE

Implantation Materials Fee
A $500.00 fee assessed for second year School of Dentistry students.

Technology Fee
A $350.00 fee is assessed to School of Dentistry and Medicine students and $10.00 an hour for School of Health Professions and Graduate School of Biomedical Sciences students.

Laptop Fee
Fee varies by School and it is assessed by the TechZone (http://ims.uthscsa.edu/computer_networking/computer_store.aspx).

Clinic Usage
A $1,320.00 fee is assessed to School of Dentistry students. Advanced Dental students in Orthodontics are assessed $14,100.00 annually.

Human Material Fee
A $1,326 fee for School of Dentistry and Medicine 1st year students and $884.00 for the School of Health Professions. The course also requires a $30.00 lab fee.

Microscope Fee
A $48.00 fee is assessed to 1st and 2nd year School of Medicine students and School of Dentistry students.

Equipment Leasing Fee
A $2,400.00 fee is assessed for Dental Professionals students and a $400.00 fee per term for Dental Hygiene Undergraduate students.

SUPPORT FEES

Educational Software Fee
A fee assessed to School of Medicine students to cover the cost of new software and annual maintenance costs associated with new technology and Ultrasound equipment.

Undergraduate Academic Advising Fee
A $204.00 fee is assessed to undergraduate School of Nursing students to provide services to assist struggling students and support student leadership development.

Education Support Fee
A fee assessed to School of Health Professions students to cover the cost of materials, equipment leased, course fees and practicum fees. The fee varies depending on the program. Students enrolled in the Emergency Health Science Program are not assessed this fee.

Program Clinic Fee
A $100.00 fee is assessed to all School of Health Professions students with the exception of Emergency Health Science and Physical Therapy programs.

Program Examination Fee
A $145.00 fee is assessed to Occupational Therapy students. The fee is to support the purchase of exams required by accreditation standards.

Student Assessment Fee
A $100.00 fee is assessed to Physician Assistant Studies students. The fee is to assist in the monitoring of the student's progress.

PAYMENT POLICY

It is the policy of UT Health San Antonio that all expenses, including tuition and fees, are due and are to be paid by each student at the time of registration unless specifically exempted. Student may be registered and attend classes without payment at the time of registration, if:

• The student is sponsored by his/her employer who will make payments directly to the university, and the employer has furnished a letter to the Office of the Bursar accepting unconditional liability for all charges not paid by the student, regardless of whether or not the student completes the courses or achieves a minimum grade for the course

• The student has a scholarship, grant, or loan covering 100 percent of all costs that will be paid directly to the university by a sponsor who has notified the Office of the Bursar in advance, in writing of the student's eligibility and acceptance; or

• The student is eligible for a deferred payment of tuition through one of the university's approved payment plans

• If you qualify for state or federal education benefits earned through military service, and payment to the school is delayed, you may be eligible for a 60-day deferment of tuition and fees to avoid late fees and/or being dropped from classes. Complete and submit the deferment request form (https://www.tvc.texas.gov/wp-content/uploads/2017/09/HB-846-Form-Fillable.pdf) to the Bursar’s Office.

Registration is made final only upon satisfaction of all charges.

BILLING

Tuition and fee bills for registration during early registration, regular registration, and late registration are available online and are not mailed.

When the student is billed, he/she is given a definite payment date for the amount due. If payment is not received, the student will receive a delinquent payment fee and/or his/her records, transcripts, and registration may be blocked until full payment is received.

REFUNDS

Fee Refund Schedule (Complete Withdrawal)
Both graduate and undergraduate students who withdraw from this institution during a fall or spring semester will receive a refund of a percentage of tuition and refundable fees based on the schedule below. Medical and dental students who withdraw in the fall of the academic year will receive a 100% refund of tuition and fees for the second half of the year (spring) and a refund for the first half of the year (fall) based upon the schedule below.

Students receiving Financial Aid through Title IV programs may have this refund returned to the federal government in accordance with the provisions in the Higher Education Act of 1965, as amended in 1998.

Fall, Spring, or Summer term of 10 weeks or longer:

<table>
<thead>
<tr>
<th>Time of Withdrawing</th>
<th>Amount of Refund of Tuition and Returnable Fees and Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to the first class day</td>
<td>100% of applicable tuition and returnable fees and charges</td>
</tr>
</tbody>
</table>
Refund for Courses Dropped

100% of tuition and fees will be refunded for courses dropped prior to the census day of the term provided the student remains enrolled in the institution for that term and has remaining eligibility for the funds after the reduced tuition/fee costs have been factored into the student's Cost of Attendance by the Veteran Services and Financial Aid office for Title IV aid recipients. No refunds will be made for courses dropped following the census day of the term unless the student withdraws from the university. If the student withdraws from the university, the Fee Refund Schedule will be used to determine refund eligibility. Students receiving assistance through Title IV programs will have their tuition and fee allowances re-evaluated by the Veteran Services and Financial Aid office to determine the impact of the dropped course(s). Students who drop below half-time before census day, after receiving their Title IV program funds, will have their tuition/fee refund returned to the federal/state programs.

The student must follow all university procedures to officially drop a course or withdraw from school.

A student must complete a Student Clearance Form to receive a refund.

The date of receipt of the form in the Office of the University Registrar will be used to determine eligibility for refund and/or final approval of classes dropped.

Once classes begin there will be no refunds for fitness fee, insurance fees, student I.D. cards, installment plan fees, parking or other fees specifically designated as non-refundable.

### TITLE IV REFUND

This refund policy applies to any financial aid recipient who withdraws from school.

As an institution participating in programs under Title IV of the Higher Education Act (http://www.ed.gov/policy/highered/leg/hea98), UT Health San Antonio is required to return a portion of the Title IV financial aid a student received, back to the Title IV program from where the funds were originally disbursed, as a result of the student's withdrawal from school. The portion returned is referred to as the Title IV Refund (http://students.uthscsa.edu/financialaid/2013/03/financial-aid-withdrawals-repayments-refunds) and is calculated by determining the portion of unearned aid a student has received. The types of Title IV funds included in this calculation are student loans from the William D. Ford Direct Loan Program, Perkins loans, Pell grants, or Supplemental Educational Opportunity Grants (SEOG).

### RETURN OF FEDERAL FUNDS DUE TO WITHDRAWALS OR LEAVE OF ABSENCE

Students withdrawing from UT Health San Antonio prior to completing 60% of the semester, and who have received Federal Title IV aid are required to return the unearned portion of funds received. Funds used to pay tuition and fees are returned by UT Health San Antonio to the appropriate federal fund as calculated by VSFA. This is NOT a refund of tuition and fees to the student. State law describes the amount of tuition and fees that a student is responsible for paying regardless of when they withdrew. Refer to the “Fee Refund Schedule” below for details on tuition and fee refunds for drops and withdrawals. Students who are granted a leave of absence over 180 days are considered withdrawn as it relates to financial aid. Funds returned due to a Title IV Refund Calculation will be returned in the order specified by the Department of Education, following the priority shown below:

1. Unsubsidized Federal Direct Loan
2. Subsidized Federal Direct Loan
3. Federal PLUS Loan
4. Federal Pell
5. Federal SEOG

Satisfactory Academic Progress Standards require a student to progress in their degree program in order to receive Title IV assistance. Withdrawals, or a leave of absence from school, may be considered a violation of this standard. Any student not meeting the standards who subsequently returns to school may need to file an appeal with the VSFA office to explain, in writing, the circumstances of the withdrawal before eligibility for federal or state aid can be reinstated. Please see the VSFA website for full details (http://students.uthscsa.edu/financialaid/2013/05/are-you-meeting-sap-requirements).

### INSTALLMENT PAYMENTS

Payment of tuition and fees in installments may be an option for students. A fee of $15 is assessed for handling installment payments of tuition and fees, and a $10 late fee is assessed for each late payment.

Penalties for failing to make installments on time include:

1. Being barred from class until payment is made;
2. Withholding of credit if payment is not made by the end of the semester, with the university adjusting its records to reflect the student's failure to have properly enrolled.
3. Bar against readmission and withholding of grades, degree, and official transcript, and/or
4. Other remedies authorized by law.

**Professional Schools**

Students in Professional-level programs (School of Dentistry D.D.S. and School of Medicine M.D.) pay tuition and fees based upon the curriculum for the academic year.

The following alternatives are available:

**Medical and Dental Students**

<table>
<thead>
<tr>
<th>Option 1</th>
<th>Registered for x Graduate Hours</th>
<th>Maximum Hours Per Week Permitted to Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>at Registration</td>
<td></td>
</tr>
<tr>
<td>50%</td>
<td>at the end of winter break</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Option 2 (for students without Financial Aid only)</th>
<th>Registered for x Graduate Hours</th>
<th>Maximum Hours Per Week Permitted to Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>25%</td>
<td>at Registration</td>
<td></td>
</tr>
<tr>
<td>25%</td>
<td>1 month later</td>
<td></td>
</tr>
<tr>
<td>25%</td>
<td>1 week at midpoint of the academic year</td>
<td></td>
</tr>
<tr>
<td>25%</td>
<td>30 days after the 3rd installment</td>
<td></td>
</tr>
</tbody>
</table>

**Graduate and Undergraduate Students**

Both Undergraduate and Graduate students (Graduate School of Biomedical Sciences, School of Health Professions and School of Nursing) pay tuition and fees based upon the hours for which they register each semester.

- One-third payment of tuition and fees in advance of the beginning of the semester (registration) and
- One-third payment 30 days after first payment and
- One-third payment 30 days after second payment.

A 60-day tuition loan is available for the full amount. An origination fee of 1.25% of the amount of the loan is assessed to cover the cost related to providing the loan.

**TUITION SET ASIDE FOR FINANCIAL ASSISTANCE**

Students are informed of the amount of their tuition set aside for financial assistance as mandated by the Texas Education Code, Section 56.014. The information will be included on their tuition bill available online prominently displaying the notice regarding the specific amount that is required to be set aside by the institution. For more information please visit the VSFA web site here (https://students.uthscsa.edu/financialaid/2013/06/designated-tuition-set-aside).

**TUITION FOR REPEATED OR EXCESS CREDIT HOURS**

**Undergraduate Students**

Authorized by Section 54.014 of the Texas Education Code, an undergraduate student who pays resident tuition rates will be charged nonresident tuition rates, and deemed ineligible for tuition waivers or exemptions, if the student has accumulated the greater of either

1. 170 or more semester credit hours without earning a baccalaureate degree, or
2. More than 30 semester credit hours than is required for completion of the baccalaureate degree. In addition, a higher tuition rate may be charged if a student enrolls again in a course that is the same or substantively identical to a course that the student previously completed.

**Graduate Students**

Authorized by Section 54.012 of the Texas Education Code, a student who has earned 100 or more semester hours of credit at the doctoral level (130 semester credit hours for biomedical sciences) is subject to the nonresident tuition rate, even if the student is a Texas resident or holds an appointment that would normally entitle the holder to pay resident tuition. In addition, a higher tuition rate may be charged if a student enrolls again in a course that is the same or substantively identical to a course that the student previously completed.

More information on excess hours may be found under the Excess Hours Policy (p. 20).

**TUITION FOR REPEATED COURSES**

A student whose hours may no longer be submitted for formula funding because it is the same or substantially similar to a course that the student previously attempted for two or more times at UT Health San Antonio may be charged a higher tuition rate per semester credit hour or nonresident tuition rates.

**WAIVER OF NON-RESIDENT TUITION**

Nonresidents who may qualify to pay tuition at the resident rate without regard to the length of residence in Texas include:

1. Military personnel assigned to duty in Texas and their spouse and children.
2. Faculty employed at least one-half time on a regular monthly basis at a state institution of higher learning and their spouse and children.
3. Teaching or research assistants employed at least one-half time in a position which is related to the assistant’s degree program under academic regulations and their spouse and children.
4. A student who holds a competitive academic scholarship for at least $1,000, which was awarded in competition with Texas students by a scholarship committee, recognized by the university and The Texas Higher Education Coordinating Board. The total number of students at an institution paying resident tuition under this provision for a particular semester may not exceed five percent (5%) of the total number of students registered at the institution for the fall semester of the preceding year.
5. Veterans eligible for benefits under the Post-9/11 Veterans Educational Assistance Act of 2008 (38 U.S.C. Section 3301 et seq.) or any other federal law authorizing educational benefits for veterans. Veterans, or their eligible dependents, must reside in Texas while enrolled at the institution and must submit a Letter of Intent to Establish Texas residency with the Veteran Services and Financial Aid office.

A non-resident student who believes he/she is qualified for one of the tuition waivers must provide documentation to the Veteran Services and Financial Aid office no later than the census date for the term in order for the application of the waiver to be considered for that term. Full details of all applicable Texas
waivers can be found at www.collegeforalltexans.com (http://www.collegeforalltexans.com) under "Types of Financial Aid."

EXEMPTION FROM TUITION AND FEES

The Texas Higher Education Coordinating Board prescribes certain cases in which students can be exempt from tuition and/or certain fees. It is the student's responsibility to initiate the action of applying for an exemption and providing satisfactory evidence that all conditions required for the exemption have been met. Until such time as the exemption is granted, a student will be required to pay all tuition and fees from his or her own funds. Students may be required to meet UT Health San Antonio's Satisfactory Academic Progress Standards in order to receive an exemption/waiver. Please review the web site for the Texas Higher Education Coordinating Board (http://www.collegeforalltexans.com/apps/financialaid/tofa.cfm?Kind=W) for a complete list of exemptions/waivers and their requirements however, please be advised that not all exemptions/waivers are available at UTHSCSA. Please visit the Veteran Services and Financial Aid website for information concerning exemptions/waivers (https://students.uthscsa.edu/financialaid/2019/02/tuition-exemptions-and-waivers) applicable to UTHSCSA.

Students who might be eligible for an exemption must apply for the exemption with the Veteran Services and Financial Aid office before the census day of the semester in which they plan to use the exemption provision. Hazlewood recipients must complete all required documents and submit to VSFA before the last class day of the term as published in UT Health San Antonio academic calendar and medical and dental professional students must complete by the last class day in the fall session.

Adopted Students Formerly in Foster or other Residential Care

<table>
<thead>
<tr>
<th>Who is eligible</th>
<th>Certain adopted students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements</td>
<td>To be eligible, a student must:</td>
</tr>
<tr>
<td></td>
<td>have been adopted</td>
</tr>
<tr>
<td></td>
<td>have been the subject of an adoption assistance agreement under Subchapter D, Chapter 162, Family Code</td>
</tr>
<tr>
<td>Tuition and fees exempted</td>
<td>Tuition and fees</td>
</tr>
</tbody>
</table>

Blind and Deaf Students

<table>
<thead>
<tr>
<th>Who is eligible</th>
<th>Texas residents who are deaf or blind</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements</td>
<td>Certification of deafness/blindness for the Texas Commission for the Deaf &amp; Hearing Impaired/Texas Commission for the Blind. Form must be provided to the Office of Veteran Services and Financial Aid.</td>
</tr>
<tr>
<td>Tuition and fees exempted</td>
<td>Tuition and fees</td>
</tr>
</tbody>
</table>

Children of Disabled/Deceased Texas Firefighter and Law Enforcement Officers

<table>
<thead>
<tr>
<th>Who is eligible</th>
<th>Children under 21 of full-paid or volunteer firefighter; full-paid or volunteer municipal, county, or state peace officers including a game warden; or custodial officer of the Department of Criminal Justice who died or became disabled in the line of duty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements</td>
<td>Certification from parent's workplace must be provided to the Office of Veteran Services and Financial Aid</td>
</tr>
<tr>
<td>Tuition and fees exempted</td>
<td>Tuition and fees</td>
</tr>
</tbody>
</table>

Exemption not to exceed 120 undergraduate credit hours or any semester begun after age 26.

Children of Prisoners of War or Persons Missing in Action

<table>
<thead>
<tr>
<th>Who is eligible</th>
<th>Child (under 21) or a dependent (under 25) who receives majority of support from parent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements</td>
<td>Parent must be a resident of Texas on active duty and be classified by the Department of Defense as a Prisoner of War or Missing in Action at the time of registration, and certification must be provided to the Office of Veteran Services and Financial Aid</td>
</tr>
<tr>
<td>Tuition and fees exempted</td>
<td>Tuition and fees</td>
</tr>
</tbody>
</table>

Children of Professional Nursing Program Faculty

<table>
<thead>
<tr>
<th>Who is eligible</th>
<th>A child of a faculty member or teaching assistant in a nursing program at UTHSCSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements</td>
<td>A resident of Texas age 25 or younger. Not have been granted a baccalaureate degree</td>
</tr>
<tr>
<td></td>
<td>Be enrolled at the same institution that employs the parent/faculty member</td>
</tr>
<tr>
<td></td>
<td>Has not previously received an exemption under this section for 10 semesters or summer sessions</td>
</tr>
<tr>
<td></td>
<td>If the parent is employed on less than a full-time basis, the value of the exemption is to be prorated in accordance with parent’s employment load. Under no circumstances, however, is the exemption to be for an amount less than 25% of the student's tuition.</td>
</tr>
<tr>
<td>Tuition and fees exempted</td>
<td>Tuition only</td>
</tr>
</tbody>
</table>
**Disabled Peace Officers**

**Who is eligible**
A permanently disabled peace officer as a result of an injury suffered during the performance of a duty as a peace officer of this state or a political subdivision of this state and is unable to continue employment as a peace officer because of the disability.

**Requirements**
To receive an exemption, the student must:
- be a Texas resident
- be taking undergraduate work
- not exceed 12 semesters in the undergraduate program

**Tuition and fees exempted**
Tuition only for no more than 12 semesters/sessions

**Firefighter Enrolled in Fire Science Courses**

**Who is eligible**
Students employed as a paid firefighter by a political subdivision of the State of Texas or Active member of volunteer fire department who holds an accredited advanced certification (or the equivalent), under the State Firemen's and Fire Marshal's Association of Texas volunteer certification program, or a Phase V (Firefighter II) certification (or the equivalent) under the Texas Commission of Fire Protection's voluntary certification program under Section 419.071, Govt. Code.

Enroll in courses offered as part of a Fire Science Curriculum.

**Requirements**
Submit complete Texas Fireman Exemption Request from the VSFA website (http://students.uthscsa.edu/financialaid/) on an annual basis.

**Tuition and fees exempted**
Tuition and lab fees only.

**Hazlewood Act (Texas ex-servicemen and Children of Texas Veterans) - rules subject to change by the Texas Veterans Commission (https://www.tvc.texas.gov/education/hazlewood-act) and/or Texas Legislature.**

**Who is eligible**
A veteran may qualify for benefits under the Hazlewood Act if he or she:

- entered the service at a location in this State, declared this State as the person's home of record in the manner provided by the applicable military or other service, or would have been determined to be a resident of this State at the time of entry into the armed forces of the United States

- was a nurse, member of the Women's Army Auxiliary Corps, member of the Women's Auxiliary Volunteer Emergency Service, and all honorably discharged members of the armed forces of the United States who served during World War II except those who were discharged from service because they were over the age of 38 or because of a personal request on the part of the person that he or she be discharged from service

- was honorably discharged from the armed forces of the United States and who served during the national emergency which began on June 27, 1950, and which is referred to as the Korean War

- was honorably discharged from the armed forces of the United States after serving on active military duty, excluding training, for more than 180 days and who served a portion of their active duty during:
  - a. the Cold War which began on the date of the termination of the national emergency cited above;
  - b. the Vietnam era which began on December 21, 1961, and ended on May 7, 1975;
  - c. the Grenada and Lebanon era which began on August 24, 1982, and ended on July 31, 1984;
  - d. the Panama era which began on December 20, 1989, and ended on January 21, 1990;
  - e. the Persian Gulf War which began on August 2, 1990, and ends on the date thereafter prescribed by Presidential proclamation or September 1, 1997, whichever occurs first;
  - f. the national emergency by reason of certain terrorist attacks that began on September 11, 2001, or any future national emergency declared in accordance with federal law;
  - g. received an honorable discharge, a general discharge under honorable conditions, or an honorable release from active duty

- has attempted fewer than 150 credit hours of college courses since the fall of 1995 using the Hazlewood exemption
Tuition and Fees Policy

has exhausted eligibility for federal veterans’ or survivor’s educational benefits during the semester/term in which they are enrolled

is not in default on any education loans made or guaranteed by the Federal Government or the State of Texas, and

is enrolled in an eligible program of study. An institution may not grant a Hazlewood Act exemption for continuing education courses for which they do not receive state tax support, unless the institution’s board has specifically granted them permission to do so.

B. The exemptions provided for in Subsection (A) of this section also apply to the spouse or children of members of the armed forces of the United States who:

are or were killed in action
die or died while in service
are missing in action
whose death is documented to be directly caused by illness or injury connected with service in the armed forces of the United States who becomes totally disabled for the purposes of employability as defined by the Department of Veterans Affairs.

Subsection (B) provisions also apply to the spouse or children of members of the Texas National Guard and the Texas Air National Guard killed since January 1, 1946, while on active duty either in the service of their state or the United States.

However, to qualify for this exemption (B) the spouse or child must be classified as a resident on the date of the spouse’s or child’s registration.

C. A person who becomes eligible for an exemption provided by Subsection (A) may waive any unused portion of their eligibility to their child. To be eligible to receive an exemption under this subsection, the child must:

be classified as a resident when the child enrolls,

make satisfactory academic progress in accordance with the policy of the institution’s financial aid department, except for the requirement to enroll in a minimum course load, and,

be 25 years of age or younger on the first day of the semester or term for which the exemption is claimed (a child who suffered from a severe illness or debilitating condition that affected their ability to use the exemption, may be granted additional time to use the exemption corresponding to the time the child was unable to use the exemption because of the illness or condition).

Requirements

A student seeking to use the exemption for the first time must:

complete an application in the Office of Veteran Services and Financial Aid prior to the official last class day of the term for which the exemption is requested or the fall term for a professional medical or dental student.

(for veterans who have served on or after 09/11/2001) submit a letter from veterans administration attesting to her or his exhaustion of federal veterans educational benefits that may be used only for the payment of tuition and fees, and meet other program requirements as in the past.

A student continuing to use the exemption must:

sign a release form, and

meet other program requirements as in the past.

Tuition and fees exempted

Tuition and fees other than service fees.

No student may use Hazlewood for more than 150 credit hours.

Surviving Spouse and Dependent Children of Certain Deceased Public Servants (employees)

Who is eligible

Surviving spouse or minor child of certain police, security, or emergency personnel killed in the line of duty.

Requirements

To be eligible, a student must:

be the eligible surviving spouse or child of an individual listed in Government Code, Sec. 615.003

be a full-time student
The University of Texas Health Science Center at San Antonio

<table>
<thead>
<tr>
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</tr>
<tr>
<td>Cost of textbooks.</td>
<td>All tuition and fees</td>
</tr>
</tbody>
</table>

**Nursing Preceptors and Dependents**

**Who is eligible**

Preceptors to professional nursing education programs and their eligible children.

**Requirements**

An individual’s eligibility for the program ends when the person has previously received exemptions under this program for 10 semesters or summer sessions at any institution or institutions of higher education, or received a baccalaureate degree. For the purposes of this program, a summer session that is less than nine weeks in duration is considered one-half of a summer session.

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</table>

**Students in Foster Care**

**Who is eligible**

Students who are under the conservatorship of the Department of Family and Protective Services:

- on the day preceding the student’s 18th birthday;
- on or after the day of the student’s 14th birthday if the student was also eligible for adoption on or after that day,
- on the day the student graduated from high school or received equivalent of a high school diploma, or
- on the day preceding the date the student is adopted (if on or after September 1, 2009), or
- on the day preceding the date permanent managing conservatorship of the student is awarded to a person other than the students’ parent (if on or after September 1, 2009).

And enrolls as an undergraduate no later than:

- the student’s 25th birthday.

**Effective with the Spring 2010 semester:**

applies to all persons under the conservatorship of the Department of Family Protective Services during an academic term in which the student was enrolled in a dual credit course or other course for which a high school student may earn joint high school and college credit can be used by eligible students while in high school to avoid the tuition and fee costs of dual enrollment courses.

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</table>

**Valedictorian of an Accredited High School**

**Who is eligible**

Highest-ranking graduate of an accredited Texas high school.

**Requirements**

Certification from high school must be provided to the Office of Veteran Services and Financial Aid Office

<table>
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<td>Tuition during first two regular (Fall and Spring) semesters immediately following their graduation may be granted for any one of the first four regular semesters immediately following their high school graduation with the permission of the Health Science Center President</td>
</tr>
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<td></td>
</tr>
<tr>
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General Academic Policies

General Academic Policies are in place to provide students with direction as they navigate their educational careers at the Health Science Center (http://www.uthscsa.edu). These policies are consistent with federal law, rules and regulations under The Texas Higher Education Coordinating Board (http://www.thecb.state.tx.us) and University of Texas System (http://www.utsystem.edu), and accreditation standards under the Southern Association of Colleges and Schools Commission on Colleges (http://www.saccoc.org). General academic policies apply to all applicants and students regardless of program, school, or certificate or degree sought. They also apply to all non-degree students.

Each school and many programs have established policies specific to their students that must be adhered to in addition to general academic policies. These policies can be found under each school's section in this Catalog.

Academic Continuity in Emergency Situations

Authority of a program curriculum’s resides with the appropriately constituted curriculum committees within a school or department, in accordance with the Department and/School's bylaws. Recommendations for curricular changes or modifications that have been approved by a curriculum committee are then routed through the Department/School’s governance process, before then being communicated to the Vice President for Academic, Faculty and Student Affairs and the University Registrar. Recommendations for changes or modifications to a program's admissions process are to follow the appropriate comparable governance review and approval process through the Department/School and then to the Vice President for Academic, Faculty and Student Affairs and the University Registrar.

In emergency situations of a prolonged duration, substantive changes to the admissions process and substantive changes to the curriculum should be reviewed by local admissions and/or curriculum committees and follow the subsequent approval processes. Examples include, but are not limited to:

1. Changes that modify the course requirements to enable students to graduate as scheduled, or as closely as possible to the planned graduation date. Curriculum committees may substitute demonstration of the fulfillment of student learning outcomes and/or competency standards, as applicable. In many cases, professional programs are following guidance sanctioned by their professional accrediting bodies.
2. Changes in the length of the course terms, and if necessary academic terms, to enable students to fulfill remaining curricular requirements that can only be accomplished through in-person instruction and clinical education.
3. Changes in grading from a graded scale (A through F) to a pass/fail option for a specific set of courses or for a specific academic term, because of the exceptional limitations applicable to the emergency.
4. Changes in admissions processes regarding the acceptability of course work completed during emergency situations that alter an institution's awarding of grades vs. pass/fail options.

All substantive changes enacted by programs to accommodate academic continuity in light of a prolonged emergency must be approved by the Dean of the School and submitted to the Vice President for Academic, Faculty and Student Affairs and the University Registrar, for final review prior to adoption. Documentation submitted to the Dean, Vice President for Academic, Faculty and Student Affairs, and the University Registrar must include the dates of the curriculum committee meetings, and other shared governance meetings as appropriate, and executive summaries of the actions taken.

Such changes must articulate the time frame for which the changes are in effect, as the information will need to be communicate in official University records, such as the Catalog and/or program handbooks.

Academic Probation and Suspension Policy

UNIVERSITY POLICY

It is the policy of the Health Science Center to inform students of their scholastic standing in keeping with the following designations: Good Standing, Scholastic Probation and Scholastic Suspension.

PERTINENT INFORMATION

The Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) requires that each institution clearly define and publish its policy regarding suspension and readmission of students for academic reasons.

OPERATING REQUIREMENTS

Good Standing

I. Graduate and Professional Programs

Students in graduate and post-baccalaureate professional programs follow their academic programs’ standards for being in good academic standing. Please refer to the academic policies and standards in each school for more details.

II. Undergraduate Programs

An undergraduate student who maintains minimum 2.00 standards of progress cumulative and term grade point averages will be in good academic standing.

A. Scholastic Probation

An undergraduate student whose standards of progress cumulative or term grade point average is below 2.00 at the end of an enrollment period is placed on scholastic probation. This student may continue on scholastic probation by achieving a minimum standard of progress term grade point average of 2.00 at the end of the enrollment period. This student is removed from scholastic probation when the standards of progress cumulative and term grade point averages are 2.00 or above.

Scholastic probation is a serious warning that the quality of the student’s work must improve in order for the student to continue enrollment at the university. Students on scholastic probation are required to meet with their advisor prior to registration and may be required to enroll in special programs or courses in order to improve grade point average. After advisement, the student may be permitted to enroll while on scholastic probation.

B. Scholastic Suspension

Scholastic suspension occurs when an undergraduate student on scholastic probation fails to maintain minimum academic standards.
A student on scholastic probation who fails to achieve a standard of progress term grade point average of 2.00 or higher will be suspended for one calendar year. A suspended student may appeal for a waiver of a suspension to the school dean or dean's designee. Any student who is scholastically suspended will be permitted to reapply for admission one calendar year from the scholastic suspension term. A student who re-enters the university after having been suspended will be placed on scholastic probation status and will be subject to the minimum requirements governing scholastic probation.

Students should consult directly with their respective dean's offices for additional information regarding scholastic and academic standing.

**Academic Program Review Policy**

The academic program review process is integral to the assessment and academic planning of academic programs at the Health Science Center. The process is intended to examine, assess, and strengthen academic programs offered at the Health Science Center. Program reviews are a means to ensure advancement in the quality of the Health Science Center’s academic programs. The process includes a comprehensive assessment of goals, infrastructure, operations, and outcomes in relation to the mission and strategic plan of the university. The program review process facilitates dialogue among the president, vice president, dean and program faculty leadership. The process provides an organized and structured opportunity for all to reflect on educational practices and review the role of their program in the context of the full array of programs offered by their school and institution.

The Health Science Center mandates that all academic programs receive a comprehensive review on a periodic basis. The academic program review cycle includes and aligns to the requirements for school-specific accreditation organizations and the Texas Higher Education Coordinating Board (THECB). The Vice President for Academic, Faculty, and Student Affairs (http://www.uthscsa.edu/vpaa) collaborates with respective school deans to establish programmatic review dates based on requirements of external accreditors and the THECB.

For more information about the Academic Review Policy, see Policy 2.7.2 (http://uthscsa.edu/hop2000/2.7.2.pdf) in the Health Science Center Handbook of Operating Procedures (HOP).

**Academic Texas Core Curriculum**

Students who will be receiving their first baccalaureate degree from the Health Science Center must successfully complete the Texas Core Curriculum requirements. See the General Education Core Curriculum Policy (p. 60) for more information, including changes to the Health Science Center’s Core Curriculum based on legislation passed in 2013 and applicable to students matriculating in the fall of 2014.

The Texas Common Course Numbers (TCCN) are provided for guidance. Information is available online (http://www.tccns.org); click on ACGM (The Lower-Division Academic Course Guide Manual of the THECB Community and Technical Colleges Division). Applicants are encouraged to contact the Office of the University Registrar (http://students.uthscsa.edu/registrar) or the respective school/program office to inquire about other courses that may satisfy Core Curriculum requirements.

Any student concurrently enrolled at more than one institution of higher education must follow the core curriculum of the institution in which they are classified as a degree-seeking student. Accordingly all degree-seeking students at the Health Science Center must meet the core curriculum requirement set forth by the Health Science Center to be considered core complete. Students who complete core curriculum of another institution while enrolled at the Health Science Center as a degree-seeking student are, regardless of their status with the other institution, only considered core complete if their coursework satisfies all core curriculum requirements at the Health Science Center.

If a student's transcript from another Texas public college or university indicates that the student has completed the institution's core curriculum, no additional core curriculum requirements will be imposed. An Associate in Applied Science degree does not deem a student core complete. If a student has not completed the core requirements at another Texas institution prior to entering the Health Science Center, the Health Science Center will only accept academic credits from another Texas public college or university the core curriculum courses successfully completed, with grades of “C” or better. The same requirements also apply to out of state students and students who attended a private college or university.

College Level Examination Program (CLEP) credit may be accepted for core curriculum requirements. The maximum number of hours accepted for CLEP shall be established by the respective school/program. More information is available in the Policy on Awarding Academic Credit, Transfers and Substitutions (http://catalog.uthscsa.edu/generalinformation/generalacademicpolicies/policyawardingacademiccredittransfersandsubstitutions) in this Catalog.

**Timeline to Complete the Texas Core Curriculum**

It is recommended that the Texas Core curriculum be completed prior to entry into the Health Science Center, however select courses may be taken up until one semester before graduation.

**Change of Personal Information**

Students may change their personal biographical information by visiting the Office of the University Registrar (http://students.uthscsa.edu/registrar), or by logging in to My UT Health and accessing My Student Center. Changes made in person are processed within 48 business hours, while changes made by students online are instantaneous. Students should note that name changes can be made in person at the Office of the University Registrar so that staff may verify supporting legal documentation for the name change or by submitting the Change of Information form with supporting documentation to registrars@uthscsa.edu. For more information on the process, contact the office at registrars@uthscsa.edu, or access the website (http://students.uthscsa.edu/registrar).

**Concurrent Enrollment Policy**

**UNIVERSITY DECISION**

It is the decision of the Health Science Center to establish agreements between specified universities to facilitate the admission and registration process. Students must be currently enrolled at their home institution in order to participate. Admission to the Health Science Center is not necessarily guaranteed under such agreements.

**PERTINENT INFORMATION**

The Texas Education Code 54.011 (http://www.statutes.legis.state.tx.us/Docs/ED/htm/ED.54.htm) states that when students register at more
than one public institution of higher education at the same time, their tuition charges shall be determined in the following manner:

- The student shall pay the full tuition charge to the first institution at which the student registered; and in any event the student shall pay an amount at least equal to the minimum tuition specified in this code.

- If the minimum tuition specified in this code for the first institution at which the student is registered is equal to or greater than the minimum tuition specified in this code for the second institution at which the student is registered concurrently, the student shall not be required to pay the specified minimum tuition charge to the second institution in addition to the tuition charge paid to the first institution, but shall pay only the hourly rates, as provided in this code, to the second institution.

- If the minimum tuition specified in this code for the first institution at which the student is registered is less than the specified minimum tuition charge at the second institution (that is, if the second institution has a higher minimum tuition charge specified in this code), then the student shall first register at the institution having the lower minimum tuition and shall pay to the second institution only the amount equal to the difference between the total tuition charge at the second institution and the total tuition charge at the first institution, but in no case shall the student pay to the second institution less than the hourly rates as provided in this code.

- If a student is considered to be a Texas resident and therefore qualified to pay Texas resident tuition rates by one institution at which she or he is registered, that student shall be considered a Texas resident at each of the institutions at which she or he is concurrently registered for the purposes of determining the proper tuition charges. Nothing in this subdivision shall be so construed as to allow a nonresident to pay resident tuition except at institutions covered by Section 54.060 of this code.

DEFINITION OF TERMS

**Concurrent enrollment** refers to taking courses at another university, a community college, or UT’s University Extension program (online, web-based, or traditional classroom) while also enrolled in classes at the Health Science Center. Students may count classes taken concurrently at another institution if the following criteria are met:

- They have met with their academic programs and obtained permission
- They are not in their first semester of enrollment at the Health Science Center
- They possess a cumulative GPA of at least 2.5

**Joint Admission** refers to the process established by formally approved agreements between two institutions, typically with another institution identifying qualified program participants and applicants as eligible for admission to the Health Science Center. In some cases admission may be guaranteed. More information is available under each school’s admissions policies in this Catalog.

**Home Institution** refers to the institution that a concurrently enrolled student identifies as his or her primary institution, where a majority of classes are expected to be taken, and from which the published diploma will be awarded. Only the institution awarding the degree will report the degree awarded to The Texas Higher Education Coordinating Board.

**PROCEDURE**

**Students Responsibilities**

- Students must discuss their degree plans with their departments before requesting concurrent enrollment.
- Students are responsible for determining whether their course(s) will satisfy any outstanding degree requirements at the home institution.
- A minimum of 24 of the last 30 hours taken towards the degree must be in academic residence (taken at the degree-granting institution). Courses taken via UT Extension and/or at another institution do not count toward this requirement.
- Particular courses may transfer to the Health Science Center and may count toward degree requirements; however, the course may not give the foundation necessary for future coursework in that field at the Health Science Center.
- UT Extension coursework (web-based, classroom, or correspondence) will count toward students’ GPAs at the Health Science Center; transfer courses from other educational institutions will not count towards their GPAs at the Health Science Center.
- Students who take a course concurrently at another educational institution must arrange for that institution to send an official transcript to The Office of the University Registrar at the Health Science Center. Courses with grades of “C” or better will transfer in some instances, an academic program may require a minimum grade of B and, if concurrent enrollment has been approved, will be counted toward a degree at the Health Science Center; P/F (pass/fail) grades will only count toward electives.
- Students must complete coursework by the last class day published on official academic calendars (http://students.uthscsa.edu/registrar/2013/04/academic-calendar) at the Health Science Center for the semester in which they petition for concurrent enrollment.
- Approval for Concurrent Enrollment must be obtained through students’ respective academic programs each semester, with approval reaching The Office of Veteran Services and Financial Aid (http://students.uthscsa.edu/financialaid) as well.
- Students are required to visit with The Office of Veteran Services and Financial Aid (http://students.uthscsa.edu/financialaid) prior to registration at a secondary institution in order to plan for any changes to the awarding of financial aid and other forms of assistance.

**Course Cross Enrollment Policy**

**UNIVERSITY DECISION**

It is the decision of the Health Science Center to allow students to enroll in courses in other Health Science Center schools/programs outside their home school/program, so long as: 1) students receive permission from both their home school/program and the school/program in which they plan to enroll by completing an official Cross-enrollment form (https://students.uthscsa.edu/registrar/2013/03/forms); 2) the course in which the student plans to enroll has start and stop dates that are consistent with the student’s program of study start and stop dates.
PERTINENT INFORMATION

It is the responsibility of the schools/departments to advise students on which courses in other schools/programs will count toward their degree program. Further, individual curriculum committees within each school/program are charged with deciding which courses/programs will allow cross-enrollment. They also will be charged with informing the Office of the University Registrar which courses should be open for cross-enrollment and specifying for each course if there are any students who are to be given priority enrollment (for example, students in their final year of study).

Transcripts: If students sign up for a course outside of their home school/program, the course will be listed on their home career transcript. For example, if a nursing student takes a course in the School of Health Professions (SHP) while the student is an active student in the School of Nursing (SON), the SHP course will show on the same transcript as the student’s nursing courses.

Tuition and fees:

- Under state statute, students in the D.D.S. and M.D. program can only be charged a flat, base tuition rate and will not be charged separately for cross-enrolled courses. Semester credit hour based, excludes D.D.S. and M.D. students.
- Students will be charged tuition and fees (including such fees as the Medical Service fee and Fitness fee) based on their home/billing school/program rate regardless of what school/program has ownership of the course in question.
- Course fees will be charged based on the course in question.
- Students will be charged program fees (such as the education support fee in the School of Health Professions) for their home/billing school/program (if applicable) and may be charged the program fee of the schools/programs of courses in which they are cross-enrolled (if applicable), unless the impacted schools/programs agree to waive that fee. If a school decides to waive program fees for cross-enrolled students, they are responsible for informing the Office of the Bursar in writing of their intent to waive these fees. Students should refer to the Cost of Attendance table on the Office of the Bursar’s website for information about program fee waivers by school/program.
- Financial aid can only be used for courses counting toward degree program completion. A curriculum committee approving a course for cross-enrollment and/or the signature of an administrator designated by the dean of the student’s home school/program on the Cross-Enrollment form will serve as proof that the course is considered part of the student’s degree program for purposes of Financial Aid. It is the responsibility of the schools/departments to verify and certify that a course taken outside a student’s home career will count toward their degree.

Course Rosters: All students registered for a course, regardless of their home school/program, will appear on the same course roster, with the exception of Dental and Medical students enrolled in semester-based courses. They will appear on a separate roster for annually enrolled students.

Courses Requiring Approval: Students must receive permission to enroll in a course offered outside their home school/program, if said course has not been pre-approved as an open-enrollment course by the student’s home program. Students can enroll, without receiving approval, in courses that are published in the catalog as pre-approved, open-enrollment courses in their home program’s plan of study.

Curriculum committees in the schools/program identify courses which will be open for cross-enrollment, designate them as approved, open-enrollment courses in the appropriate plans of study and publish them in the catalog. Students who desire to take a course that is not a pre-approved, open-enrollment course in their plan of study must request approval from both their home program and the receiving program following the process listed below.

DEFINITION OF TERMS

Cross-enrollment refers to taking one or more courses in a Health Science Center school/program that is not the same as the student’s home school/program.

Designated administrator/adviser is the person(s) designated by the school/program (sending or receiving) to approve the enrollment of students in a course that is outside their home school/program.

PROCESS

1. Students complete the Cross-Enrollment form (https://students.uthscsa.edu/registrar/2013/03/forms) and request approval from the designated administrator/adviser in their home school/program and the designated administrator/adviser in the receiving school/program. Please click here (http://students.uthscsa.edu/registrar/wp-content/uploads/sites/2/2017/06/Course-Cross-Enrollment-List.pdf) for a list of designated administrators/advisers in the home and receiving school/program.

2. Student submits the completed Cross-Enrollment form to the Office of the University Registrar.

3. Staff in the Office of the University Registrar are notified if the start and stop dates of the cross-enrollment course in question fall outside the start and stop dates of the student’s home program/school. When dates of the course are not consistent with the student’s home program the Office of the University Registrar, in consultation with the appropriately designated administrator(s) in the student’s home program/school, will make a determination on a case-by-case basis as to whether the student will be allowed to enroll in the course in question.

4. Office of the University Registrar registers student for the course.

Curriculum and Credit Hours Policy

PERTINENT INFORMATION

As part of the continued accreditation of the institution, the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) performs reviews of the institution’s assignment of credit hours. Academic credit has stipulated the basis for measuring the amount of engaged learning time expected of a student enrolled not only in the traditional classroom settings but also laboratories, clinics, seminars, practicums, internships and other experiential learning, and distance and correspondence education. The common use of academic credit amongst all institutions ensures the transfer of coursework from one institution to another. The federal government also relies on the academic credit to assess student academic engagement as a basis of awarding financial aid. The amount of credit awarded for undergraduate and graduate courses is based on the unit of the semester credit hour, in
DEFINITION OF TERMS

Semester Credit Hour

34 CFR § 600.2 defines the amount of work represented in intended learning outcomes and verified by evidence of student achievement within one semester (fall, spring or summer) that is an institutionally established equivalency that reasonably approximates:

1. Not less than one hour of classroom or direct faculty instruction and a minimum of two hours out of class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time, or

2. At least an equivalent amount of work as required outlined in item 1 above for other academic activities as established by the institution including laboratory work, internships, practicums, studio work, and other academic work leading to the award of credit hours. (See 34 CFR 668.8(k) and (l).)

“Credit hour” may be used interchangeably at the Health Science Center with “semester credit hour” or “unit.”

Semester credit hours are based on contact hours. Contact hours are the amount of time a student has with an instructor or instructional assistant such as a research assistant or preceptor, whether face-to-face or virtual. A semester is defined by the Texas Higher Education Coordinating Board (“THECB”) as 15 weeks of instruction and a week for final examinations (Title 19 Texas Administrative Code §4.6). Therefore, assuming a lecture format, the traditional 3-hour semester credit-hour course, for example, contains 45 to 47 contact hours.

Distance education and hybrid courses use the same credit hour requirements as face-to-face courses. Further, courses delivered in shortened semesters are expected to have the same number of contact hours and the same requirement for out-of-class learning as courses taught in a normal semester. For example, a three-credit hour course that meets for one hour three times per week in a 15 week semester (45 contact hours) must meet nine hours per week in a five week semester (45 contact hours) to be equivalent. This does not apply to rotational classes offered in the School of Medicine or the School of Dentistry.

The School of Medicine determines the amount of credit awarded for courses in accordance with the accreditation standards of the Liaison Committee on Medical Education (LCME), the accrediting body for medical education programs in the United States.

For the calculation of semester credit hours, the Health Science Center recognizes the following components:

- Clinical
- Conference
- Laboratory
- Lecture
- Practicum
- Pre-clinical
- Seminar

UNIVERSITY PROCEDURE

COURSE DEVELOPMENT

Course developers are to ensure that the quantity of student learning required per credit hour is the equivalent of 15 hours (=1 semester for the final) of coursework for the semester through activities that:

1. Address and demonstrate student competency in the defined learning outcomes; and

2. Draw upon recommended instructional practices identified by the Health Science Center’s Office of the University Registrar (see contact hour ratio).

Student learning outcome equivalencies are to be based on documented qualitative and quantitative expectation for:

1. Time required of students to complete assigned learning activities, taking into account expectations based on degree level, discipline, and weight in students’ final course grade;

2. Time required of students to read and understand content developed by course faculty, excluding time required to read assignments in a course syllabus;

3. Time required of course faculty to respond to student questions received via e-mail, posted in the online classroom, and/or discussed in the online class chat room; and

4. Time required of course faculty and students to participate in online conference activities.

Student learning outcome equivalencies reflect differences in delivery methods, quality of instruction and interaction, degree of supervision, measurements of student work, academic disciplines, academic calendars, and degree levels.

Each School is responsible for demonstrating to SACSCOC that these requirements are met for both courses composed of seat-time and other alternative delivery methods.

CREDIT HOUR BY COURSE

The Office of the University Registrar is responsible for calculating the number of semester credit hours associated with courses given the definitions above. The Office of the University Registrar strongly advises against courses that carry variable credit hours, that is, courses whose credit hours vary by student or by semester. This is because consistency and fairness are expected procedurally and with respect to the content of a course and the amount of instruction a student receives from an instructor.

AMOUNT AND LEVEL OF CREDIT

The amount and level of credit awarded for courses for each program by the School is determined by each school’s Dean’s Office, in conjunction with the Office of the University Registrar. The Office of the University Registrar
Registrar uses established practices for awarding credit as specified by the THECB (Title 19 Texas Administrative Code, Section 4.6).

Each School is responsible for establishing a formal faculty review process to ensure that the amount and level of credit awarded for the undergraduate and graduate courses is compatible with the sound academic practice in the given field. As part of the review process, faculty ensure that all distance education courses have learning outcomes that are equivalent to the outcomes for the same or similar courses delivered through traditional formats.

The THECB requires that every student pursuing a baccalaureate degree program complete a core curriculum consisting of 42 credit hours that includes content found in Texas Administrative Code, Section 4.28.

The Health Science Center curriculum assures that all undergraduate programs provide an appropriate breadth of knowledge in these required areas. If the student has already completed a core curriculum from another Texas public institution in a previous degree program, they are not required to complete the Health Science Center core curriculum.

**CREDIT HOURS REQUIRED TO GRADUATE**

Each program requires a designated minimum number of hours to graduate. No student shall graduate without meeting this minimum as documented on the official transcript. For this reason, any credit gained through course substitutions, waivers, or by challenge exams must be appropriately documented on designated forms in The Office of the University Registrar.

**EXCESS CREDIT HOURS**

Undergraduate students and graduate students seeking doctoral degrees are subject to rules in the Texas Education Code that limit the number of hours they may take before receiving the intended degree. For undergraduate students, these hours are based on a cumulative total across all institutions of higher education they attended, including technical and community colleges. Some exceptions are allowed. For graduate students, these hours are based only on hours taken at the Health Science Center. See the Excess Hours Policy (http://catalog.uthscsa.edu/generalinformation/excesscredithourspolicy) in this Catalog for details.

Contact to Credit Hour Ratio: = 1 hour of credit

<table>
<thead>
<tr>
<th>Program</th>
<th>Lecture</th>
<th>Conference</th>
<th>Laboratory</th>
<th>Seminar</th>
<th>Practicum</th>
<th>Clinical</th>
<th>Pre-Clinical</th>
</tr>
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<tbody>
<tr>
<td>Dental School (Post-doctoral)</td>
<td>16.0</td>
<td>16.0</td>
<td>48.0</td>
<td>16.0</td>
<td>N/A</td>
<td>64.0</td>
<td>N/A</td>
</tr>
<tr>
<td>Dental School (Pre-doctoral)</td>
<td>16.0</td>
<td>16.0</td>
<td>48.0</td>
<td>16.0</td>
<td>N/A</td>
<td>64.0</td>
<td>64.0</td>
</tr>
<tr>
<td>Dental School (Undergraduates)</td>
<td>15.0</td>
<td>15.0</td>
<td>45.0</td>
<td>15.0</td>
<td>N/A</td>
<td>60.0</td>
<td>N/A</td>
</tr>
<tr>
<td>Graduate School of Biomedical Sciences</td>
<td>16.0</td>
<td>16.0</td>
<td>48.0</td>
<td>16.0</td>
<td>48.0</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Distance Education Policy

The Health Science Center's commitment to academic excellence includes consistency between traditional classroom instruction and distance education. The purpose of this operating policy is to provide a framework for the development, implementation, and maintenance of formal degree and certificate programs and courses offered via distance education for academic credit.

The school-specific administration is responsible for the administration of distance education programs and course delivery. The school-specific deans report to the President.

All schools of the Health Science Center shall have an opportunity to participate in providing distance education courses and/or programs and shall be encouraged to provide distance education as appropriate. Through the schools, the Health Science Center shall ensure that all academic programs, including those delivered through distance education, are afforded an adequate resource support structure.

The Health Science Center follows the definitions for distance education as articulated by the Texas Higher Education Coordinating Board: “The Coordinating Board rules define distance education as ‘the formal educational process that occurs when students and instructors are not in the same physical setting for the majority (more than 50 percent) of instruction.’ Distance education can include courses and programs offered online, off-campus face-to-face, and electronic-to-groups. Coordinating Board rules recognize two categories of distance education courses: fully distance education courses and hybrid/blended courses.

Suggestions for meeting hours of student work per week outside of instruction time:

- Online and hybrid courses must meet the same credit hour requirements as face-to-face courses.
- Faculty teaching online and hybrid courses must account for 48 hours of instructional time for every 3 credit hours.
- Logging on constitutes neither active faculty teaching nor active student learning. Faculty must demonstrate active faculty engagement in online teaching/instructing students. Methods such as discussion boards, chats, etc. can serve as instructional time.
- Other methods may include instructional how-to videos, small group activities, virtual labs, required participation in live or online discussion (e.g. review sessions, Blackboard chat, case discussions, or other instructor-driven self-guided activity delivered live or by electronic media).
- Faculty may also consider field experiences, cultural events, group projects, increased course content, research and information literacy, service learning and civic engagement, individual or group conferences, oral presentations, or other methodology that should contain some rationale for SACSCOC.
- Activities that are counted for credit be required and structured. Examples of activities that do not count toward instructional time: readings, homework and other intrinsic preparation or activities (e.g. practicing calculations).

A fully distance education course is defined as ‘A course which may have mandatory face-to-face sessions totaling no more than 15 percent of the instructional time. Examples of face-to-face sessions include orientation, laboratory, exam review, or an in-person test.’ A hybrid/blended course is defined as ‘A course in which a majority (more than 50 percent but less than 85 percent), of the planned instruction occurs when the students and instructor(s) are not in the same place.’ *(http://www.thecb.state.tx.us/)

For more information on the Distance Education Policy, please see Policy 2.6.5 (http://uthscsa.edu/hop2000/2.6.5.pdf) in the Health Science Center Handbook of Operating Procedures (HOP).

Final Credit Hours Policy

UNIVERSITY DECISION

It is the decision of the Health Science Center to offer graduate level students seeking Master’s or Doctoral degrees to claim “final hours” in order to qualify for full-time status despite being registered for fewer hours than necessary to achieve that classification.

PERTINENT INFORMATION

A student in her/his final semester or summer session registering only for thesis or dissertation may register for “final hours.” When a student declares “final hours” for a semester, the student shall be considered enrolled in a full-time course load for that semester. The student pays tuition based upon the number of credit hours for which he/she registers.

UNIVERSITY PROCEDURE

A Ph.D. student must register for a minimum of 3 semester credit hours; and an M.S. student must register for a minimum of 1 semester credit hour. The Request for Designation of Final Hours Form is available online (https://students.uthscsa.edu/registrar/2013/03/forms). It must be completed along with required signatures and submitted to The Office of the University Registrar by the first official class day according to the student’s respective academic calendar (http://students.uthscsa.edu/registrar/2013/04/academic-calendar). A student may register for final credit hours only once during her/his degree program. If a student registers for a subsequent semester and registers for fewer hours than necessary to be classified as full-time, the student will be classified and reported as less than full time.

General Grade Point Average (GPA) Policy

UNIVERSITY POLICY

It is the policy of the Health Science Center to use a standard method for calculating student grade point averages.

PERTINENT INFORMATION

There is no method externally imposed on the Health Science Center for calculation of grade point averages. However, the Southern Association of Colleges and Schools specified that an institution “must publish its grading policies and its grading practices must be consistent with policy.”

“GPA” is the abbreviation used to designate “Grade Point Average.”
DEFINITION OF TERMS

Credit Hours
This number is listed in both the schedule of classes and the catalog and represents the hours assigned to a course for credit towards a certificate or degree. Typically the number ranges from 1.0 to 9.0.

Grade Value
The numerical value assigned to a grade: A = 4 points, B = 3 points, C = 2 points, D = 1 point, F = 0 points.

Grade Points
Credit hours for a course times the grade value.

Attempted Hours
Credit hours associated with a course a student was registered for as of the first official day of class, regardless of final outcome or grade.

Earned Hours
Credit hours for a class that is successfully completed (see individual schools’ grading systems).

Repeat
When the course in which the student received a substandard grade is repeated and the last grade earned, whether higher or lower than the original grade, is calculated in the student GPA.

Remediation
This is the process by which a student corrects a failing grade in a class either by taking a national board exam or other standardized exam specific to the program, or repeating the class in the subsequent term to resolve the substandard grade.

Audit
All students must gain approval to audit classes. Auditing generally includes attendance at scheduled lectures or seminars of a class without access to supplemental instruction including labs and discussions. Supplemental instructional materials such as syllabi, online reading and podcasts may not be available. Formal grades are not awarded, although registered students will have the class noted on their transcripts with a grade of “AU.” For additional information, see the Policy on Auditing Courses (p. 46) in this Catalog.

Grade Point Average (GPA)
A grade point average is calculated by assigning the following numerical weight to each letter grade:

A = 4
B = 3
C = 2
D = 1
F = 0

When courses are repeated for credit, previous grades for the same courses are excluded from GPA calculations, whether or not they were failing, and whether or not they were better than the grade ultimately earned.

Term GPA
This is the GPA calculated for coursework taken within one semester or, as is the case for the School of Dentistry (students seeking a D.D.S.) and Long School of Medicine (students seeking an M.D.), within one academic year.

Cumulative GPA
This is the overall GPA calculated across a student’s education within a career (e.g. certificate, undergraduate, Master’s doctoral or professional career).

UNIVERSITY PROCEDURES

1. The grade and credit earned for any course taken by a student at Health Science Center will become part of the student’s permanent record and will be used in the computation of the University grade point average (GPA).

   a. Program GPA will be reflected on the transcript as part of the program completion information
   b. Cumulative Grade Point Average is used for graduation certification
   c. Degrees cannot be conferred with any incomplete grade of “I”, “IP”, “X” or no grade on the student’s records. Incomplete grades in progress grades are not included in the cumulative GPA until the correct grade has been entered.
   d. When a course is repeated, the last grade earned will be counted for grade point average calculations unless the course is designated as repeatable for credit.

2. Term Grade Point Average (TGPA) is derived by multiplying the credit hours of each attempted course by the quality-point value of the grade earned for that course, adding those amounts, then dividing by the total number of credit hours attempted for each term. All grade point averages are carried to two decimal points and rounded to the nearest one hundredth of a point. The grade point average may range from 0.00 to 4.00.

Example Student Transcript

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
<th>Grade</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>3</td>
<td>A (4 points)</td>
<td>12</td>
</tr>
<tr>
<td>Research</td>
<td>1</td>
<td>B (3 points)</td>
<td>3</td>
</tr>
<tr>
<td>Clinical Skills</td>
<td>3</td>
<td>C (2 points)</td>
<td>6</td>
</tr>
<tr>
<td>Ethics</td>
<td>3</td>
<td>F (0 points)</td>
<td>0</td>
</tr>
</tbody>
</table>

10 Total Credit Hours Attempted 21 Total Grade Points

To calculate the example student’s GPA, the total grade points (21) are divided by the total credit hours attempted (10) = 2.10.

GPAs
Student GPAs appear on unofficial and official transcripts and advisement reports. A transcript shows separate GPAs for each “career” a student was or is enrolled in. These careers include the following:

- Advanced Dental Education Post-professional
- Dental School Graduate
- Dental School Professional
- Dental School Undergraduate
- Graduate School of Biomedical Sciences Graduate
DEFINITION OF TERMS

Audit
This is a method of class attendance that allows for student observation in a class environment. The grading basis for an audited course is simply “audit,” and carries no GPA weight. Audited courses do not satisfy degree requirements. (For more information, see the Policy on Auditing Courses (p. 46) in this Catalog.)

Remediation by exam
A student may be afforded the opportunity to remediate a failing grade by successfully completing an exam determined appropriate by the academic department. The exam is often a nationally-distributed, standardized exam. Upon successful remediation, the failing grade remains on the transcript but the grade is excluded from GPA calculation.

Remediation by repetition
A student may be afforded the opportunity to remediate a failing grade by repeating a course in its entirety. Upon successful remediation, the failing grade remains on the transcript but the grade is excluded from GPA calculation.

Incomplete Grades
The assignment of an “I” grade indicates that the student failed to complete requirements for the course due to unexpected and extenuating circumstances, such as illness, family emergency, or other non-academic and urgent matters. A grade of Incomplete “I” is not acceptable as a temporizing measure in situations of substandard academic performance. The outstanding work must be completed by the designated date issued by the faculty but no later than one year of the issuance of the “I” grade. When the course is completed the qualitative grade issued by the instructor will be submitted to the Office of the University Registrar using a Change of Grade Form. If the course work is not satisfactorily completed within the designated time, the “I” grade will be changed to an “F” grade. Incomplete grades should not be confused with failing grades of “F,” in which a student failed to complete requirements without proper notice to the instructor.

In Progress Grades
The assignment of an “IP” grade indicates that the course is in progress, and may for logistical reasons span two or more grading periods, whether contained within one semester or spanning two or more semesters. These grades are replaced with iterations of the final grade once it is earned.

Letter Grades
These are awarded as “H” (for Honors), “A,” “B,” “C,” “D,” or “F,” although not all schools use all these letters. Grading details are on the back of the university’s official transcript paper.

Withdrawal Grades
A student who has been withdrawn, granted a leave of absence or been dismissed will receive a grade of “WP,” “WF,” or “W,” according to the school’s grading system and as deemed appropriate by the department. Students returning from a leave of absence to the same courses must re-register for the course and pay tuition associated with the hours, along with any course fees.

Academic Year
This is marked by the start and end of the year for a given program. In some cases, the academic year may commence with a summer semester,
and in other cases it may commence with the fall semester. In the case of the School of Dentistry and School of Medicine, the academic year begins in the summer months but is not formally or officially marked by any semesters within it.

**Calendar Year**
This is marked by the months January through December.

**GPA**
A grade point average is calculated by assigning the following numerical weight to each letter grade:

- **A** = 4
- **B** = 3
- **C** = 2
- **D** = 1
- **F** = 0

When courses are repeated for credit, previous grades for the same courses are excluded from GPA calculations, whether or not they were failing, and whether or not they were better than the grade ultimately earned.

**Term GPA**
This is the grade point average calculated for one semester or, as is the case for the School of Dentistry and Long School of Medicine, for one academic year.

**Cumulative GPA**
This is the grade point average calculated across a student’s education within an academic career.

**Academic Career**
At the Health Science Center, this refers to a student’s general course of study, including one of the following:

- Dental School Graduate
- Dental School Post-Professional
- Dental School Professional
- Dental School Undergraduate
- Graduate School Graduate
- Health Professions Graduate
- Health Professions Undergraduate
- Medical School Graduate
- Medical School Professional
- Nursing School Graduate
- Nursing School Undergraduate

**UNIVERSITY PROCEDURE**
Strict procedures must be followed by all schools when grading students, including accurate and timely entry of such grades for student review and access, the recording and transmission of student grade changes to minimize the possibility of error, omission or authorized change.

**Grade Changes**
When an instructor discovers that an erroneous grade was reported for a student, he/she shall immediately submit the corrected grade for processing.

1. The currently adopted Change of Grade Form must be used for the purpose of correcting grades on a student’s transcript record.
2. The reason for changing a grade recorded in a student’s permanent academic record must be provided on the Change of Grade Form and must be signed by the instructor and the Associate Dean. If the instructor of record is no longer employed by the university, the Associate Dean may sign the change of grade.
3. When a grade is changed on a student’s permanent academic record, the student will be notified by the school.
4. A copy of the Change of Grade Form submitted shall be stored in the student’s academic record at the Office of the University Registrar for audit purposes.
5. Any grade change must be made within one year of the issuance of the grade. No exceptions will be considered thereafter.

**Grading Practices**
1. A close relationship exists between student evaluation and graduation requirements.
   a. Evaluation and grade reporting should reflect the skills, knowledge and/or competencies which can be directly associated with validated task inventories or competency lists. Thus, a close correlation between the evaluation, course objectives and task inventories should be present in the curriculum and instructional materials.
   i. Performance levels are defined by the instructional program and may include a variety of learning activities and learning outcomes, which will determine students’ level of achievement in the specific skills, knowledge and competencies associated with each course.
   ii. Learning activities may include but are not limited to:
      1. Individual and group projects
      2. Reports or presentations
      3. Hands-on demonstrations
      4. Participation in class discussions
      5. Exercise or lab assignments
      6. Homework assignments
      7. Quizzes and tests
   b. The minimal performance level accepted at the Health Science Center in a student’s major courses should relate closely to the minimal or basic requirements associated with the respective school’s accreditation requirements. This level of performance varies by school, but may be a D, C, or P.
      i. It specifies that the student has demonstrated the acquisition mastery of skills and knowledge or competencies that particularly support the filed for which the program is designed.
2. The grading followed by instructors must be appropriate for each student’s situation, particularly in the cases of withdrawals,
dismissals, and voluntary or administrative leaves of absence. Such situations may include the following:

a. **Leaves of Absence**: Students approved or mandated to take a leave of absence after the official first day of class and before the administration of final exams will receive grades of "W", "WP" or "WF" in all classes for which they registered but did not already receive a final grade via the student information system. Not all schools use "WP" or "WF".
   i. Students must re-register for any dropped courses required for attainment of the degree sought in the next possible semester following return to the university.
   ii. Tuition and fees are calculated based on those and any other courses registered for, and must be paid by the Census Date. Students will not receive any monetary credit for classes dropped in previous semesters and outside the Refund Schedule followed by the Bursar’s Office for each term.

b. **Withdrawals**: Students who voluntarily withdraw from the Health Science Center after the official first day of class and before the administration of final exams will receive grades of "W", "WP" or "WF" in all classes for which they registered but did not already receive a final grade via the student information system. Dismissed students seeking to register for subsequent semesters must reapply for the program of interest and satisfy all requirements anew, including application fees. Admission to dismissed students or any other former students is not guaranteed.

c. **Dismissals**: Students who are dismissed from the Health Science Center after the official first day of class and before the administration of final exams will receive grades of "W" in all classes for which they registered but did not already receive a final grade via the student information system. Dismissed students opting to withdraw from the course must follow established procedures.

d. **Incomplete Grades**: When an "I" grade is assigned, a student must complete the coursework by a date specified by the course instructor.
   i. The date cannot exceed one year from the end of the term for which the "I" grade was issued.
   ii. Upon completion, the instructor should submit a Change of Grade Form to the Office of the University Registrar.
   iii. If coursework is not satisfactorily completed, the "I" grade will be changed to an "F" one year following the end of the term in which the "I" was recorded. This is an administrative change in grade that occurs by way of an electronic process managed by The Office of the University Registrar.

3. The criteria, standards and performance grade must be specified for each course by the instructional program.

a. These may likely include cognitive, psychomotor and affective domains, but should reflect proportionately what is found in the educational practice.

b. Faculty members may consider student participation in specific learning activities when determining final grades, provided students are informed of the required activities at the beginning of the course.

c. Regular class participation is necessary for satisfactory achievement. Therefore, it is the responsibility of the student to participate in lecture and laboratory sessions in accordance with requirements of the course as established and communicated by the faculty member.

4. Faculty members cannot drop or award grades of "W" for students based on non-participation. Students who fail to meet performance requirements for the course within the allotted time frame will receive a grade of "F".

a. Student performance will be regularly monitored and students will be notified when they fail to meet performance levels.

b. Students will be advised of options for improving performance or withdrawing from the course(s).

c. Students opting to withdraw from the course must follow established procedures.

d. Students should remain aware of the penalties that dropped courses may have on their academic studies and financial aid, including, but not limited to, assessment of non-Texas resident tuition. See the Excess Hours Policy (p. 20) in this Catalog for more information.

5. Student grades are reported upon course completion and are available at times other than at end of term.

a. Each student shall be evaluated and a grade reported in the student information system for each course according to the established grading deadlines.

b. A current status of grades and course completion shall be obtained by students in My Student Center via students.uthscsa.edu.

**GRADUES and GRADE APPEALS**

Grading standards, symbols, grade point scales, and other considerations regarding the quality of work of students are the prerogative of the faculty of the programs, as are issues of promotion and advancement. More details regarding school-specific grading symbols and scales can be found under their respective sections. The student requesting a change of grade bears the burden of proof in establishing the appropriateness of any grade change requested. Thus, the responsibility of providing sufficient input to justify the change of grade requested by the student is to be borne by the student. Processes for grade appeals are also located under each school's Catalog section.

**Graduation Policy**

**POLICY**

It is the policy of the Health Science Center that students who satisfy all Health Science Center eligibility criteria and requirements for graduation shall be designated as “graduates.”

**PERTINENT INFORMATION**

The Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) has set a standard that at least 25 percent of credit hours applicable to a baccalaureate degree or at least 33 percent of credit hours applicable to an graduate or post-baccalaureate professional degree must be earned through instruction offered by the university granting the degree.

Students who satisfy all eligibility criteria and requirements from the Health Science Center may or may not participate in a university sponsored graduation ceremony/reception. Regardless of ceremony attendance, a student's status in the official record of the university is recorded as a "graduate".
Degrees are conferred and certificates awarded only on official dates publicly announced by the Office of the University Registrar. Exceptions are made on a case by case basis and will only be awarded on the last day of the month in which the requirements are completed.

The certificate or degree is awarded by the Board of Regents following the student's satisfaction of all academic requirements for graduation.

**DEFINITION OF TERMS**

**Regular Instructional Program**
Educational program of instruction defined by a curriculum approved by the Texas Higher Education Coordinating Board (THECB) for which term and/or semester hour credits as well as Certificate and/or a degree is awarded.

**Curriculum**
A list of courses, credits, and other requirements associated with completion of a regular instructional program.

**Confer**
The presentation of a degree or certificate to a graduate.

**Graduate (noun)**
A person who has qualified for one of the University's awards and has received the degree or certificate for that award.

**Graduate (verb)**
To attend a graduation ceremony and receive a degree or certificate.

**UNIVERSITY PROCEDURE**

**Application for Graduation**
Degrees are not normally awarded automatically upon completion of scholastic requirements. To be considered as candidates for degrees, students must submit the Application for Graduation online using their student portal by the appropriate deadline. Graduation application deadlines are:

- May 30 for fall conferral
- November 30 for spring conferral
- February 15 for summer conferral

These dates may vary from term to term; updated deadlines will be communicated by the university through means of the university website and/or via students’ campus e-mail accounts. Students should obtain an official degree audit one semester prior to their expected graduation date to avoid graduation conflicts and delays. Students who graduate with their first bachelor's degree may be eligible for a tuition rebate, provided they have completed at least one course during the academic year the selected catalog was in effect with a letter grade other than W or F and the appropriate dean has approved the amended degree plan. Students must complete all degree requirements under that selected catalog. Choosing a new catalog begins a new three-year or six-year time limit. Students who graduate under one catalog and begin a second degree must begin the new degree under the catalog in effect at that time. Students must have an approved degree plan at the time an application for graduation is filed.

**Catalog of Graduation for Courses**
Students must meet the course requirements in effect when a course is taken. This prevents students from retaking courses to meet new requirements, yet allows students the opportunity to benefit from new course requirements intended to promote student success. For example, if a student has declared a program of study for the current academic year but has taken courses previously, this student would be held to the course requirements in effect at the time the courses were taken, not the year the program of study was declared.

**Eligibility Criteria and Requirements for Graduation**
1. The student's cumulative Health Science Center Grade Point Average must be 2.00 or higher.
2. Students must have no pending disciplinary issues as defined in the university's catalog.
3. A minimum of 25 percent of the total credit hours of the required coursework for an baccalaureate degree or a minimum of 33 percent of the total credit hours of the required coursework for an graduate post-baccalaureate professional degree must be instruction provided by the school granting the award.
4. Transfer credits accepted by Health Science Center and applied to a Health Science Center degree plan shall be approved by the Office of the University Registrar and the program to which the credit would apply. Please refer to the Policy on Awarding Academic Credit (p. 47) in this Catalog.

**Graduation Ceremonies Policy**
The University conducts multiple commencement ceremonies throughout the year. Most ceremonies occur in the Spring semester, when the majority of graduating cohorts complete their program of study. Students who wish to participate in their programs’s commencement ceremony must adhere to the school’s and university’s procedures for application for graduation. Candidates for graduation are not required to attend the graduation ceremony to be considered “graduates.” Photos and videos are available for purchase through an outside vendor, which is coordinated by the Office of Student Life.

**STUDENT RESPONSIBILITIES**
A candidate for the degree must:

- Satisfy all academic requirements for graduation
- Satisfy all indebtedness to the university, including loaned or rental property
- Make formal application for his/her degree to the Office of the University Registrar by the specified deadline for that term of graduation
- Be recommended to receive the degree by the faculty, and the certification by the dean of the school and the president of the Health Science Center
• Not have an “F,” “Incomplete” or outstanding grade in any course in any semester
• Pay the graduation fee

Degrees and certificates are provided after final grades have been recorded on the student's permanent academic record and the student has been conferred as a graduate.

FACULTY RESPONSIBILITIES
Faculty must submit final grades by published deadlines in their respective school's academic calendar (http://students.uthscsa.edu/registrar/2013/04/academic-calendar). Faculty are responsible for notifying their associate deans or program chairs if unable to record grades due to an unexpected absence and must have an alternate to record grades.

OFFICE OF THE UNIVERSITY REGISTRAR RESPONSIBILITIES
The Office of the University Registrar will review the following requirements for graduation:
• Minimum number of Semester Credit Hours have been completed
• Minimum grade point average has been met
• All final official transcripts have been received, along with any foreign transcript evaluations necessary
• All prerequisites have been completed
• Any transfer credits have been posted to the student's record
• Any previous degrees earned have been posted to the student's record
• All Health Science Center grades have been posted

OFFICE OF STUDENT LIFE'S RESPONSIBILITIES
The Office of Student Life (http://students.uthscsa.edu/studentlife) is responsible for securing a venue for the ceremony, coordinating a rehearsal and hosting the ceremony. They are also responsible for contracting outside vendors for the ceremony for videography and photography.

UNIVERSITY PRESIDENT RESPONSIBILITIES
The President is the presiding officer who officiates over graduation ceremonies.

REPLACEMENT OF DIPLOMAS
A lost or destroyed diploma can be replaced upon payment of a duplicate diploma fee and completion of the Request for Duplicate Diploma or Certificate (https://students.uthscsa.edu/registrar/2013/03/forms) form with the Office of the University Registrar. The graduate must complete a Request for Duplicate Diploma form and a statutory declaration. Any other supporting evidence is to be attached to the request.

REVOCATION OF DEGREES
The University reserves the right to revoke any degree awarded if it is proven through student disciplinary or other action that the student is guilty of cheating, plagiarism, or other academic dishonesty or fraudulent activity and obtained the degree under false pretenses.

Grievances

UNIVERSITY DECISION
The Health Science Center provides the opportunity for students to file a grievance for academic and non-academic type complaints. Both academic and non-academic grievance processes are managed by the Dean of the school in which the student is enrolled.

PERTINENT INFORMATION
The student grievance policy is based on authority delegated by the Board of Regents of The University of Texas System, and the Texas Higher Education Coordinating Board. Grievance policies for academic and non-academic matters are administered by each school. The student appeal process for academic and non-academic matters resides in the school of student enrollment. The Dean of the school in which the student is enrolled has the responsibility to hear final appeals and to make the final decision.

DEFINITION OF TERMS
For purposes of this policy the terms Complaint and Grievance may be used synonymously.

The Executive Director, Academic, Faculty, and Student Ombudsperson and ADA Compliance and the Director of Student Life, are the designated ombudspersons and can provide unofficial, confidential consultation about a student's rights, responsibilities, and options.

The Assistant or Associate Dean is the position that oversees student affairs in each school.

An Informal Grievance allows a student to pursue a resolution on an unofficial basis with the guidance of his/her Assistant or Associate Dean.

The Formal Grievance procedure is intended to provide a student with an opportunity to formally grieve any perceived act, omission, or issue of a nonacademic nature which adversely affects a student.

An Academic Grievance is a complaint regarding an academic decision or action that affects a student's academic record.

A student may file a Non-Academic Grievance against another student, faculty or staff of the Health Science Center concerning the interpretation, application, or claimed violation of his/her rights.

POLICY
Student Academic Grievance Procedures
Each school at the Health Science Center has a defined academic and non-academic grievance policy to meet the needs of its students. Please refer to the school specific section information:
• School of Nursing: nursing.uthscsa.edu
• School of Medicine: som.uthscsa.edu
• School of Health Professions: uthscsa.edu/shp
Student Nonacademic Grievance Procedure
A student filing a nonacademic grievance should provide the following information: relevant names, locations, dates, witnesses and description of the incident(s) that occurred. If the accused individual is a Health Science Center employee, the employee's immediate supervisor receives the written grievance. Please refer to the Student Mistreatment Policy (p. 71) in this catalog for information on the nonacademic grievance procedure.

Americans with Disabilities Act
In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (http://www.ada.gov/ada_intro.htm) (ADA), the grievance procedures described in this document should be followed for complaints alleging discrimination on the basis of disability.

No qualified student shall, on the basis of disability, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any academic program or activity at the Health Science Center. If a student feels he/she has been subject to discrimination a complaint should be filed with the Executive Director, Academic, Faculty, and Student Ombudsperson and ADA Compliance.

Sexual Misconduct and Civil Rights Violations
Complaints alleging sexual assault and/or sexual harassment should be addressed in accordance with the policies and procedures set forth in the Handbook of Operating Procedures Section 4.2.2. For all other Title VII complaints refer to the Handbook of Operating Procedures Section 4.2.1: "Nondiscrimination Policy and Complaint Procedure (http://www.uthscsa.edu/hop2000/4.2.2.pdf)."

Nonacademic Grievances for Distance Education Students
The Health Science Center desires to resolve student grievances, complaints and concerns in an expeditious, fair and amicable manner. Students enrolled in the Health Science Center who desire to resolve a grievance should follow the Health Science Center's Student Grievance Procedure as stated in our catalog. However, if an issue cannot be resolved internally, a complaint may be filed with the appropriate state regulatory agency where the instruction is provided and/or the accrediting agency for the Health Science Center. Students attending the Health Science Center in face-to-face classes should file complaints with the appropriate state of Texas agency and not with the regulatory agency of their state of residency.

The University of Texas System provides to its students and prospective students contact information for filing complaints with the Southern Association of Colleges and Schools Commission on Colleges, its accrediting agency, and with the appropriate state agency for handling complaints in the student’s instruction and/or residence state. Student Grievance Contact Information for individual States including phone numbers, emails and/or links to state regulatory agencies can be found by visiting the University of Texas System Online Consortium, Contacts for Student Complaints (http://catalog.uthscsa.edu/generalinformation/generalacademicpolicies/grievances/%20https://utsystem.edu/sites/ut-online-consortium).

The Texas Higher Education Coordinating Board
If a student exhausts the Health Science Center grievance process, a complaint may be filed to The Texas Higher Education Coordinating Board. More information on the types of complaints it investigates, processes, and the complaint form can be accessed on The Texas Higher Education Coordinating Board website. (http://www.thecb.state.tx.us)

Leave of Absence Policy

UNIVERSITY DECISION
The Health Science Center recognizes that students may find it necessary to request a leave of absence. On the recommendation of the program director or school designee, the Dean's Office may grant up to a year leave of absence at any one time to students in good academic standing.

A Leave of Absence essentially creates a university placeholder which allows the student's matriculation record to remain active. It will not, however, afford an individual the status of an officially enrolled student. The breaks in enrollment which are formally recognized as leaves of absence fall into one of these categories:

- Leave of absence while in good standing;
- Involuntary Leave of Absence
- In Absentia

Upon return from a leave of absence, students must submit official transcripts from institutions they may have attended while on leave from the Health Science Center. Students who decide not to return to the university must formally withdraw from the institution. To do so, students should contact their respective Dean's Office prior to the end of the first week of the semester the withdrawal is to begin. At the time of withdrawal, students are advised of the conditions under which they might resume their studies in the university should they change their minds at a future date.

PERTINENT INFORMATION
In absentia status provides an opportunity for graduate students to engage in approved study in a location away from the University campus during the academic year while continuing to work under the guidance of the University.

Graduate students whose research or study requires them to remain outside the university for the duration of a full semester can take advantage of in absentia registration. The research or study must be directly related to the student's degree program and of a nature that makes it necessary to be completed outside of the university. This includes students holding a fellowship, internship, or having a graduate student researcher appointment.

DEFINITION OF TERMS
Leave of Absence
Students who must interrupt the regular academic program may be granted a one-year leave of absence. The leave of absence is approved by the Dean's Office. While the student is on leave of absence, the student will not have student status which may affect student loan deferment and access to campus facilities and services.
In Absentia

- **Graduate and Professional students:** In absentia status is a type of registration that allows the students to maintain student status at the university while completing research elsewhere. In Absentia may also allow students who have completed all requirements for graduation to enroll for purposes of a degree conferral. Registration in Absentia is designated as a zero credit hour and the student is assessed a fee.

- **Undergraduates:** In absentia may only be considered for undergraduate students on a case by case basis.

**UNIVERSITY PROCEDURES**

**Leave of Absence While in Good Academic Standing**

Students in good academic standing will normally receive permission to take a Leave of Absence for up to one academic year.

**Involuntary Leave of Absence**

A student who fails to register for two or more consecutive semesters and does not elect to take a leave of absence or to enroll in Absentia will be considered for dismissal from the program.

Students may be dismissed, suspended, dropped from the academic rosters, and refused readmission at any time if circumstances of a legal, moral, health, social, or academic nature are considered to justify such action.

In addition to dismissal due to academic deficiencies, questions of scholastic dishonesty and other infractions of the Rules and Regulations of the Board of Regents of the University of Texas System or the procedures and regulations governing Student Conduct and Discipline of the Health Science Center may be grounds for dismissal. Taking a leave of absence without permission, failing to return at the appointed time from a leave of absence, and failure to pay tuition and fees may lead to a student’s termination.

**Eligibility Criteria for Enrollment in Absentia**

The Graduate Dean is responsible for determining that following criteria has been met:

1. Research or coursework must be directly related to the student’s degree program as evidenced by faculty approval.

2. Research or coursework must be of a nature that makes it necessary to be completed outside of the university for the full academic semester.

3. Doctoral students must be advanced to candidacy by the time the in absentia status would begin.

4. Master’s and graduate professional students must have completed at least one year of coursework by the time the in absentia status would begin.

**Applying for Readmission**

Students who have exceeded the one year approved leave will be involuntarily withdrawn. Students who have been withdrawn from the university are required to re-apply for admission with the burden of proof for eligibility resting on the student. He or she will be competing for admission against:

1. Students who have formally applied and been granted a bona fide leave of absence by the respective school prior to their absence; and/or

2. All new applicants for admission.

**Terms and Conditions of In Absentia Registration**

- **Financial Support:** Students enrolled in absentia are not eligible for university fellowship support, university research grants, and financial aid.

- **Academic Appointments and Employment at Health Science Center:** While enrolled in absentia, students are not eligible to hold apprentice or other student appointment titles.

- **Graduate Student Researcher Employment:** While enrolled in absentia, students are not eligible to hold a Graduate Student Researcher appointment.

- **Health Insurance:** While enrolled in absentia, students are not covered by student health insurance through the institution.

- **Library Privileges:** Students enrolled in absentia maintain borrowing privileges at the Library.

- **International Students:** International students are required to secure OIS approval to enroll in absentia.

**Policy on Auditing Courses**

**UNIVERSITY POLICY**

It is the policy of the Health Science Center to permit a student to audit a course when:

1. Classroom and laboratory space is available

2. Classroom instructor approves the audit

3. Approval is given from the instructor and department chair or COGS chair (for Graduate School only) to the Office of the University Registrar

4. Applicable registration fees are paid

Permission to audit may be cancelled if the space is necessary to admit a student desiring to enroll in the class for course credit.

**PERTINENT INFORMATION**

The UT System Board of Regents approves all fees. See the Schedule of Tuition and Fees (p. 23) for the most current fees in addition to regular course tuition.

Students auditing courses are subject to rules and standards of other offices, such as the Office of the University Registrar and the Office of Veteran Services and Financial Aid.

**UNIVERSITY PROCEDURE**

Students auditing a course will:

1. Comply with Texas State Legislation that mandates those who have not been continuously enrolled at the Health Science Center must have received the bacterial meningitis vaccine within the past five years.
2. Obtain permission from the instructor of record on a Course Audit Request (https://students.uthscsa.edu/registrar/2013/03/forms) form available from the Office of the University Registrar.

3. If permission is approved the student will be registered, and will need to pay necessary fees at the Bursar's Office by the first day of class.

4. Students auditing courses:
   a. Have the full rights and privileges in the class which are afforded all other students of the course, such as use of laboratory facilities, test taking, check out materials, etc.;
   b. Are subject to the same responsibilities of classroom policies as all other students in the course;
   c. Must take and pass all safety tests associated with the course in order to retain laboratory privileges;
   d. Receive a grade of "AU" unless withdrawn from the course. If the student withdrawals from the course, a grade of "W" will be given. The grade will be reported on the grade report and transcript. The audited course will not be used to determine "good standing" or satisfactory progress." Auditing consists of the privilege of hearing and observing only, with no active participation, such as submitting papers, taking part in class discussions or receiving a grade or credit for the course.
   e. May take a course for credit after auditing the course if approved by their school's designated dean;
   f. Cannot receive credit by examination for a course audited;
   g. Cannot use an audited course as a substitution for credit for any other course.

Registration for Audit

Students may be required to audit previously attempted courses as a requirement of remediation. Standards of performance are set by course instructors, academic or clinical coordinators, department committee, or the department chair. Permission to audit one or more courses is granted according to schools’ discretion. Auditing conveys only the privilege of observing and excludes handing in papers or taking part in a class discussion, laboratory exercises, or fieldwork. A grade of "AU" is given but no credit is reported.

Auditing Courses in the Graduate School of Biomedical Sciences

Graduate students must obtain permission to register to audit a course from the course director and the COGS chair of the program in which they are enrolled. Others who wish to register to audit a graduate course must apply to the Associate Dean of the Graduate School for admission as a Non-Degree Student.

Auditing Courses in the School of Nursing

Students may not attend class without proof of registration, either as a matriculated or an auditing student. Anyone may audit a non-clinical course in the School of Nursing (http://nursing.uthscsa.edu) with the approval of the Associate Dean for Graduate Studies, and based on space available. A student auditing a course is not permitted to participate in any clinical activity of the course. The Associate Dean for Graduate Studies seeks the consent of the course instructor. Students pay an audit fee. It is the instructor’s prerogative to stipulate expectations of attendance or assignments for auditors. Audited courses will be recorded on the transcript as audited (AU). No audited course may be taken subsequently for credit.

Policy on Awarding Academic Credit, Transfers and Substitutions

UNIVERSITY DECISION

The University will accept transfer coursework from regionally accredited institutions; however, students may request a review of all transfer work regardless of regional accreditation status. Other transfer coursework such as life experience, extra-institutional learning, ACT test scores, CLEP test scores, GED test scores, technical training, vocational training and military schools may be evaluated on a case by case basis, however under customary circumstances credit will not be awarded.

PERTINENT INFORMATION

The intention of this policy is to maintain best practices in applying transfer credits and to ensure the academic integrity of Health Science Center academic programs.

Senate Bill 111 from the 79th Regular Session of the Texas Legislature (TEC 51.968) requires all Texas public colleges and universities adopt a policy regarding the awarding of academic credit to entering students who have completed a "post secondary level program" while still in high school. Those programs include Advanced Placement (AP) courses, College Level Examination Program (CLEP), and the International Baccalaureate Diploma (IBD). House Bills 133 and 1170 (TEC 51.3041) require all institutions of higher education to award course credit toward a degree for students’ completion of certain military training.

In the “Principles and Philosophy of Accreditation,” under the Standards for All Educational Programs, the Southern Association of Colleges and Schools (SACSCOC) requires that the institution has a defined and published policy for evaluating, awarding, and accepting credit for transfer, experiential learning, advanced placement, and professional certificates. .”

The SACSCOC standards also include a requirement that “the institution awards academic credit for course work taken on a noncredit basis only when there is documentation that the noncredit course work is attested to a designated credit experience.” This SACSCOC standard is addressed in the “Credit Award for Non-Traditional Assessments and Training” section of the accreditation guidelines.

DEFINITION OF TERMS

Residence for Academic Credit

Before earning credit without sitting for courses at the Health Science Center, students must establish residency for academic credit. Establishment of academic residency for credit is done by registering for and completing 25% of all baccalaureate coursework or 33% of all graduate or post-baccalaureate professional coursework at the institution that will award the certificate or degree. Credits previously taken under another program at the Health Science Center may be applied to the academic residency requirement.

Substitutions

Students may request to substitute course requirements with another credit course that is equivalent in content and semester credit units/hours. A substituted course must be another credit course at the Health Science Center, or it can be transferred in from another regionally accredited academic institution.
Transfer Credit
Students may request transfer in credit from another institution regardless of its regional accreditation status. Such requests are submitted in writing for evaluation by the Office of the University Registrar. Students should be prepared to obtain and provide supporting documentation for previous coursework, including course descriptions and syllabi. Students should further note that there are limits to the number of semester credit hours that may be transferred in according to academic residence requirements set forth by SACSOC.

Waivers
Students who possess a license or credential in a particular subject area or professional field may request to have a professional certificate course requirement waived. When a course is waived, the semester units/hours of the waived course must be made up by taking another credit course equivalent to the same number of credit hours waived. When requesting a course waiver, students must provide the department with all requested documentation from their relevant credential(s) or license.

UNIVERSITY PROCEDURE
In addition to sitting for official classes, regardless of method of instruction, students may earn academic credit through the following:

- Transfer of credit
- Course substitutions
- College Level Examination Program (CLEP) subject exams
- Advanced Placement (AP) exams
- Credit for military training
- International Baccalaureate Degree
- Experiential learning

For all degrees awarded, and in accordance with accreditation guidelines under the Southern Association of College and Schools (SACSOC), a minimum of 25% of the baccalaureate coursework and a minimum of 33% of graduate coursework must be taken at the Health Science Center to receive a degree from the institution. The minimum applies to all baccalaureate coursework including courses taken the first two years of college. For example, a degree that requires a total of 120 semester credit hours calls for 30 semester credit hours to be earned via official coursework at the Health Science Center, versus alternate methods of earning credit at the Health Science Center including those listed above.

GENERAL RULES AND REGULATIONS
1. Official transcripts will be evaluated only after all necessary evaluation documents are on file at the Office of the University Registrar.

2. All official documents submitted to the Office of the University Registrar become property of the University and will not be returned or copied for the applicant.

3. Any accepted applicant seeking credit at the University through any means must have met all admissions requirements including, but not limited to, assessment scores, minimum GPAs, submission of previous transcripts, pre-requisites, and the Texas Core curriculum.

4. The total number of semester credit hours awarded for credit may vary depending upon the student’s program of study; however, the total credit awarded (including transfer credits) cannot exceed 75% of the total credits required for the student’s declared program of study for a baccalaureate degree. At least 25% of the total credits in a student’s degree plan must be earned through regular semester credit hour instruction at Health Science Center. This applies to the graduate or post-baccalaureate professional degrees as well, transfer credit cannot exceed 67% of the total credits for the declared program of study.

5. While credit may be awarded by the Health Science Center for external exams and training, this credit may not satisfy requirements for a specific program of study. Students should check with their department to determine if accepted credit will meet program requirements.

6. Credit granted will be reflected on the student’s official transcript either in bulk or associated with a specific course number from the Health Science Center.

7. A grade of CR (credit) will be assigned for any course in which Credit is received. This grade is not computed in the grade point average, and the credit does not count toward calculation of student statistics for that term, including GPA.

8. The student is responsible for obtaining documentation of external exam scores and/or other training and submitting it to the Department or the Office of the University Registrar at Health Science Center. Scores for the College Level Examination Program (CLEP) and Advanced Placement (AP) examinations, as well as other transfer, substitution and waiver documentation, should be received prior to enrollment.

9. Students must complete the Course Substitution Request Form (https://students.uthscsa.edu/registrar/2013/03/forms) for Health Science Center courses with appropriate documentation to initiate the consideration of their request at the department level. This form must be signed by the appropriate Associate Dean. Credit based on exam or test scores require the Credit by Exam Form (https://students.uthscsa.edu/registrar/2013/03/forms) with no additional approval other than the Department and the Registrar certifying that the score reports have been received and validated. The Transfer Credit Form (https://students.uthscsa.edu/registrar/2013/03/forms) will need to be completed for credit awarded from an external institution or internal transfer credit.

10. Students are notified in a timely manner by their academic department and/or dean’s office of the disposition of their requests for course waiver/substitutions.

11. Students who are denied Credit may appeal to the appropriate university administrator through the university’s published appeal process. Also see the section below on “Transfer of Credit” for more information on the resolution of transfer credit disputes for lower-division courses.

12. Credit by local examination satisfies degree requirements in the same way as credit earned by passing a course. Credit earned by examination does not jeopardize eligibility for scholarships that require a certain class standing (e.g. Junior class).

TRANSFER OF CREDIT
Transfer students must submit official transcripts from all previously attended institutions, regardless of whether or not transfer credit is assigned or desired as a condition of admission;
1. The student's transfer course work is identified as a bona fide college-level course and must have been earned at an institution that can ascertain the course content and learning outcomes, correspond with current Health Science Center courses required in the student's program of study, and have been assigned a grade of "C" or better from the originating institution. In accordance with SACSCOC accreditation requirements, no more than seventy-five percent of the total credit hours of the required course work may be applied from transfer credit.

2. Transfer of Courses from Texas Institutions: When possible, the Office of the University Registrar will use the Texas Common Course Numbering System (TCCNS) to perform transfer of credit for courses offered by regionally accredited state institutions.

3. Transfer of Courses from Non-Texas Institutions: Degree or Certificate-seeking students will request transfer of credit from any out-of-state regionally accredited institutions by providing their department official transcript(s) containing the courses to be evaluated.
   a. Transfer credit will be awarded on a semester credit hour scale in all instances, including courses transferred in on quarter-hour scales. Credit transferred in on quarter-hour scales will be converted to semester credit hours proportionately.
   b. Adequate documentation must be provided for consideration of the request. This may include syllabi, catalog course descriptions, or any other documentation deemed appropriate by the department and/or Registrar.
   c. Transfer and/or substitution course work is reviewed and submitted for processing before the end of the student's first term of enrollment (or the first semester after an eligible transfer course has been completed).
   d. Although no specific limit is placed upon the number of transfer/substitution credits that may be accepted, all transfer students must complete the required minimum of 25% of all baccalaureate coursework or 33% of all graduate or post-baccalaureate professional coursework. The transfer process must be completed before students may receive substitution credit for course work completed at another institution.
   e. Academic courses may substitute only for academic courses.

4. All transferred courses will be posted on the student's official transcript with grades of "TR" but will not be calculated in the student's grade point average.

   a. If an institution of higher education does not accept course credit earned by a student at another institution of higher education, the receiving institution shall give written notice to the student and to the sending institution that transfer of the course credit is denied, and shall include in that notice the reasons for denying the credit. Attached to the written notice shall be the procedures for resolution of transfer disputes for lower-division courses as outlined in this section, accompanied by clear instructions outlining the procedure for appealing the decision to the Commissioner of Higher Education.
   b. A student who receives notice as specified in paragraph (a) of this subsection may dispute the denial of credit by contacting a designated official at either the sending or the receiving institution.
   c. The two institutions and the student shall attempt to resolve the transfer of course credit in accordance with Board rules and guidelines.
   d. If the transfer dispute is not resolved to the satisfaction of the student or the sending institution within 45 days after the date the student received written notice of denial, the sending institution may notify the Commissioner in writing of the request for transfer dispute resolution, and the institution that denies the course credit for transfer shall notify the Commissioner in writing of its denial and the reasons for the denial.

WAIVERS/ SUBSTITUTION
1. Student's requesting course waivers or course substitutions will submit a Course Waiver/Substitution Request Form (https://students.uthscsa.edu/registrar/2013/03/forms) to the appropriate department.
2. After evaluating the Request for a Waiver or Course Substitution, the student's department will submit the completed Course Waiver/Substitution Request form to the Office of the University Registrar for processing.
3. Upon receipt of the Course Waiver/Substitution Request Form from the department, the Office of the University Registrar determines that the student has an official transcript containing the respective substitution course(s) on file and enters the course(s) and grade(s) for credit of "CR" into the degree audit system and student's official transcript.
4. Waived courses and/or Course Substitutions will appear on the student's degree audit report. Course waivers and/or Course Substitutions are not counted in cumulative credits and are not used in the calculation of student's GPA.
5. Waivers: Students who possess a license or credential in a particular subject area or professional field may request to have a professional certificate course requirement waived. When a course is waived, the semester units/hours of the waived course must be made up by taking another credit course. When requesting a course waiver, students must provide the program director with documentation of their relevant credential or license, and any other documentation deemed appropriate.
6. Course Substitution: Students may request to substitute a course requirement in a program at the Health Science Center with another credit course that is equivalent in content and credit semester units/hours. A substituted course must be another credit course at the Health Science Center, or the outside course credit can be transferred in from another regionally accredited academic institution (see Transfer Credit below).

CLEP SUBJECT EXAMS
The College Level Examination Program (CLEP) is a series of tests offered by The College Board. The tests cover a variety of subject areas including business, science and mathematics, history and social sciences, foreign languages, and composition and literature. CLEP exams are offered on most college and university campuses; however the Health Science Center does not offer it. The Health Science Center awards course credit for CLEP Subject Exams provided the minimum score has been obtained on the specific test and the department has approved it. CLEP Scores are valid for ten (10) years from the test date.
Students who wish to earn Health Science Center course credit for a CLEP Subject Examination must comply with the following requirements in addition to the policy under General Rules and Regulations for Credit Awards:

1. Student must submit official CLEP test scores to The Office of the University Registrar prior to enrollment for use in academic advising and degree auditing, and no later than the last class day of the first term of enrollment at the Health Science Center. Official scores include scores sent directly by The College Board as well as official score reports received by the student.

2. CLEP credit will not be awarded for courses previously attempted, regardless of score originally earned.

<table>
<thead>
<tr>
<th>Prerequisite Course</th>
<th>CLEP Examination</th>
<th>Minimum Score</th>
<th>Maximum Credit Granted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>Financial Accounting</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td>College Algebra, or Higher</td>
<td>College Algebra</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Pre-Calculus</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Calculus</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>Computer Literacy</td>
<td>Information Systems</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td>Composition &amp; Literature</td>
<td>American Literature</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Analyzing and Interpreting Literature</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>College Composition Modular</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>College Composition</td>
<td>50</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>English Literature</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Humanities</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Business Administration</td>
<td>Principles of Management</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td>Business Law</td>
<td>Introductory Business Law</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td>Marketing</td>
<td>Principles of Marketing</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td>History and Social Sciences</td>
<td>American Government</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>History of the United States I</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>History of the United States II</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Human Growth and Development</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Introduction to Educational Psychology</td>
<td>50</td>
<td>3</td>
</tr>
</tbody>
</table>

### ADVANCED PLACEMENT

Advanced Placement (AP) exams are offered by the College Board to students who complete AP courses while enrolled in high school. The exams cover a variety of subject areas including business, science and mathematics, history and social sciences, foreign languages, and composition and literature. The Health Science Center awards course credit for AP Exams providing the minimum score has been obtained on the specific test and it has been approved by the program. AP scores are valid ten years from the test date.

Students who wish to earn Health Science Center course credit for an Advanced Placement Examination must comply with the following requirement in addition to the General Rules and regulations for Credit Awards:

1. Submit official AP test scores to the Office of the University Registrar, preferably prior to enrollment for use in academic advising and degree auditing.

<table>
<thead>
<tr>
<th>Core Curriculum Course</th>
<th>AP Test Name</th>
<th>Minimum Score</th>
<th>Maximum Credit Granted</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS 1303, 1304</td>
<td>Art History</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>BIOL 1406, 1407</td>
<td>Biology</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>CHEM 1411, 1412</td>
<td>Chemistry</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>COSC 1301, ITSE 1302, 1307</td>
<td>Computer Science</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ECON 2301, 2302</td>
<td>Macroeconomics, Microeconomics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1301, 1302</td>
<td>English Language and Composition</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>ENGL 2321 or 2322</td>
<td>English Literature and Composition</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>GOVT 2305</td>
<td>United States Government and Politics</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1301, 1302</td>
<td>U.S. History</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>MUSI 1306</td>
<td>Music Theory</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
MATH 1342  Statistics  3  3
MATH 2312  Calculus AB  3  3
MATH 2413  Calculus AB  3  4
MATH 2414  Calculus BC  3  6
PSYS 1401, 1402  Physics B  3  8
PHYS 2425, 2426  Physics C  3  4
PSYC 2301  Psychology  3  3
SPAN 1311  Spanish Language and Culture  3  6
SPAN 1311, 1312, 2311, 2312  Spanish Language  5  12
SPAN 2323  Spanish Literature and Culture  3  9
SPAN 2323, 2324  Spanish Literature and Culture  4  9

CREDIT FOR MILITARY TRAINING

The Health Science Center employs the American Council on Education’s Guide to the Evaluation of Educational Experiences in the Armed Services (https://www.acenet.edu/news-room/Pages/Military-Guide-Online.aspx) to assess potential transferability of Military Occupational Specialties (MOS). Specific degree applicability is at the discretion of the Dean’s Office over the student’s program.

Transfer credit is not awarded for the following:

- “Lower-division baccalaureate/associate degree category” ACE recommendations.
- “Vocational certificate category” ACE recommendations.
- Basic military training. Some institutions recognize basic training, usually in fulfillment of physical education requirements, but the Health Science Center does not offer physical education.

Transfer credit is awarded for courses under the “upper-division baccalaureate category” in the ACE Guide.

Acceptable forms of documentation include the following:

- AARTS (https://jst.doded.mil/smart/welcome.do) Transcript (Army ACE Registry Transcript)
- SMART (https://jst.doded.mil/smart/welcome.do) Transcript (Sailor/Marine ACE Registry Transcript)
- Form DD-214 (Report of Separation)
- Form DD-295 (Application for the Evaluation of Learning Experience During Military Service)

To be considered official, any of the credentials above (except form DD-214) must be sent to the Health Science Center directly from the issuing agency. Students/applicants may submit an original DD-214; a certified copy will be made for office use and the original returned.

Students should be advised that, unlike college or high school transcripts, submission of military credentials for potential transfer credit is optional and is neither required for undergraduate admission nor subject to admission deadlines. However, any credit awarded may be applied during the student’s first semester of coursework; therefore official documents should be provided as early as possible.

DANTES Minimum Score Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>DANTES Examination</th>
<th>Minimum Score</th>
<th>Maximum Credit Granted</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Algebra, or higher</td>
<td>Fundamentals of College Algebra</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Communication</td>
<td>Technical Writing</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Computer Literacy</td>
<td>Computing and Information Technology</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Management Information Systems</td>
<td>Management Information Systems</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Lifespan Developmental Psychology</td>
<td>Lifespan Developmental Psychology</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Note: Many DANTES examinations may satisfy credits for electives.</td>
<td>Varies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art of the Western World</td>
<td>Art of the Western World</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Human/Cultural Geography</td>
<td>Human/Cultural Geography</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Ethics in America</td>
<td>Ethics in America</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to World Religions</td>
<td>Introduction to World Religions</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Business</td>
<td>Introduction to Business</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Human Resource Management</td>
<td>Human Resource Management</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Supervision</td>
<td>Principles of Supervision</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Fundamentals of College Algebra</td>
<td>Fundamentals of College Algebra</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Statistics</td>
<td>Principles of Statistics</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Astronomy</td>
<td>Astronomy</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>Environmental Science</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Physical Science</td>
<td>Principles of Physical Science</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Lifespan Developmental Psychology</td>
<td>Lifespan Developmental Psychology</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>General Anthropology</td>
<td>General Anthropology</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Organizational Behavior</td>
<td>Organizational Behavior</td>
<td>400</td>
<td>3</td>
</tr>
</tbody>
</table>
Course Equivalencies for the Various Exams

<table>
<thead>
<tr>
<th>Exam Area</th>
<th>Semester Hours</th>
<th>Minimum Score</th>
<th>UTHSCSA Course Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>6</td>
<td>5</td>
<td>ENGL 0001 &amp; 0002</td>
</tr>
<tr>
<td>History Americas</td>
<td>6</td>
<td>5</td>
<td>HIST 0001 &amp; 0002</td>
</tr>
<tr>
<td>Economics</td>
<td>6</td>
<td>5</td>
<td>SSCI 0001</td>
</tr>
<tr>
<td>Psychology</td>
<td>6</td>
<td>5</td>
<td>SSCI 0001</td>
</tr>
<tr>
<td>Philosophy</td>
<td>3</td>
<td>5</td>
<td>HUMA 0001</td>
</tr>
<tr>
<td>Chemistry</td>
<td>8</td>
<td>5</td>
<td>NSCI 0001</td>
</tr>
<tr>
<td>Biology</td>
<td>8</td>
<td>5</td>
<td>NSCI 0002</td>
</tr>
<tr>
<td>Physics</td>
<td>8</td>
<td>5</td>
<td>NSCI 0003</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4</td>
<td>5</td>
<td>MATH 0001</td>
</tr>
<tr>
<td>Visual Arts A</td>
<td>3</td>
<td>5</td>
<td>FINE 0001</td>
</tr>
<tr>
<td>Visual Arts B</td>
<td>3</td>
<td>5</td>
<td>FINE 0001</td>
</tr>
</tbody>
</table>

CREDIT BY EXAM/CHALLENGE EXAM

Health Science Center Challenge Exams are comprehensive examinations for courses in which proficiency may be determined by examination. These exams are designed and written by qualified faculty and authorized by the department and Dean’s Office. No GPA-weighted credit is awarded on the basis of successful performance on these, but, they allow a student two privileges:

1. The opportunity to enroll in advanced level courses in the area of proficiency.
2. The opportunity of satisfying various college or departmental “area” of or proficiency requirements without taking prescribed courses.

Proficiency or exemption examinations for many courses are available to any student currently enrolled in a degree program at the Health Science Center. A student may be eligible to earn credit for a course by passing the examination designated and administered by an academic department. Not all departments offer credit by examination, and departments set the passing scores. Students should consult with their Dean’s Office or academic department for more information.

Credit by examination is reported to the Office of the University Registrar by the academic department upon request from the student using the Credit by Exam Form. Credits earned by examination are not included in the calculation of the student’s grade point average.

CREDIT FOR EXPERIENTIAL LEARNING

Experiential learning allows students to receive college/university credit for equivalent educational experiences acquired through earlier schooling situations, work/on-the-job training or life experiences. Upon approval of the appropriate department chair and/or director, a student may develop a petition for a course or courses offered by the Health Science Center to gain college-level credit. Petitions are reviewed by the appropriate department chair and/or director and submitted to the Dean’s Office for approval. A petition for semester credit for experiential learning is a document that demonstrates learning and knowledge gained through work and life experiences. The petition must specifically state the skills and knowledge gained that is equivalent to those taught in the course(s). The petition can include knowledge and skills gained from a wide variety of sources including, but not limited to: Full or part-time jobs, independent reading and study, training program or in-service courses, volunteer work, cultural and artistic pursuits, military service and travel study.

The approval process for awarding semester credit for experiential learning will include the following steps in addition to the General Rules and Regulations for Credit Awards:

1. The student submits the Credit by Exam Form (https://students.uthscsa.edu/registrar/2013/03/forms) along with a formal written petition for credit for experiential learning and supporting documentation to the department. Based on the documentation and evaluation of the credentials, experience and skills listed on the petition for semester credit for experiential learning, the department chair/director may:
   a. Recommend approval of equivalent semester credit hour course credit to the Dean’s Office or
   b. Close the request with no recommendation for approval.
The department chair/director will notify the student promptly when the request for semester credit hour equivalent course credit is closed with no recommendation for approval. If approved, the department chair/director forwards the Credit by Exam Form and documentation to the Dean's Office.

2. The Dean's Office may:
   a. Recommend approval of equivalent semester credit hour course credit to the Office of the University Registrar or
   b. Close the request with no recommendation for approval.

   The Dean's Office will notify the student promptly when the request for semester credit hour equivalent course credit is closed with no recommendation for approval. If approved, the Credit Award form and supporting documentation is forwarded to the Office of the University Registrar.

3. The Office of the University Registrar receives the recommendation form with related documentation for processing.

Policy on Classification of Students

Classification by School and Program

Students are classified according to school and program, as well as attendance statuses that include full-time, half-time, or less-than-half-time.

Students are also classified according to their schools and programs. This is also known as the institution's academic structure. Students are associated with one of the institution's five schools, as well as his or her academic program under that school and, if applicable, a track under that academic program. These designations may be found on students' enrollment verifications and official transcripts.

Classification by Attendance and Number of Hours Enrolled

A graduate student is considered full-time if he or she is registered for a minimum of:

- 9 semester credit hours during a fall or spring semester; or
- 6 semester credit hours in a summer semester.

A graduate student is considered half-time if he or she is registered for a minimum of:

- 5 semester credit hours during a fall or spring semester; or
- 3 semester credit hours in a summer semester.

Any hours less than those enumerated above for graduate students prompt classification as less-than-half-time.

An undergraduate student is considered full-time if he or she is registered for a minimum of:

- 12 semester credit hours during a fall or spring semester; or
- 6 semester credit hours in a summer semester.

Any hours less than those enumerated above for undergraduate students prompt classification as less-than-half-time.

Schools may impose additional semester credit hour requirements for students holding assistantships or fellowships which exceed the minimum stated above. Exceptions to the above criteria are rare, but include students enrolled in academic programs where the combination of hours of academic course work, work, research, or special studies is sufficient to warrant a classification of full-time. These exceptions are specified elsewhere in the catalog in the applicable program description(s).

It is also imperative that international students contact The Office of International Services to verify the minimum number of hours required to maintain specific visa statuses and types.

Registration Policy on Adding/Dropping Courses

UNIVERSITY DECISION

Students may add and drop courses using My Student Center via students.uthscsa.edu during official Web Registration days as designated by The Office of the University Registrar (http://students.uthscsa.edu/registrar) in the official academic calendar (http://students.uthscsa.edu/registrar/2013/04/academic-calendar) for each term. Under no circumstances are students permitted to add classes to their schedules after the Census Date, unless otherwise dictated by the school's profession-specific accreditation body. Check the official Academic Calendar for published Census Dates.

PERTINENT INFORMATION

A full or partial refund may be possible for dropped courses contingent on the date of a drop and the official start of the term. See the Refund Schedule (p. 25) in this Catalog for more detailed information.

Students may drop courses at any time during the semester, but before administration of final exams or final lab exercises, if approved by their program director, associate dean, or other designated official. Withdrawal grades may consist of W (Withdrawal), WP (Withdraw Passing) or WF (Withdraw Failing). Students should check the Catalog section specific to their respective schools for applicable grades.

Students should also note that dropped courses will count towards the "attempted credit hours" for the purpose of calculating excess hours under Texas Education Code §54.068 and §61.0595 for undergraduate students, and Texas Education Code §54.012 for doctoral students in the Graduate School of Biomedical Sciences, including Nursing Ph.D. students. See the Excess Hours Policy (p. 20) in this Catalog for more detailed information.

Additional Applicable Legislation:
The Six-Course Drop Limit stems from legislation applicable to all Texas public colleges and universities. This legislation was passed by the Texas Senate (SB 1231) and applies to all students entering into any Texas public institution of higher education as a first-time freshman and thereafter. Courses taken at a private institution or out-of-state do not count toward the six-course limit.
A first-time enrolled student with undergraduate status in a Health Science Center undergraduate program is precluded from dropping any course if, at the time of enrollment, such undergraduate student has an official transcript(s) indicating that such student has accumulated six documented drops. A documented drop occurs when a) the student was enrolled in a course, b) the student dropped the course without receiving a grade or penalty, and c) the student was not withdrawing completely from the institution. At many institutions, these are referred to as “Q drops,” where “Q” denotes the assigned grade.

Notwithstanding the above, the Health Science Center may permit drop(s) in excess of the six drops for the following reasons:

1. A severe illness or other debilitating condition that affects the student’s ability to satisfactorily complete a course.
2. The student’s responsibility for the care of a sick, injured, or needy person if the provision of care affects the student’s ability to satisfactorily complete a course.
3. The death of a person who:
   • Is considered to be a member of the student’s family; or
   • Is otherwise considered to have a sufficiently close relationship that demonstrates good cause.
4. The active duty service of the student or person considered to be a member of the student’s family and considered a sufficiently close relationship that demonstrates good cause.
5. The change of a student’s work schedule or financial support situation that seriously affects the student’s ability to satisfactorily complete the course.
6. Other good cause as determined by the Health Science Center.

A refund or adjustment of tuition and mandatory fees for dropped courses and student withdrawals shall be governed by Section 54.006 of the Texas Education Code as they relate to Section 51.907 (http://www.statutes.legis.state.tx.us/Docs/ED/htm/ED.51.htm#51907) of the Texas Education Code. The change in law made by Section 54.006, as it applies to Section 51.907, applies to tuition and mandatory fees charged with the beginning of Fall 2007.

DEFINITION OF TERMS

Adding
This refers to the process by which students enroll in one or more courses at the Health Science Center, including non-credit courses, courses bearing zero semester credit hours, and enrolling in absentia.

Census Date
The Census Date is determined in accordance with rules set forth by The Texas Higher Education Coordinating Board, including the length of the term in weeks. It is the date by which all registration must be finalized, and tuition and fees paid.

Class
This references a specific instance of a course within a particular term. For example, a course entitled “Introduction to Sciences” may be offered for fifteen weeks in the fall term. This is the class associated with that course.

Course
This refers to a set of meeting components (lectures, labs, clinics, or a combination of several components) that together make up a unit that can be taught during a specified term.

Dropping
This refers to the procedure by which students remove themselves from one or more of the courses in which they are enrolled while continuing in the remainder of their courses. A student who is enrolled in only one course and intends to drop that course must either withdraw from the university or apply for a leave of absence if the student intends to drop the course.

Holds
Holds are managed by various departments for various restrictions. The owner of the hold may be the only department to release a hold. Certain holds restrict registration which prevent enrollment transactions including but not limited to adding courses.

Term
This refers to the time frame in which a class is taught, and is specific to the school in which it is taught. Terms at the Health Science Center include fall, spring, summer, and academic years (as in, 2010-2011). Schools operate either under traditional semesters (long fall, long spring, short summer) or super semesters (long fall and long spring; no summer term).

UNIVERSITY PROCEDURE

Adding and Dropping
Students have the ability to add or drop courses online using My Student Center via students.uthscs.edu during the official web registration time period identified in the academic calendar (http://students.uthscs.edu/registrar/2013/04/academic-calendar).

Any adds or drops approved for processing outside web registration dates must be documented on the Add/Drop Form (https://students.uthscs.edu/registrar/2013/03/forms). All necessary signatures must be obtained in order for the form to be processed in The Office of the University Registrar. Under most circumstances, forms are processed within two business days. Once processed, a copy of the form will be maintained in the student’s academic record. It is the student’s responsibility to inquire with the Bursar’s Office regarding any expected refunds, as well as additional tuition owed. Outstanding balances may prohibit additional registration and/or receipt of the diploma.

Under no circumstances may a student ask another individual to register her or him on her or his behalf. This includes peers, faculty, and other support staff. Only students may register for courses; outside designated web registration dates, personnel from The Office of the University Registrar may do so.

Census Date and Failure to Pay Tuition and Fees
Absolutely no changes to enrollment will be made after the Census Date. Furthermore, a student who fails to pay tuition and fees by the Census Date or make sufficient payment arrangements with the Bursar’s Office will be permanently dropped from all their courses that semester. Students who are administratively withdrawn from all classes as a result of failure to pay or make suitable payment arrangements with the Bursar’s Office by Census Date will not have any transcriptable record of enrollment for that term.

The student’s tuition and fees will then be recalculated to reflect a balance of zero. During that term, the student does not carry any registration, but may register along with other students for the subsequent semester. The student should meet with an academic advisor or designated associate dean to determine how the curriculum might be
earned in courses taken

Graduation with University honors is based on the average of all grades

have completed at least 30 semester credit hours at the Health Science

to graduate with any University honors or distinctions, students must

designation honors and

The Health Science Center is committed to higher education in the

degree is essential to the success of the University’s education and research mission and violations of academic integrity constitutes serious offenses against the entire academic community.

Academic integrity is based on educational principles and procedures that protect the rights of all participants in the educational process and validate the legitimacy of degrees awarded by the University. In the investigation and resolution of all allegations of student academic dishonesty, the University’s actions are intended be corrective, educationally sound, fundamentally fair, and based on reliable evidence.

The Scholastic Dishonesty policy is adopted by the University based on authority delegated by the Board of Regents to the President and is implemented and enforced under the direction of the Deans and Vice President for Academic, Faculty and Student Affairs.

Please note that culpability is not diminished when scholastic dishonesty occurs in drafts which are not the final version or when the student claims not knowing the policy or procedures.

Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes but not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt commit such acts.

For more information on Scholastic Dishonesty, please see Policy 14.1.1 (http://uthscsa.edu/hop2000/14.1.1.pdf) of the Health Science Center Handbook of Operating Procedures (HOP).

**Scholastic Dishonesty Policy**

As an academic university dedicated to the creation, dissemination, and application of knowledge, the Health Science Center is committed to fostering an intellectual and ethical environment based on the principles of academic integrity which is essential to the success of the University’s education and research mission and violations of academic integrity constitutes serious offenses against the entire academic community.

Scholastic Dishonesty Policy

UNIVERSITY POLICY

It is the policy of the Health Science Center to recognize the academic achievement of students with scholastic honors and distinctions awarded at the end of each term and at graduation.

PERTINENT INFORMATION

The Health Science Center is committed to higher education in the State of Texas and recognizes the academic achievement of students each term and at that time of graduation by designating honors and distinctions based on their GPAs, coursework, or programs. To be eligible to graduate with any University honors or distinctions, students must have completed at least 30 semester credit hours at the Health Science Center.

Graduation with University honors is based on the average of all grades earned in courses taken in residence at the Health Science Center,

whether the courses were passed, failed, or repeated. All courses regardless of grading basis are counted in the 30 hour minimum, but only letter-graded courses are used to determine the grade point average. Certificate and non-degree seeking students are not eligible for graduation scholastic honors.

Graduation with distinction is based on the successful completion of specified coursework, often with minimum grades, as determined by the school offering such distinctions. To qualify for consideration, students must have completed at least 30 semester credit hours, or two full academic years, at the Health Science Center.

**DEFINITION OF TERMS**

**Dean’s List**

The School of Dentistry, School of Health Professions and School of Nursing recognize students who meet a minimum GPA as qualifying for the Dean’s List each semester, including the term of graduation. Qualifying GPAs can be found under each school’s respective Catalog section.

**Distinction**

Some schools recognize students’ commitment to and excellence in a specific area of study within their program by recommending they graduate with distinction in a given area.

**GPA**

An acronym for grade point average, it represents an average of the numerical weight assigned to letter grades earned in credit-bearing classes graded on a letter basis (i.e. A, B, C, D and/or F). For more information, please see the Student Grade Point Average Policy.

**In Residence**

This term refers to a student establishing academic residence at the university by completing a minimum number of semester credit hours that qualifies them for honors and distinctions.

**Latin Honors**

These include Cum Laude, Magna Cum Laude and Summa Cum Laude, each of which are described further under University Procedures below.

**UNIVERSITY PROCEDURES**

**Scholastic Honors by Term**

Students at the end of term who earn GPAs of 3.5 or higher are recognized as qualifying for the Dean’s List. Students may earn this honor multiple times for each semester in which they are registered in credit-bearing classes graded on a letter basis (i.e. A, B, C, D and/or F). Qualifying GPAs can be found under each school’s respective Catalog section.

Dean’s List recognition is notated under the appropriate grading term on the official transcript. The recognition may also appear on the official Commencement Program for graduating undergraduate, graduate, and professional-level students.

**Scholastic Honors at Graduation**

Graduating undergraduate students who earn particular GPAs at the end of their respective programs shall be recognized with Latin honors based on specific GPA ranges. These designations only apply to undergraduate
students. GPA ranges and the Latin honors applicable to them are as follows:

- Cumulative GPA 3.5 – 3.69: Cum Laude
- Cumulative GPA 3.7 – 3.89: Magna Cum Laude
- Cumulative GPA 3.9 – 4.00: Summa Cum Laude

Latin honors are noted on diplomas and official transcripts.

Graduate or professional students do not receive Latin honors designations. Other school-specific honors may be noted on their transcript based on the schools’ policies. Graduate-level students within the School of Nursing are awarded high honors with a cumulative GPA of 4.0.

Students in some schools may recognize students’ commitment to and excellence in a specific area of study within their program by recommending graduation with distinction. Examples include distinction in research and distinction in teaching. These are noted on their official transcripts, but not on their diplomas. More information on each school’s policies can be located under their respective, school-specific policies.

Schools may choose to denote distinctions and honors awarded on the official Commencement Program published each May.

Student Notification of Honors
The school's associate dean for student affairs or other designated official carries the responsibility for obtaining confirmation of honors and apprising students accordingly. The deans' offices manage achievement of distinctions within their own schools. Students shall be notified in a timely manner whenever they have achieved honors or distinction at the end of a term or upon graduation.

Student Absences
UNIVERSITY DECISION
It is the policy of the Health Science Center to grant an excused absence from class attendance to a student for the observance of a religious holy day when all procedures for making the request for an excused absence have been met by the student. Failure to comply with all assignments scheduled during the time of absence shall be subject to rules for grading of the program, course and instructor. The grading policy (p. 40) in this Catalog provides additional information.

PERTINENT INFORMATION
The implementation of this policy and procedure is in compliance with Senate Bill 738, codified in Section 51.911 of the Texas Education Code, which states, "...a student who is excused under this section may not be penalized for the absence, but the instructor may appropriately respond if the student fails to satisfactorily complete the assignment or examination."

DEFINITION OF TERMS
Religious Holy Day
This is a day observed by a religion whose place of worship is exempt from property taxation.

GENERAL RULES AND REGULATIONS
Absences for Religious Holidays
Absences for religious holidays must be formally approved by the appropriate course instructor(s) in advance of the actual holiday. The form (https://students.uthscsa.edu/registrar/2013/03/forms) is included on the website of The Office of the University Registrar. Schools may prescribe specific deadlines available under their school policies in this Catalog.

Military Absences and Leaves of Absence
Under certain circumstances, a student who is required to participate in active military services is excused from scheduled classes or other required activities and will be allowed to complete an assignment or exam within a reasonable time after the absence. The excused absence is permitted only if the student will not miss more than 25% of the total number of class meetings or the contact hour equivalent (not including the final examination period) for the specific course or courses in which the student is enrolled at the beginning of the period of active military service.

Students expected to be absent from classes for active duty must obtain approval from their respective associate dean in order to take a Leave of Absence. All related procedures, including completion of a Student Clearance Form, must be followed. More information is available under the Leave of Absence Policy (p. 45) in this Catalog.

UNIVERSITY PROCEDURES
Absences for Religious Holidays
1. Students may take an examination or complete an assignment missed during the observance of a religious holy day(s) if they give notification of the planned absence to the instructor(s).

2. The student shall request the excused absence immediately following registration/enrollment or within the first fifteen days of the term.

3. A student shall notify the instructor by completing the Notification of Planned Absence to Observe a Religious Holy Day form available on the website of The Office of the University Registrar.

4. The Notification of Planned Absence to Observe a Religious Holy Day form is initiated by the student and signed and dated by the instructor.

5. Instructors, upon notification, will stipulate a "reasonable time" in which the student may complete an assignment or take an examination scheduled on the day(s) the student is absent for the purpose of observing a religious holy day.

6. If the student fails to satisfactorily complete assignments or examinations within the stipulated "reasonable time," loss of credit for work or a failing grade for an examination will result.

Military Absences and Leaves
1. Students should provide a copy of their orders to report for active duty to their respective associate dean as soon as possible upon receipt.

2. The Student Clearance Form is obtained by the student and signed by the associate dean and circulated to the departments identified within the form.
3. Students absent from classes for active duty have up to two years from the last term of enrollment to return and complete outstanding coursework to resolve the Incomplete (I) grade.

4. The Incomplete initially awarded will be converted to a ‘W’ for ‘withdrawal.’

5. Students who fail to return from a military leave of absence within two calendar years will have their statuses converted to indicate “Discontinued; Did not return,” and all incomplete grades will be converted to withdrawal grades (“W”).

6. Students who do not return within the specified time frame must re-apply for admission to the program. If admitted, they must re-register for the course and pay any associated tuition and fees again.

For more information on leaves of absences, see the Leave of Absence Policy (p. 45) in this Catalog.

**Transcript Requirement Policy**

**UNIVERSITY DECISION**

Applicants and students are required to submit official transcripts from all previous colleges and universities attended in accordance with accreditation standards of the Southern Association of Colleges and Schools (http://www.sacscoc.org) Commission on Colleges (http://www.sacscoc.org) (SACSCOC). Any separation from the university that led a student to take coursework at another institution must be documented on an official transcript where coursework was taken. Students who take coursework concurrently at another institution must also provide official transcripts as courses are being completed. Students bear the responsibility for providing these transcripts.

**PERTINENT INFORMATION**

The Southern Association of Colleges and Schools Commission on Colleges (http://www.sacscoc.org) (SACSCOC) calls for all institutions to assume responsibility for the academic quality of any coursework considered or transferred as part of the admissions process, especially as it pertains to credit for transfer coursework, experiential learning, and advanced placement, among other functions. This is done by evaluating all transcripts from institutions previously attended and maintaining a complete academic record. See SACSCOC Principle of Accreditation 3.4.4 for additional information. Official transcripts from previous institutions are also required to comply with Texas legislation including the Six-Drop Limit (Under Section 51.907 of the Texas Education Code) and Excess Hours limits (under Texas Education Code §54.068 and §61.0595, as well as Texas Administrative Code Chapter 13, Subchapter F, §13.102 through §13.108). Also see the Excess Hours Policy (p. 20) for more information.

**DEFINITION OF TERMS**

**Applicant**

For the purposes of this policy, an applicant is an individual seeking admission to a program at the Health Science Center who has not been admitted.

**Census Date**

The Census Date is determined in accordance with rules set forth by The Texas Higher Education Coordinating Board, including the length of the term in weeks. It is the date by which all registration must be finalized, and tuition and fees paid.

**Holds**

These are placed on students’ electronic academic records in the student information system. They prohibit enrollment transactions including but not limited to adding courses. Holds are managed by various departments for purposes of collecting critical information at the time of matriculation. Designated personnel in the department responsible for the hold may be the only ones to release a hold.

**Matriculation**

This is the process by which applicants offered admission to a program become students. It includes processes from the point of accepting an offer of admission, to providing documentation required by various institution offices, to official registration and verification of enrollment after Census Date.

**Official Transcript**

This is a transcript that reaches The Office of the University Registrar in a sealed envelope from the issuing institution, and the enclosed transcript must be printed on the institution’s official transcript paper and bear the institution’s seal and signature from the registrar or another authorized individual designated by the institution’s executive leadership.

**Final Transcript**

A final transcript reflects all coursework taken at an institution with all courses graded. If a degree was awarded at that institution, the degree is posted.

**Student**

For the purposes of this policy, a student is an individual who has been admitted to a program at Health Science Center facing matriculation requirements including submission of final, official transcripts.

**UNIVERSITY PROCEDURE**

**Transcripts from United States Institutions**

- An official transcript is one that has been officially issued by an institution and received at the Health Science Center in an envelope sealed by the issuing institution. The transcript will contain the official school seal or stamp and the signature of the Registrar.

- Students are required to submit official transcripts from each college or university previously attended or currently attending, regardless of degree sought. Transfer credits indicated on another school’s transcript are not accepted in lieu of submitting the original institution record for that coursework. Copies or other versions available through third-party records or websites are also unacceptable.

- If the issuing institution will not release an official transcript to the student, the student should request that it be sent directly to each proposed department at the Health Science Center to which admission is being sought or offered.

**Transcripts from Institutions Outside the United States**

An international educational record will be considered complete and official if:

- Each document is an original or a copy that is issued and certified by the university or college. It must contain the original stamp or seal
of the institution and the original signature of the appropriate school authority.

- It is a comprehensive record of all study completed, detailing courses studied and the grades (marks) received, in the form of a transcript or yearly grade (mark) sheets.

- It includes all degree/diploma certificates conferred. If the degree is not posted on the transcripts, a separate degree certificate must indicate the type of degree awarded and the date of award. Verification of graduation is required.

- Each document must be submitted in the original language and must be accompanied by a NACES Members (http://www.naces.org/members.htm) evaluation agency English translation.

- Copies of original documents must be certified by the appropriate authority of the issuing university or college. Each page of the copy must contain the original signature and title of the school authority, the date of issuance, and the institutions original stamp or seal.

- Individuals whose foreign university issues only one set of official documents must consult with their respective academic departments directly for alternate methods of submission.

Please be advised that all materials submitted in support of an application become the property of the Health Science Center and will not be returned to the applicant or forwarded to other schools or agencies. Additionally, transcripts will not be copied for applicants or students. For "one of a kind" and difficult to replace documents, we suggest that applicants have the issuing institution(s) certify copies for submission for the application process. This will allow applicants in particular to keep original documents. However, official transcripts will still be required in the event of admission for those incoming students who submitted certified copies of transcripts as part of the application process.

Applicants and students with coursework from foreign institutions where original documents cannot be produced or reproduced must contact the Office of the University Registrar (http://students.uthscsa.edu/registrar) directly. The Office of the University Registrar will verify transcript issuing constraints at those institutions in those countries in order to offer alternatives to this requirement, including acceptance of notarized copies in lieu of official transcripts. Only applicants and students making formal arrangements with the Office of the University Registrar may exercise this option.

Institutional Policies

Students must abide by all institutional policies, which are administered by pertinent departments and divisions across the Health Science Center. Institutional policies are consistent with those that are also identified in the Health Science Center Handbook of Operating Procedures (http://uthscsa.edu/hop2000).

For more detailed information, select a specific Health Science Center Catalog policy from the list.

Alcohol, Drug and Chemical Abuse Policy

The purpose of this statement is to comply with the federal Safe and Drug-Free Schools and Communities Act Amendment of 1989 and the Drug-Free Workplace Act of 1988. The statements provided below represent the Health Science Center policy with regard to the abuse and/or distribution of alcohol, drugs, and controlled substances by faculty and staff.

The unlawful manufacture, sale, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and on any property under the control of the Health Science Center. A controlled substance is any substance so defined by federal or state statute or regulation.

Please review Section 8.2 “Alcohol, Drug and Chemical Matters” in the Handbook of Operating Procedures (http://uthscsa.edu/hop2000/8-toc.aspx) for a more detailed explanation of the policy.

Alcohol Policy for Student Organizations

The Regents’ Rules and Regulations, Rule 80102, “Alcoholic Beverages” prohibits the use of alcoholic beverages on property and in buildings and facilities owned or controlled by the Health Science Center. However, the President may waive this prohibition with respect to any event sponsored by the University. An event is considered “sponsored” if a budgeted office or department of the Health Science Center is responsible for organizing the event, inviting attendees, and paying expenses related to the event, including the purchase of food and beverages; meetings or events organized and presented by registered faculty, staff, or student organizations are not events sponsored by the Health Science Center.

State law relating to alcoholic beverages will be strictly enforced at all times on property and buildings and facilities owned or controlled by the Health Science Center. All non-student requests should be made using the Request for Alcoholic Beverages on Campus. The form must be completed and submitted through the Chair or Director of the requesting sponsoring unit to the appropriate Executive Committee member (Dean or Vice President) at least ten (10) working days prior to the event. The Executive Committee Member will review the form and make a recommendation to the President as to whether or not the request should be approved.

Students must use the form entitled Request for Alcoholic Beverages on Campus for Student Organizations. The form should be submitted to the Office of Student Life for review and signature. Please see Section 8.2.3 “Use of Alcoholic Beverages on Campus”, of the Handbook of Operating Procedures for a more detailed explanation of the policy.

Bacterial Meningitis

Important Information about Bacterial Meningitis

Pursuant to SB 1107 enacted by the State of Texas and SB 62 thereafter, all new students enrolling in the Health Science Center must provide proof that the meningitis vaccination was administered at least 10 days
prior to the first day of the term. Vaccinations must have been received or renewed within the last 5 years. The legislation provides two exceptions:

1. students who are over 21 years of age and
2. students taking 100% of classes online.

Students who qualify for exceptions and wish to exercise the same must use an affidavit issued from the Texas Department of State Health Services (https://corequest.dshs.texas.gov) to claim an exemption based on conscientious or religious objections. Failure to do so consistent with the noted time frame will preclude registration.

Bacterial Meningitis is a serious, contagious, potentially deadly disease that can progress extremely fast, so take utmost caution. It is an inflammation of the membranes that surround the brain and spinal cord. The bacteria that cause meningitis can also infect the blood. This disease strikes about 3,000 Americans each year, including 100–125 on college campuses, leading to 5–15 deaths among college students every year. There is a treatment, but those who survive may develop severe health problems or disabilities. Keeping up to date with recommended immunizations and maintaining health habits such as getting plenty of rest and avoiding close contact with sick people, are ways to prevent Meningitis.

What are the symptoms?

- High fever
- Severe headache
- Vomiting
- Rash or purple patches on skin
- Stiff neck
- Light sensitivity
- Nausea
- Confusion and sleepiness
- Seizures
- Lethargy

There may be a rash of tiny, red-purple spots caused by bleeding under the skin. These can occur anywhere on the body.

The more symptoms, the higher the risk, so when these symptoms appear seek immediate medical attention. How is bacterial meningitis diagnosed? Diagnosis is made by a medical provider and is usually based on a combination of clinical symptoms and laboratory results from spinal fluid and blood tests.

Early diagnosis and treatment can greatly improve the likelihood of recovery.

How is the disease transmitted?

- The disease is transmitted when people exchange saliva (such as by kissing, or by sharing drinking containers, utensils, cigarettes, toothbrushes, etc.) or come in contact with respiratory or throat secretions.

How do you increase your risk of getting bacterial meningitis?

- Exposure to saliva by sharing cigarettes, water bottles, eating utensils, food, kissing, etc.
- Living in close conditions (such as sharing a room/suite in a dorm or group home).

What are the possible consequences of the disease?

- Death (in 8 to 24 hours from perfectly well)
- Permanent brain damage
- Kidney failure
- Learning disability
- Hearing loss, blindness
- Limb damage (fingers, toes, arms, legs) that requires amputation
- Gangrene
- Coma
- Convulsions

Can the disease be treated?

- Antibiotic treatment, if received early, can save lives and chances of recovery are increased. However, permanent disability or death can still occur.
- Vaccinations are available and should be considered for those living in close quarters and college students 25 years old or younger.
- Vaccinations are effective against 4 of the 5 most common bacterial types that cause 70% of the disease in the U.S. (but does not protect against all types of meningitis).
- Vaccinations take 7–10 days to become effective, with protection lasting 3–5 years.
- The cost of vaccine varies so check with your health care provider.
- Vaccination is very safe – most common side effects are redness and minor pain at injection site for up to two days.

How can I find out more information?

- Contact your own health care provider.
- Contact the Student Health Center at 567-WELL (9355).
- Contact Web sites:
  - http://www.acha.org/Topics/meningitis.cfm

Bookstore

Textbook and supplemental material information, including the maximum extent practicable the International Standard Book Number (ISBN) and retail price information, is available on the online bookstore (http://uthscsa.bncollege.com).

A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Campus Carry Law

In 2015, the Texas Legislature passed a law which permits duly licensed concealed handgun owners the right to bring concealed handguns on to Texas public university campuses effective August 1, 2016. This law is commonly referred to as the “Campus Carry Law”. The law directed each public university president in Texas to establish campus-specific policies for their campus implementing the law with consideration to the uniqueness of the campus environment. This law is applicable only to those who have a license to carry a handgun, and the handgun must be concealed at all times. This policy does not authorize the open carry of handguns on the Health Science Center campus. The purpose of
this policy is to ensure compliance with Section 411.2031 of the Texas Government Code, the “Campus Carry Law”.

It is the policy of the University of Texas Health Science Center at San Antonio to respect the Federal and Texas constitutions, both of which recognize Texas citizens’ rights to keep and bear arms. The Health Science Center also recognizes the Texas Legislature’s power to regulate the carrying of handguns. Finally, the Health Science Center recognizes its right under the Campus Carry Law to implement its own reasonable rules, regulations and other provisions regarding the carrying of concealed handguns on the premises of the Health Science Center campuses.

For more information on the Campus Carry Law, please see Policy 8.12.1 (http://uthscsa.edu/hop2000/8.12.1.pdf) in the Health Science Center Handbook of Operating Procedures (HOP).

**Campus Facilities**

**Access to Campus Facilities**

The responsibility of The University of Texas System Board of Regents is to operate and maintain an effective and efficient system of institutions of higher education and requires that the time, place, and manner of assembly, speech, and other activities on the grounds and in the buildings and facilities of the UT System or institutions be regulated.

No person, organization, group, association, or corporation may use property, buildings, or facilities owned or controlled by the Health Science Center for any purpose other than in the course of the regular programs or activities related to the role and mission of the university, unless authorized by the Regents’ Rules and Regulations. Any authorized use must be conducted in compliance with the provisions of the Regents’ Rules and Regulations, the university’s Handbook of Operating Procedures, and applicable federal, state, and local laws and regulations.

Health Science Center facilities may be used by outside organizations with the joint sponsorship of a Health Science Center department. The Health Science Center may recommend joint sponsorship of a project or program when the following listed conditions are met: (1) the educational implications are self-evident and directly supplement the educational purposes of the institution and the academic or administrative mission of the department recommending sponsorship; and (2) there will be no private gain for the cooperating individuals, group, or association. The Health Science Center sponsor when entering into a joint sponsorship of any program assumes full responsibility for all details, including cost, as well as approval of subject, contents, and publicity for the event. To the extent that there are charges for Health Science Center services (e.g., printing, housekeeping, parking, security, etc.) for the event, such charges shall be paid by the sponsoring department. It is the responsibility of the sponsoring department to determine an appropriate level of reimbursement, if any, from the outside entity cosponsoring the event and obtain such payments and deposit such payments to the accounts from which charges for the event were made. Regents’ Rules and Regulations apply (from Handbook of Operating Procedures 9.1.4 (http://uthscsa.edu/hop2000/9.1.4.pdf)).

**Gang-Free Zones Policy**

Premises owned, rented or leased by the Health Science Center and areas within 1,000 feet of the premises are “gang-free” zones. Certain criminal offenses, including those involving gang-related crimes, will be enhanced to the next highest category of offense if committed in a gang-free zone by an individual 17 years or older. See Texas Penal Code, Section 71.028 (http://www.statutes.legis.state.tx.us/Docs/PE/htm/PE.71.htm).

**General Education Core Curriculum Policy**

It is the policy of the Health Science Center to evaluate all incoming students for completion of the Texas Core Curriculum who are not otherwise exempt. Pursuant to changes established by The Texas Higher Education Coordinating Board, the Health Science Center established a new Core specific to the academic needs and interests of the Health Science Center community. The new core for the Health Science Center includes a 42 semester credit hour core curriculum for all undergraduate students which includes six core objectives and common component areas implemented in Fall 2014. General Education requirements completed at private or out-of-state institutions may not be equivalent of, may not fulfill the requirements of, and may not excuse students from completing the core curriculum. Through the Texas Core Curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world, develop principles of personal and social responsibility for living in a diverse world, and advance intellectual and practical skills that are essential for all learning. The Texas Core Curriculum is listed below and may also be found on the website of the Office of the University Registrar (http://students.uthscsa.edu/registrar/2013/04/curriculum), which includes the assessment plan for evaluating these foundational component areas for incoming applicants.

**Foundational Component Areas:**

<table>
<thead>
<tr>
<th>010 Communication</th>
<th>6</th>
</tr>
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<tbody>
<tr>
<td>The goal of the communications component of the Texas Core Curriculum is to develop students’ mastering in writing. Students must complete one course that requires them to learn to communicate effectively through the development of descriptive, expository, narrative and self-expressive writing. Students must also complete a second writing-intensive course that may have as its focus student expression in communication or may be directed to the basic genres of research-based scientific and technical writing.</td>
<td></td>
</tr>
<tr>
<td>Texas Core Objective:</td>
<td></td>
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<tr>
<td>The student will be able to write effectively using appropriate organization, mechanics, and style. Students will be able to construct effective written arguments. Students will be able to gather, incorporate, and interpret source materials in their writing.</td>
<td></td>
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<tr>
<td>020 Mathematics</td>
<td>3</td>
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<tr>
<td>The goal of the mathematical component of the Texas Core Curriculum is to develop logical reasoning and inferences and the application of mathematical concepts.</td>
<td></td>
</tr>
<tr>
<td>Texas Core Objective:</td>
<td></td>
</tr>
<tr>
<td>Students will be able to apply basic mathematical methods to modeling and solving real world problems. Students will be able to formulate and interpret basic mathematical information, numerically, graphically, and symbolically.</td>
<td></td>
</tr>
<tr>
<td>030 Life and Physical Sciences</td>
<td>12</td>
</tr>
</tbody>
</table>
The goal of the life and physical science component of the Texas Core Curriculum is to develop an appreciation of the intricacies of the natural world and the ability to describe and explain some of the basic principles of how the natural world functions. Each student must complete 12 credit hours of science courses, of which must have laboratory components.

**Texas Core Objective:**
Students will be able to describe laws, theories or principles of how the natural world functions. Each student must complete 12 credit hours of science courses, of which must have laboratory components.  

**040 Language, Philosophy & Culture**  
The goal of the language, philosophy & culture of the Texas Core Curriculum is to examine a variety of literary philosophical and/or historical works drawn from the humanities and presented in an established context as examples of expressions of individual and human values. Students must complete at least one course that is representative of literature, philosophy, cultural studies, modern language, or classic language.

**Texas Core Objective:**
Students will be able to examine and analyze a variety of works from the humanities, particularly those connected to literature and philosophy. Students will be able to analyze and critically evaluate such works in the context of culture, society, and values as well as be able to compare and contrast the works with each other. Students will be able to apply considered analysis and respond to works in the humanities as examples of human expression and aesthetic and philosophical principles.

**050 Creative Arts**  
The goal of the creative arts of the Texas Core Curriculum is to expose and illuminate at least one and possibly multiple forms of artistic expression, including but not exclusive to the traditional areas of the performing and visual arts. Students must complete at least one course that is representative of one or more of the visual or performing arts.

**Texas Core Objective:**
Students will be able to examine and respond critically to a variety of artistic forms in at least one and possibly multiple forms of expression drawn from either the visual or performing arts or some combination thereof. Students will be able to demonstrate an appreciation for artistic expression and an ability to analyze specific works of art within a cultural or social context.

**060 American History**  
The goal of American history component of the Texas Core Curriculum is to develop students’ comprehension of the scope of American and/or Texas historical development through an examination of social, institutional, political, and cultural evolution over specified periods of time in the history of the United States and/or the State of Texas. Students must complete two courses that address the history of the United States or one that addresses the history of the United States and one course that addresses the history of the State of Texas.

**Texas Core Objective:**
Students will be able to identify, explain, and give examples of significant developments in American and/or Texas history over a defined span of time. Students will be able to examine and analyze historical development through knowledge of institutional, social, cultural, and political evolution and change over a defined span of time.

**070 Government/Political Science**  
The objective of the government component is to increase students’ comprehension of the history and evolution of political institutions, and the interrelationship between institutions such as executive and legislative; the role that political institutions play in the lives of citizens, and to demonstrate the relationship between citizens and political institutions including activities such as voting and interest group activity that provides awareness for citizen influence. Students must complete two courses that include consideration of the Constitution of the United States and the constitution of the states, with special emphasis on the Texas constitution.

**Texas Core Objective:**
Students will be able to apply important theoretical and scholarly approaches to understanding state and national institutional behavior, citizen involvement and interaction between citizens and institutions of government. Students will be able to analyze and appreciate historical trends in development of government institutions and their constitutional foundations. Students will be able to identify, describe, and analyze various mechanisms of citizen political involvement.

**080 Social and Behavior Sciences**  
The goal of the social and behavioral science component of the Texas Core Curriculum is to increase student’s knowledge of how social and behavioral scientist describe, explain, and critically analyze the behaviors and interactions among individuals, groups, institutions, cultures, events and ideas. Students must complete at least one course that is representative of the following social and behavioral science: anthropology, economics, geography, psychology, sociology or women’s studies.

**Texas Core Objective:**
Students will be able to describe major theoretical and scholarly approaches in the social/behavior science discipline. Students will be able to apply modes of critical thinking used in the social/behavior science discipline.

**Hazing Policy**

Hazing in state educational institutions is prohibited by both state law (Sections 51.936 and 37.151, Texas Education Code), and by the Rules and Regulations of the Board of Regents of The University of Texas System (Series 50101, Section 2.8). Individuals or organizations engaging in hazing could be subject to fines and charged with criminal offenses. Additionally, the law does not affect or in any way restrict the right of the university to enforce its own rules against hazing.

According to the law, a person commits a hazing offense if the person engages in hazing; solicits, directs, encourages, aids, or attempts to aid another in hazing; intentionally, knowingly, or recklessly allows hazing to occur; or fails to report firsthand knowledge that a hazing incident is planned or has occurred in writing to the chief student affairs officer. The fact that a person consented to or acquiesced in a hazing activity is not a defense to prosecution for hazing under this law.

An organization commits an offense if the organization condones or encourages hazing or if an officer or any combination of members, pledges, or alumni of the organization commits or assists in the commission of hazing.

The law defines hazing as any intentional, knowing, or reckless act, occurring on or off the campus of an educational institution, by one person alone or acting with others, directed against a student, that endangers the mental or physical health or safety of a student for the purpose of pledging, being initiated into, affiliating with, holding office in, or maintaining membership in an organization whose members are or include students at an educational institution.

Hazing includes but is not limited to:

1. any type of physical brutality, such as whipping, beating, striking, branding, electronic shocking, placing of harmful substance on the body, or similar activity;
2. any type of physical activity, such as sleep deprivation, exposure to the elements, confinement in a small place, calisthenics, or other activity that subjects the student to an unreasonable risk of harm or that adversely affects the mental or physical health or safety of the student;
3. any activity involving consumption of food, liquid, alcoholic beverage, liquor, drug, or other substance that subjects the student to an unreasonable risk of harm or which adversely affects the mental or physical health or safety of the student;
4. any activity that intimidates or threatens the student with ostracism; that subjects the student to extreme mental stress, shame, or humiliation; or that adversely affects the mental health or dignity of the student or discourages the student from entering or remaining registered in an educational institution, or that may reasonably be expected to cause a student to leave the organization or the institution rather than submit to acts described in this subsection; and
5. any activity that induces, causes, or requires the student to perform a duty or task which involves a violation of the Penal Code. The fact that a person consented to or acquiesced in a hazing activity is not a defense to prosecution.

Any student who engages in conduct that constitutes hazing is subject to disciplinary action regardless of whether he or she is charged with a criminal offense.

Series 50101, Section 2.8, of the Rules and Regulations of the Board of Regents of The University of Texas System, provides that:

1. hazing with or without the consent of a student is prohibited by the System, and a violation of that prohibition renders both the person inflicting the hazing and the person submitting to the hazing subject to discipline;
2. initiations or activities by organizations may include no feature which is dangerous, harmful, or degrading to the student and a violation of this prohibition renders both the organization and participating individuals subject to discipline. Activities which under certain conditions constitute acts that are dangerous, harmful, or degrading, in violation of the Rules and Regulations of the Board of Regents of The University of Texas System include but are not limited to:
   - calisthenics, such as sit-ups, push-ups, or any other form of physical exercise;
   - total or partial nudity at any time;
   - the eating or ingestion of any unwanted substance;
   - the wearing or carrying of any obscene or physically burdensome article;
   - paddle swats, including the trading of swats;
   - pushing, shoving, tackling, or any other physical contact;
   - throwing oil, syrup, flour, or any harmful substance on a person;
   - rat court, kangaroo court, or other individual interrogation;
   - forced consumption of alcoholic beverages either by threats or peer pressure;
   - lineups intended to demean or intimidate;
   - transportation and abandonment (road trips, kidnappings, walks, rides, drops);
   - confining individuals in an area that is uncomfortable or physically burdensome;
   - confining individuals in an area that is uncomfortable or scopes benefit to the individual members;
   - wearing of embarrassing or uncomfortable clothing;
   - assigning pranks such as stealing, painting objects, harassing other organizations;
   - intentionally messing up the house or room for clean up;
   - demeaning names;
   - yelling and screaming; and
   - requiring boxing matches or fights for entertainment.

In an effort to encourage reporting of hazing incidents, the law grants immunity from civil or criminal liability to any person who reports a specific hazing event in good faith and without malice to the chief student affairs officer and immunizes that person from participation in any judicial proceeding resulting from that report. The penalty for failure to report is a fine of up to $1,000, up to 180 days in jail, or both. Penalties for other hazing offenses vary according to the severity of the injury that results and range from $500 to $10,000 in fines and up to two years confinement.
The law does not affect or in any way limit the right of the university to enforce its own rules against hazing.

Infection Policy (AIDS, HIV, and Hepatitis, etc.)

The University of Texas System provides a Policy and Guidelines on Bloodborne Pathogens Including Human Immunodeficiency Virus (HIV) Hepatitis B Virus (HBV), and Hepatitis C Virus (HCV). The purpose of this policy is to provide guidance in complying with statutes concerning bloodborne pathogens including human immunodeficiency virus (HIV), Hepatitis B virus (HBV), and Hepatitis B virus (HCV). Immunization requirements are based on current regulations, guidelines and recommendations by the Centers for Disease Control (CDC) and the U.S. Department of Health and Human Services. This policy is to provide guidance in complying with statutes concerning bloodborne pathogens including human immunodeficiency virus (HIV), Hepatitis B virus (HBV), and Hepatitis C virus (HCV). Immunization requirements are based on current regulations, guidelines and recommendations by the Centers for Disease Control (CDC) and the U.S. Department of Health and Human Services.

This policy is applicable to students, faculty, and employees of the Health Science Center and shall be made available to students, faculty, and staff members of the University by its inclusion in the student, faculty, and personnel guides if practicable, or by any other method. More detailed information about bloodborne pathogens can be found in The Health Science Center Handbook of Operating Procedures (http://www.uthscsa.edu/hop2000/8.1.1.pdf) (HOP). The policies that follow are published to reflect those policies in The HOP.

ADMISSION OF HEALTH PROFESSIONS STUDENTS WITH AIDS OR HIV INFECTION

The Health Science Center shall not inquire about the HIV status of any applicant for admission to the Health Science Center unless it has been determined that the condition of being infected is grounds for denial of admission. Admission or hiring of an asymptomatic HIV-infected applicant can only be denied on the basis of such infection if the institution concluded, on the basis of sound medical and scientific evidence, that the applicant's infected status would prevent him or her from completing essential degree requirements and that no reasonable accommodation could be made that would enable the applicant to do so.

SCREENING FOR HIV-1 INFECTION

The Health Science Center will not initiate mandatory HIV screening of students, faculty, staff, or employees unless justified by evidence of significant risk to patients.

The Health Science Center encourages students, faculty, staff, and employees who believe they are at risk of HIV infection to seek testing and counseling. The Health Science Center shall provide information about the availability of confidential and anonymous testing programs. In addition, the Health Science Center shall provide information and/or access to counseling for students, faculty, staff, employees, and others about the implications of positive or negative testing for career and future health.

Students, Faculty, Staff, and Employees with Positive Antibody to HIV-1 or Clinically Manifest AIDS or AIDS-Related Complex

It is expected that all students, faculty, staff, and employees will be bound to the principle of strict confidentiality in all patient and healthcare related activities.

As stated in Policies 8.1.3 (http://uthscsa.edu/hop2000/8.1.3.pdf) and 8.1.4 (http://uthscsa.edu/hop2000/8.1.4.pdf) of The HOP, “Screening for HIV-1 Infection” and “Students, Faculty, Staff and Employees with Positive Antibody to HIV-1 or Clinically Manifest AIDS or AIDS — Related Complex,” The Health Science Center encourages students, faculty, staff, and employees who believe they are at risk of HIV-infection to seek testing and counseling. The Health Science Center shall provide counseling about access to confidential and anonymous HIV-antibody testing, about the implications of positive or negative results for career and personal health, about the availability of expert medical care, and about the prevention of further spread of infection.

Interaction with Patients with Bloodborne Pathogens

Entry into the healthcare professions is a privilege offered to those who are prepared for a lifetime of service to the ill. Students, faculty, and healthcare staff have a fundamental responsibility to provide care to all patients assigned to them, regardless of diagnosis. A failure to accept this responsibility violates a basic tenet of the medical profession: to place the patient's interests and welfare first.

Individuals who feel that their activities within the Health Science Center pose a special risk to their health because of exposure to bloodborne pathogen-infected patients, working conditions presenting a risk of exposure to bloodborne pathogens, or the presence of a bloodborne pathogen infection in the individual himself or herself, should seek the assistance of their immediate supervisor.

Infection Policy and Education Committee

The Health Science Center has established an Infection Policy and Education Committee that exists as a resource to address issues related to bloodborne pathogen infection on a case-by-case basis in the Health Science Center. The Committee serves as an advisory body to the Executive Committee of the Health Science Center and may arbitrate concerns or provide recommendations for the resolution of these infection-related issues.

EDUCATION OF STUDENTS, FACULTY, STAFF, AND EMPLOYEES ABOUT BLOODBORNE PATHOGENS

This section provides information regarding education on bloodborne pathogens to the University community based on The Health Science Center Handbook of Operating Procedures, Policy 8.1.6 (http://uthscsa.edu/hop2000/8.1.6.pdf).

Guidance

As stated in the Health Science Center’s Exposure Control Plan, the Health Science Center adheres to the Universal or Standard Precautions for the Prevention of Transmission of Human Immunodeficiency Virus, Hepatitis B Virus, and Other Bloodborne Pathogens in Health Care Settings (http://www.cdc.gov/mmwr/preview/mmwrhtml/00000039.htm)
published by the Centers for Disease Control and Prevention. Consistent with the early education of students, staff, and employees in these and other pertinent data relevant to potential infection, the following approach will be taken.

Educational Program
Each school will provide a program on prevention of exposure to infectious organisms in professional and personal situations early in the student’s educational experience and at the beginning of clinical rotations.

Each administrative division of the Health Science Center will provide an educational program for staff and employees to take place early in the employment and annually thereafter to focus upon prevention of exposure to infectious organisms in the workplace as warranted by the occupational risk.

Content of Program
The Infection Policy and Education Committee shall advise and review the development of appropriate educational programs. At the conclusion of Health Science Center educational programs/curriculum on bloodborne pathogens, the participant should be able to:

1. Have a basic understanding of HIV, HBV, and HCV as viral disease and its natural history.
2. Recognize how viruses are transmitted and contacts that do not transmit the virus.
3. Recognize the symptoms of bloodborne pathogens and the degrees/stages of these illnesses.
4. Identify precautions one must take in one's own area of practice or work regarding the bloodborne pathogens.
5. Familiarize oneself with institutional policies about bloodborne pathogens as described in the Health Science Center’s Exposure Control Plan.
6. Recognize one’s own role in alleviation of anxiety and misinformation.
8. Identify legal and ethical issues that may potentially impact patient care.

Information Management Services (IMS)
Students can access their personal and academic information through My Student Center via students.uthscsa.edu.

This secured site provides a variety of information for students including enrollment, financial aid, student account, features to update addresses and telephone numbers, check final grades, and options to restrict the release of personal information. For more information on the latter, see the FERPA Policy (p. 65) in this Catalog.

Each school has their own unique website for students to access syllabi and other course information, often utilizing the Learning Management System (https://www.uthscsa.edu/university/canvas).

Student Needlestick Policy
Student Percutaneous Injury/Bloodborne Pathogen Exposure Procedure
In case of needlestick or body fluid exposure immediately:

1. Wash exposed area thoroughly with soap & water or appropriate tissue cleanser
2. Notify supervisor
3. Seek care within 2 hours of exposure; call first to expedite treatment
   a. Weekdays Monday through Friday from 8:30 a.m. to 4:30 p.m. at the Student Health Clinic (210) 567-9355
   b. After Hours: University Health System Emergency Triage (210) 743-0161
4. Bring the following, or send to the Health Science Center Student Health Service
   a. The Health Science Center Incident Report Form (http://shc.uthscsa.edu/pdf/Percutaneous_InjuryBloodBorne_BodyFluidExpForms.pdf)
   b. TDH Contaminated Sharps Injury Reporting Form
   c. Incident report from facility where exposure occurred
   d. Identification of person whose body fluid was exposure source
   e. Contact person for follow up
   f. Relevant medical records

5. If exposure occurs outside the San Antonio area (more than 30-45 minutes away from the Health Science Center), go to the nearest ER or health care facility
   a. Providers may consult the 24 hour national HIV Post-Exposure Prophylaxis Hotline for Clinicians at 1-888-HIV-4911
   b. Call the Student Health Clinic at (210) 567-9355 for follow up on the next non-holiday workday

6. Obtain consent of patient (source of exposure) for blood tests per facility protocol
   a. Hepatitis B Surface Antigen (HBsAg)
   b. Hepatitis C Antibody (Anti-HCV)
   c. Antibody to Human Immunodeficiency virus (Anti-HIV)

7. Student blood to be drawn in Student Health Services as soon as possible for
a. HBsAg**
b. Antibody to Hepatitis B Surface Antigen (Anti-HBs)**
c. Hepatitis C Antibody
d. Anti-HIV
e. Omit HBsAg & Anti-HBs if the student has a documented seroconversion following a Hepatitis B vaccination series
f. Order CBC and Liver Function Test if placing student on HIV prophylaxis drugs

* Injury must relate to currently registered at the Health Science Center student's clinical duties: percutaneous needlestick, puncture wound, laceration, human/animal bite; body fluid exposure to open wound or mucous membrane by splash, aerosol; other blood/unfixed tissue exposure

** Treatment Guidelines

1. Hepatitis B
   a. Patient HBsAg positive and student HBsAg negative and Anti-HBs negative:
      • give one dose of Hepatitis B Immune Globulin (.06 ml/kg intramuscularly) as soon as possible within 72 hours after exposure, and begin a Hepatitis B vaccination series within seven days.
      • a student with prior Hepatitis B vaccination with a negative Anti-HBs should receive HBIG and one dose of Hepatitis B vaccine.
   b. No further Hepatitis B testing or therapy is needed if
      • the patient (exposure source) is HBsAg negative
      • the student is HBsAg positive or Anti-HBs positive due to prior disease or vaccination, even though the patient is HBsAg positive

2. Hepatitis C
   a. Patient source is positive for Hepatitis C:
      • test student for HCV-PCR 2-3 weeks after exposure
      • test student for Hepatitis C serology at 6 weeks, 3 months, 6 months, & 1 year.

3. HIV
   a. Risk of HIV transmission following percutaneous exposure to HIV-infected blood is approximately 0.3% (CDC, 2005).
   b. Anti-HIV seroconversion in a needlestick recipient has been documented despite use of prophylaxis.
   c. Drugs used for HIV prophylaxis have multiple potential side effects. Please contact Student Health Service prior to discontinuing prophylaxis medications to ensure it is indeed the medication responsible for the symptoms.
   d. Students are responsible for costs of elective evaluation outside the Student Health Service.

** Recommendations

1. Students at all sites receive, at no cost, testing, medication and follow up care per 2005 CDC guidelines
   a. HIV (https://stacks.cdc.gov/view/cdc/20711)
   b. Hepatitis B (https://www.cdc.gov/mmwr/preview/mmwrhtml/rr6210a1.htm)
   c. Hepatitis C (https://www.cdc.gov/hepatitis/hcv/guidelinesc.htm)

2. A centralized service coordinates the testing and treatment of exposed students. The current requirement is for students to pay for care, then file a claim with private insurance, with a Health Science Center reimbursement limit of up to $500. The invoices received from the treatment center will need to be delivered to the Student Health Clinic so that reimbursement can be made.

** Privacy Rights

Students are entitled to certain privacy rights, especially under the Family Educational Rights and Privacy Act, although any research papers and theses authored by students may be made available to interested members of the public. Students should also bear in mind that any patients or patient records they come into contact with are protected based on patient privacy policies under the Health Insurance Portability and Accountability Act (HIPAA) and the Health Science Center Handbook of Operating Procedures (http://www.uthscsa.edu/hop2000).

** Family Educational Rights and Privacy Acts (FERPA) Policy

** Pertinent Information

The Family Educational Rights and Privacy Act (FERPA), 20 U.S.C. §1232g, and the Texas Public Information Act, Texas Government Code § 552.001 et seq., are respectively a federal and state law that provide for the review and disclosure of student educational records. These regulations set forth requirements regarding the privacy of student records and affords students certain rights with respect to their education records. FERPA applies to those institutions that require funding from the Department of Education and guarantees students three primary rights: to inspect and review their education records; to seek to amend education records; and to exercise some control over the disclosure of information from those education records.

Students at the Health Science Center have the right of confidentiality under the federal Family Educational Rights and Privacy Act (FERPA) of 1974. Generally, no one outside the institution shall have access to, nor will the institution disclose any information from students' educational records without the student's written consent.

The Health Science Center (http://www.uthscsa.edu) affords all the rights under the law to students who are declared independent. However, student education records may be released without written consent for legitimate educational interest. Legitimate educational interest allows for access to educational records by appropriate Health Science Center administrators, faculty members, staff members or contractors acting on behalf of the Health Science Center, who require such access in order
to perform their legitimate educational and business purposes of the student or Health Science Center. Examples include:

- to appropriate school officials, including staff and faculty with the university who have been determined by the university to have legitimate educational interest;
- to officials of other institutions in which students seek to enroll;
- to persons or organizations providing students financial aid provided that such disclosure is necessary to determine eligibility, amount, conditions or enforcement of terms or conditions of the financial aid;
- to accrediting agencies carrying out their accreditation function;
- to organizations conducting studies for, or on behalf of educational agencies or institutions for the purpose of developing, validating, or administering predictive tests, administering student financial aid programs, and improving instruction, if such studies are conducted in such a manner as will not permit the personal identification of students and their parents by persons other than representatives of such organizations and such information will be destroyed when no longer needed for the purpose for which it is conducted;
- to persons in compliance with judicial order or lawfully issued subpoena, upon condition that the university makes a reasonable effort to notify the student of the order or subpoena in advance of compliance therewith;
- to persons in an emergency in order to protect the health or safety of students or other persons;
- to federal, state, or local officials or agencies authorized by law;
- to the parents of a dependent student, as defined in Section 152 of Internal Revenue Code (http://uscode.house.gov/search/criteria.shtml) of 1954, provided a reasonable effort is made to notify the student in advance;
- to an alleged victim of any crime of violence, the results of the alleged perpetrator’s disciplinary proceeding may be released;
- to authorized agents, vendors, or contractors of the university who have agreed to abide by the provisions of FERPA regarding covered student data.

All the exceptions identified above are permitted under the Act.

Within the Health Science Center community, only those members, individually or collectively, acting in the legitimate educational interest of the students are allowed access to student education records. A legitimate educational interest is determined by the appropriate administrator from the Office of the University Registrar in consultation with the Vice President for Academic, Faculty and Student Affairs and the appropriate school-specific Dean. Release of information to a school official having a legitimate educational interest does not serve as permission to share that information with a third party without the student’s written permission.

A record of requests for disclosure and such disclosure of personally identifiable information from student education records shall be maintained by the Office of the University Registrar for each student and will also be made available for inspection pursuant to this policy.

The law provides students with:

1. The right to inspect and review education records within 45 days of the day the university receives a request for access. A student should submit written requests that identify the record(s) the student wishes to inspect to the Office of the University Registrar or appropriate institutional official. The university official will make arrangements for access and notify the requestor of the time and place where the records may be inspected. If the records are not maintained by the university official to whom the request was submitted, that official will advise the student of the correct official to whom the request should be addressed.

2. The right to request the amendment of an education record(s) that a student believes is inaccurate or misleading. The student should write the university official responsible for the record, clearly identify the part of the record for which a change is requested, and specify why it is inaccurate or misleading. If the university decides not to amend the record as requested, the university will notify the student of the decision and advise that student of his/her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided when the student is notified of the right to a hearing. The student may want to consult with staff in the Office of the University Registrar regarding his/her appeal rights and/or the hearing procedure associated with an appeal.

3. The right to consent or to withhold consent to disclosures of personally identifiable information contained in a student’s education records, recognizing that FERPA and Health Science Center policy authorize certain disclosures without a student’s prior consent. These exceptions are provided below.

   a. Disclosure to school officials with legitimate educational interests. A school official is defined as a person employed by the university in an administrative, supervisory, academic, or support staff position (including law enforcement unit and health staff); a person or company with whom the university has contracted (such as an attorney, auditor, authorized agent, vendor or contractor who has agreed to abide by the provisions of FERPA regarding covered data, or collection agent); a person serving on the Texas Board of Regents or the Board’s staff. 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 responsibility.

   b. Disclosure to officials of other schools or school systems in which a student seeks or intends to enroll, or where a student is enrolled in or receives services.

   c. Disclosure to parents of a dependent student of such parents, as defined in Section 152 of the Internal Revenue Code of 1986, provided that such dependent status is required to be affirmed by a student’s parents in a manner satisfactory to the university prior to release of the student’s records.

   d. Disclosure to comply with a judicial order, or lawfully issued subpoena, upon condition that the university makes a reasonable effort to notify the student of the order or subpoena in advance of compliance therewith.

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

   Federal Student Privacy Office
   US Department of Education
   400 Maryland Avenue, SW
   Washington, DC 20202-4605

The Vice President for Academic, Faculty, and Student Affairs has been designated by the Health Science Center to coordinate the inspection and review procedures for student education records, which include admissions, personal, academic, financial, and disciplinary records.
DIRECTORY INFORMATION

The Health Science Center designates the personally identifiable information contained in a student’s education records listed below as “directory information” in order that the university may at its discretion, disclose the information without a student’s further prior written consent. Students requesting that all Directory Information be withheld will have only their first and last name, middle initial, school, photograph, and class listed in the Directory.

As such and at its discretion, the Health Science Center may release historical student and directory Information:

- name, address, telephone number, e-mail address;
- photograph;
- date and place of birth;
- major field of study;
- participation in officially recognized activities; sports
- dates of attendance;
- most recent previous educational institution attended;
- classification, level or year of study;
- degrees and awards received;
- date of graduation; and,
- enrollment status (undergraduate, graduate or professional; full-time or part-time).

Students may withhold all or part of the directory information by making changes to the Privacy Restrictions section of their Profile within My Student Center via students.uthscsa.edu. Request for non-disclosure will be honored by the Health Science Center for only the current enrollment period; therefore, a request to withhold Directory Information must be filed each semester or term.

DEFINITION OF TERMS

Family Educational Rights and Privacy Act (FERPA) is a federal law which protects privacy interests of parents and students in their educational records.

An education record includes those records, files, documents and other material that contain information directly related to a student, and are maintained by an educational agency or institution, or by a person acting for such agency or institution. Records include electronic and paper files. The Office of the University Registrar and other designated record custodians are designated as the official record holder of student education files.

However, education records do not include:

1. Records of instructional, supervisor and administrative personnel and educational personnel ancillary thereto which are in the sole possession of the maker thereof and which are not accessible or revealed to any other person except a substitute;
2. Records maintained by a law enforcement unit of the educational agency or institution that were created by that law enforcement unit for the purpose of law enforcement;
3. In the case of persons who are employed by an educational agency or institution but who are not in attendance at such agency or institution, records made and maintained in the normal course of business which relate exclusively to such person in that person’s capacity as an employee and are not available for use for any other purpose; or
4. Records on a student who is eighteen years of age or older, or is attending an institution of postsecondary education, which are made or maintained by a nurse practitioner, physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in his professional or paraprofessional capacity, or assisting in that capacity, and which are made, maintained, or used only in connection with the provision of treatment to the student, and are not available to anyone other than persons providing such treatment, except that such records can be personally reviewed by a physician or other appropriate professional of the student’s choice.

Additionally, in accordance with UT System requirements, research papers and theses authored by students will be made available to interested members of the public.

Directory Information is information contained in students’ education records that is generally not considered to be harmful or an invasion of privacy if disclosed.

Personally Identifiable Information refers to any data element in an education record that, if disclosed alone or together with another data element, would allow a person to reasonably identify the eligible student who is the record’s subject.

School Official is a person employed by the University in an administrative, supervisory, academic or research, or support staff position (including law enforcement until personnel and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

Legitimate Educational Interest is established if the information is necessary for the requestor to: perform appropriate tasks specified in a position description or by a contract agreement; perform a task related to a student’s education; perform a task related to the discipline of a student; provide a service or benefit to the student such as health care, counseling, job placement, or financial aid; provide educationally related information to the student concerning extra-curricular activities and student organization; or maintain the safety and security of the campus.

A legitimate educational interest is determined by the appropriate administrator from the Office of the University Registrar in consultation with the Vice President for Academic, Faculty and Student Affairs and the appropriate school-specific Dean. Release of information to a school official having a legitimate educational interest does not serve as permission to share that information with a third party without the student’s written permission.

UNIVERSITY PROCEDURE

Required FERPA Training

The Office of the University Registrar requires that all students, staff, and faculty complete FERPA training bi-annually via the Web through the Knowledge Center. Notice of required training reaches students, staff, and faculty through their Health Science Center email accounts, at which time they are prompted to complete online training. Training covers the purpose of FERPA, directory information, and scenarios of potential FERPA violations.
Student requests for inspection of their education records

Students who wish to inspect their records should fill out the Request to Review Education Records Form in the Office of the University Registrar. The form is available on the Office of the University Registrar’s web site.

The Registrar or other designated record custodian will make the needed arrangements and advise the student when and where the records will be available. The procedure will be completed as promptly as possible, but in all cases the student will be permitted to inspect the record within 45 business days after the custodian receives the student's request with the following limitations:

1. Financial records and statements of their parents or any information contained therein; Confidential letters of recommendation and confidential statements of recommendation which were placed in the education records of the student, respecting admission to an educational institution, an application for employment, or the receipt of an honor or honorary recognition, provided that the student has waived his or her right to inspect and review those letters and statements of recommendation.

2. Any records that contain personally identifiable information about more than one student, a student may inspect only that information which relates to her/him.

If for any valid reason such as work hours, distance from a student’s place of residence to a record location, distance between records location sites, or health, a student cannot personally inspect and review her/his education record, the Health Science Center will arrange for the student to obtain copies of the record.

Request for correction of an education record

The Health Science Center encourages students to periodically inspect and review their education records to make certain the records correctly reflect their academic progress and other achievements.

The school-specific Dean assumes the full responsibility for the process, procedure, and final decision for student request to revise educational records. The final decision is conveyed to the student, the Registrar and the Vice President for Academic, Faculty, and Student Affairs.

Challenges to the Content of Records-Hearing-Informal Proceedings

Students shall have an opportunity to a hearing to challenge the content of the student record, to insure that the record is not inaccurate, misleading, or otherwise in violation of the privacy of other rights of students, and to provide an opportunity for the correction or deletion of any such inaccurate, misleading, or otherwise inappropriate data contained therein and to insert into such records a written explanation of the student respecting the content of such records. Any explanation placed in the education record of the student shall be maintained by the Health Science Center.

The Health Science Center shall attempt to settle any dispute with a student regarding the content of the student’s education record through informal meetings and discussions with the student. If agreement is reached with respect to the student’s request, the appropriate records will be amended. Upon the request of either the student or the university official responsible for a particular portion of the student record in question, a hearing shall be conducted by the Registrar.

1. Such hearing and decisions shall be made by a panel of university faculty and professional staff who do not have a direct interest in the outcome of the hearing.
2. The hearing shall be conducted within twenty days following the request for hearing.
3. The student shall be afforded notice of the date, place, and time at least five days in advance of the hearing, and shall be afforded a full and fair opportunity to present evidence relevant to the issue pertinent to his or her challenge. The student may be assisted or represented by individuals of his or her choice at his or her expense, including an attorney.
4. The decision shall be rendered in writing within twenty days following the conclusion of the hearing, and shall be based solely upon the evidence presented at the hearing and shall include a summary of the evidence and the reasons for the decision.

Decisions of the hearing officer will be final. A written statement summarizing the evidence and stating the reasons for the decisions, and will be delivered to all parties concerned.

Request for Directory Information

Custodians of records will refer all requests for directory information about students to the Registrar. Any requests by external agencies for directory information shall also be directed to the Office of Institutional Research. Costs for preparing the information shall be borne by the requesting parties.

Custodians of Education Records

The Health Science Center reserves the right to refuse to permit a student to inspect and review the following education records:

1. financial records of the student's parents or guardian;
2. statements and confidential letters of recommendation prepared by university officials or submitted with the student's application for admission which were placed in the educational records of a student prior to January 1, 1975 or for which the student has waived her/his right of access in writing;
3. records of instructional, administrative, and educational personnel which are kept in the sole possession of the maker and are not accessible or revealed to any other individual except a temporary substitute for the maker;
4. records of law enforcement units;
5. employment records related exclusively to an individual's employment capacity;
6. medical and psychological records;
7. thesis or research papers; or
8. records that only contain information about an individual after the individual is no longer a student at the institution.

Copies

Students may have copies of their educational records. These copies will be made at the student’s expense at rates authorized in the Texas Public Information Act except for official transcripts. Official copies of academic records or transcripts will not be released for students who have a delinquent financial obligation or financial hold at the Health Science Center.

Deceased Students

Records of deceased students, current or former, will be reviewed within 90 days after death and purged of all documents except the barest
essentials such as the transcript. Personal information from student educational records shall not be released to third parties except as authorized in writing by the deceased student's spouse, executor/executrix or parents. Written requests for such information should be directed to the Public Information Officer, the Vice President and Chief Financial Officer.

**Access to file**

The Health Science Center has placed responsibility for administration of FERPA with the Registrar. This office is responsible for the administration of this policy. Students who have problems or questions related to the policy should contact the Office of the University Registrar (http://students.uthscsa.edu/registrar) for help. Those who wish to file a complaint under FERPA should do so in writing to the following address:

Federal Student Privacy Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-5901

**Request for Accommodations under the ADA and the ADA Amendments Act of 2008**

It is the policy of the Health Science Center to comply with the provisions of the Americans with Disabilities Act (ADA) and the ADAAA (http://uthscsa.edu/hop2000/4.2.3.pdf). The ADA prohibits discrimination against people with disabilities in employment, transportation, public accommodation, communications, educational environments, and governmental activities. Title I of the ADA requires an employer to provide reasonable accommodations to qualified individuals with disabilities who are employees or applicants for employment or applicants for admissions as students or residents to one of the Health Science Center schools.

A qualified individual with a disability requesting accommodation must submit the appropriate request for accommodations under the Americans with Disabilities Act (ADA) as amended. Students, fellows and residents must submit a Student/Resident Request for Accommodation (http://uthscsa.edu/eeo/form100studentresident.pdf) under the American with Disabilities Act (ADA), form ADA-100, to the Executive Director, Academic, Faculty, Student Ombudsperson and ADA Compliance Office with a copy of the current job description (if appropriate).

The Executive Director, Academic, Faculty, Student Ombudsperson and ADA Compliance Office will determine if additional medical information is needed and will furnish the individual with any forms and/or questionnaires necessary for the health care provider to complete. This individual will evaluate information to determine eligibility within the guidelines of ADA. The Executive Director, Academic, Faculty, Student Ombudsperson and ADA Compliance Office will then coordinate with the necessary institutional staff and the individual to identify the essential functions of the job or the program of study and determine whether there is an effective, reasonable accommodation that will enable the employee, student, fellow or resident to perform those essential functions (interactive process). The Executive Director, Academic, Faculty, Student Ombudsperson and ADA Compliance Office will follow-up on the individual's status/progress on annual basis, or earlier as need arises.

Reasonable accommodations under the ADA are an ongoing process. At any point in time, the individual receiving the reasonable accommodation may request a reevaluation of their request from the Executive Director. At that point, the interactive process will be implemented in order to deal with any new requests and/or revisions to the initial requests.

The Executive Director, Academic, Faculty, Student Ombudsperson and ADA Compliance Office shall keep all medical-related information confidential and maintained separately from other personnel records. However, supervisors and managers may be advised of information necessary to make the determinations they are required to make in connection with a request for an accommodation. First aid and safety personnel may be informed, when appropriate if the disability might require emergency treatment, or if any specific procedures are needed in the case of fire or other evacuation. Government officials investigating compliance with the ADA may also be provided relevant information as requested.

Additional information can be found in the Handbook of Operating Procedures (HOP) (http://uthscsa.edu/hop2000), Chapter 4, Section 4.2, Policy 4.2.3 (http://uthscsa.edu/hop2000/4.2.3.pdf).

**Sexual Harassment and Sexual Misconduct Policy**

The Health Science Center is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVe Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. As stated in the definition, sexual misconduct includes sexual harassment, sexual violence, sexual assault, stalking, domestic violence and/or dating violence. Individuals who engage in sexual misconduct and other inappropriate sexual conduct will be subject to disciplinary action.

The Health Science Center will take prompt disciplinary action against any individuals or organizations within its control who violate this Policy. The Health Science Center encourages any student, faculty, staff or visitor to promptly report violations of this Policy to an individual identified in Section 3.2.

Please see Section 4.2.2 “Sexual Harassment and Sexual Misconduct Policy” (http://uthscsa.edu/hop2000/4.2.2.pdf) of the **Handbook of Operating Procedures** for a more detailed explanation of the policy.

**Smoking Policy**

One mission of the Health Science Center is to promote public health. For this reason, all campus buildings and grounds of the University are smoke-free; smoking is not permitted outside buildings or anywhere inside buildings including private offices. University no smoking policies include electronic cigarettes, e-cigs, and similar products. No tobacco products will be sold on the campus either by the Health Science Center or outside vendors. By the nature of business of the Health Science Center, it is the responsibility of each individual employee to ensure that a healthy environment is provided by example and deed. Employee cooperation and support of this policy is essential to its success. The **Handbook of Operating Procedures** (http://uthscsa.edu/hop2000) addresses these matters as well.
Solicitation Policy

Solicitation is defined as the sale, lease, rental or offer for sale, lease, rental of any property, product, merchandise, publication, or service, whether for immediate or future delivery; an oral statement or the distribution or display of printed material, merchandise, or products that is designed to encourage the purchase, use, or rental of any property, product, merchandise, publication, or service; the receipt of or request for any gift or contribution; or the request to support or oppose or to vote for or against a candidate, issue, or proposition appearing on the ballot at any election held pursuant to State or Federal law or local ordinances.

No solicitation, as defined above, shall be conducted on any property, street, or sidewalk, or in any building, structure, or facility owned or controlled by The University of Texas System or any of its institutions unless permitted by the Regents’ Rules and Regulations, Series 80103, shall be conducted on the campus of the Health Science Center with the following exceptions as defined in the Health Science Center Handbook of Operating Procedures, Policy 9.1.7 (http://uthscsa.edu/hop2000/9.1.7.pdf):

1. Registered or sponsored student organizations may collect membership fees and admission for events and similar activities only if prior approval is obtained from the Vice President for Academic, Faculty and Student Affairs or the Chief Student Affairs Officer and the required accounting for such activities is made to the Vice President for Academic, Faculty and Student Affairs or the Chief Student Affairs Officer.

2. Per the Regent’s Rules and Regulations, Series 80103, (Collection or Sales by a University Organization) the collection of contributions or the sale of merchandise, publications, food, or nonalcoholic beverages by the students’ association or by a sponsored or registered student, faculty, or staff organization. A students’ association or a registered or sponsored student, faculty, or staff organization may not conduct such solicitation activities on behalf of or for the benefit of any individual, association, organization, corporation, or group of individuals that is not registered as a student, faculty, or staff organization.

3. Major focus for fund-raising activities on the campus of the Health Science Center should be to generate funds for University programs and the State Employee Charitable Campaign (SECC). Requests by other off-campus, non-profit 501(c)(3) organizations to conduct fund-raising activities must be forwarded to the Vice President and Chief Development Officer for review. Only the Health Science Center Executive Committee may authorize such events.

Student Conduct and Discipline Policy


All students are expected and required to obey federal, state, and local laws, to comply with the Regents’ Rules and Regulations, Rule 50101, with The University of Texas System and institutional rules and regulations, with directives issued by an administrative official of the University of Texas System or the Health Science Center in the course of his or her authorized duties, and to observe standards of conduct appropriate for an academic institution.

University students are expected to conduct themselves in a professional manner, not only in interaction with patients, but also with peers, faculty, and staff of the Health Science Center and the community in general. In addition to conventional academic tests and measurement criteria for assessment, students will be evaluated on issues relating to their professional conduct/judgment according to the defined standards of the school, program, and profession for which they are in training. The specific professional discipline/school in which the student is enrolled may have additional and more specific codes of conduct. As such, the dean of each school shall have the responsibility for the administration of discipline in cases concerning academic dishonesty and professional misconduct.

Students are expected to reply to all written and electronic correspondence from university officials and are obligated to meet with university officials when summoned. Failure to respond to written or electronic correspondence or failure to meet with a university official when directed may result in referral to the individuals program and promotions board or an interim suspension until a meeting is scheduled.

Conduct matters under the scope of the academic and professional standards of expectations as defined by the educational programs in the schools will be adjudicated by the individual schools in which the educational programs are housed. As such, the dean of each school shall have the responsibility for the administration of discipline in cases concerning academic dishonesty and professional misconduct.

Please see Section 14.1.1 “Procedures and Regulations Governing Student Conduct and Discipline” (http://uthscsa.edu/hop2000/14.1.1.pdf) of the Handbook of Operating Procedures for a more detailed explanation of the policy.

Student Criminal Background Checks

As specified under the University Admissions Policy (p. 12), certain programs require students to submit to and satisfactorily complete a criminal background check as a condition of admission, re-admission and/or participation in education experiences. Accepted applicants and current students are responsible for the costs associated with obtaining criminal background checks. Students who refuse to submit to a background check or who do not pass the background check may be dismissed from the program.

Graduating students seeking professional certification and/or licensure to practice in the state of Texas may be denied employment opportunities based on unsatisfactory criminal background checks as determined by licensing agencies and employers.

Students seeking internships or employment as teachers in the state of Texas should be aware that many Texas school districts require applicants for student teaching or field experiences to undergo a criminal history background check prior to placement in the school district. School districts may deny placement of students with a criminal background. If a school district denies a placement for this reason, the student’s department may attempt to assist the student in obtaining a placement in an alternate district. Students should be aware, however, that if they are unable to obtain a placement they may not meet requirements for a teaching degree or teacher certification. Additionally, The Texas State Board for Educator Certification (SBEC) regulates the certification of educators to teach Texas public school
Student Mistreatment Policy

Policy framework: UT Health strives to provide an educational environment that is safe, equitable, and hospitable so that learners have the opportunity to succeed in their academic and professional programs. To that end, mistreatment of students will not be tolerated. Mistreatment, intentional or unintentional, occurs when behavior shows disrespect for the dignity of others and interferes with the learning process. Student mistreatment may take many forms, all of which impact student performance.

Examples of behavior that are unacceptable at the Health Science Center include:

- Disparaging or demeaning comments about an individual or group;
- Loss of personal civility including shouting, displays of temper, public or private abuse, belittling, or humiliation;
- Use of grading or other forms of evaluation in a punitive or retaliatory manner;
- Sending student on inappropriate errands.

Students should be able to access university officials to understand processes and procedures for resolution of their non-academic grievances.

Sexual harassment and assault, as well discrimination or harassment based on race, color, religion, sex, national origin, age, disability, citizenship, genetic information, veteran status, gender identity, or sexual orientation are also forms of student mistreatment. The citizens, genetic information, veteran status, gender identity, or race, color, religion, sex, national origin, age, disability, sexual harassment and assault, as well discrimination or harassment based on race, color, religion, sex, national origin, age, disability, citizenship, genetic information, veteran status, gender identity, or sexual orientation are also forms of student mistreatment. The University of Texas Health Science Center at San Antonio (UT Health) has a Student Mistreatment Policy which describes the process for filing complaints related to mistreatment, providing guidance. If a student seeks advice from an institutional representative, the institutional representative should refer the student immediately to the student’s Assistant/Associate Dean for Student Affairs for further instructions.

A grievance involving perceived mistreatment can be resolved in an informal or a formal manner. A student pursuing an informal, nonacademic grievance resolution must contact the Assistant/Associate Dean for Student Affairs, in writing, within twenty (20) business days of the alleged incident. The written informal complaint must include a short description of the alleged incident, the expressed desire to handle the issue informally, and the date it occurred. (If the grievance involves staff, faculty, student(s) from the broader Health Science Center community, the Assistant/Associate Dean for Student Affairs will liaison with other appropriate authorities, as indicated.) The Assistant/Associate Dean for Student Affairs will assist the student in the informal resolution of the grievance, to be completed within twenty (20) days from receipt of the student's written grievance. If an informal resolution is not achieved, the aggrieved student has an additional five (5) business days to file a formal written grievance.

Formal Grievance Resolution Process: A student may forego the informal resolution process and move directly to filing a formal academic grievance. To file a formal, nonacademic grievance the student must first contact the Assistant/Associate Dean for Student Affairs for a review of applicable policies and procedures. If the allegation is one of sexual harassment/assault, the Assistant/Associate Dean for Student Affairs will engage the Health Science Center’s Chief Student Affairs Officer & Title IX Director to follow the procedures described in HOP 4.2.2. If the allegation is one of discrimination, the Assistant/Associate Dean for Student Affairs will follow the procedures described in HOP 4.2.1. The student must file a formal written grievance with the Assistant/Associate Dean for Student Affairs within twenty (20) business days from the alleged incident. If the student had sought an informal resolution and now wishes to submit a formal grievance, the student must file the formal written grievance no later than five (5) business days after the period of the informal grievance process.

The formal grievance must include a detailed description of the incident, the underlying reason for filing the formal grievance, and a proposed resolution, if possible. If the grievance involves/accuses Health Science Center students, faculty, staff, or employees, who are not members of the grievant’s school, the Assistant/Associate Dean for Student Affairs of the student’s School will facilitate engagement with appropriate advocacy/supervisory institutional authorities. Copies of the written grievance will be made available to named parties and the appropriate advocacy/supervisory institutional authorities. The Assistant/Associate Dean for Student Affairs (and appropriate institutional authorities noted above) may, at her/his discretion, hold discussions with or without the involved/accused individual(s) to hear and resolve the grievance, schedule a meeting between the student and the involved/accused individual(s) and/or involve other parties in facilitating a resolution of the grievance. The Assistant/Associate Dean for Student Affairs has twenty (20) business days from receipt of the formal written grievance to resolve the grievance and will provide the aggrieved student a written summary of resolution.

Informal Grievance Resolution Process: These school and institutional representatives are empowered to informally discuss a student’s perceptions related to mistreatment, providing guidance. If a student seeks advice from an institutional representative, the institutional representative should refer the student immediately to the student’s Assistant/Associate Dean for Student Affairs for further instructions.

Examples of behavior that are unacceptable at the Health Science Center include:

- Disparaging or demeaning comments about an individual or group;
- Loss of personal civility including shouting, displays of temper, public or private abuse, belittling, or humiliation;
- Use of grading or other forms of evaluation in a punitive or retaliatory manner;
- Sending student on inappropriate errands.

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If the aggrieved student is dissatisfied with the resolution, he/she may file a formal written appeal with the School's Dean within five (5) business days of the decision. The decision of the School Dean is final. The School Dean has twenty (20) business days to provide a written decision to the student and the School's Assistant/Associate Dean for Student Affairs.

The Dean's decision regarding the merits of the grievance and its resolution are final. If the student alleges that institutional policies were not followed, the student may appeal at the institutional level only if the student alleged he/she was not afforded due process.

Appeals on the basis of procedure violations only are submitted to the to the Vice President for Academic, Faculty and Student Affairs, or the Vice President's designee, within five (5) business days of receipt of the Dean's decision pertaining to the non-academic grievance.

**Student Right-To-Know Act and Campus Security Act**

**Your Right to Know**

The Jeanne Clery Act is the landmark federal law that requires colleges and universities to disclose information about crime on and around their campus. The "Clery Act" is named in memory of a 19-year-old Lehigh University freshman named Jeanne Ann Clery, who was sexually assaulted and murdered in her residence hall room on April 5, 1986.

The Health Science Center is committed to assisting the Health Science Center community in providing for its own safety and security. Information regarding campus security, personal safety, crime prevention, university police law enforcement authority, crime reporting policies, crime statistics for the most recent three-year period, and disciplinary procedures is available on the Health Science Center Police Department website.

If you would like a paper copy of this information, you may contact the crime prevention office at 210-567-2800.

**Crime Statistics**

The University Police Department compiles statistics of crimes occurring on the campus. Reports of these statistics are forwarded to The Office of the Director of Police of The University of Texas System, to the Texas Department of Public Safety, and to the Federal Bureau of Investigation. Statistics are provided to meet compliance requirements established in the Clery Act. Persons with questions about the information may contact the Chief of Police at (210) 567-2791. Information is available upon request.

**Crime Reporting**

Numerous efforts are made to advise members of the campus community about campus crime and crime-related problems.

1. **Annual Report:** A comprehensive annual report of crime-related information is compiled, published, and made available for distribution. This report is available to the media and any member of the campus community or members of their immediate family.
2. **Special Crime Alerts:** If circumstances warrant, special crime bulletins can be printed and distributed throughout the campus.
3. **Emergency Notifications/Timely Warnings:** When crimes occur on or near the campus property that pose a continuing threat to the safety or health of the campus community, immediate notifications will be made utilizing the HSC Alert text message notification system.
4. **Electronic Mail:** In extreme situations, crime bulletins can be prepared and disseminated, utilizing the campus electronic mail system.

**DEFINITION OF TERMS**

**Campus**

"(i) any building or property owned or controlled by the institution of higher education within the same reasonable contiguous geographic area and used by the institution in direct support of, or related to its educational purposes; or (ii) any building or property owned or controlled by student organizations recognized by the institution."

Contained herein, "campus" and/or "The University of Texas Health Science Center at San Antonio" refers to the Health Science Center and the 8403 Floyd Curl Campus, inclusive.

Branch campuses, schools, or divisions that are not within a reasonable contiguous geographic area are considered separate campuses for the reporting requirements.

In most cases, fraternity, sorority, and other organizational housing units will be considered part of the campus regardless of location and ownership. Other areas that may be included are recreation/camp sites, research facilities, teaching hospitals, and foreign campuses.

**Crimes**

While not defined in the law, the National Association of Student Personnel Administrators, Inc. (NASPA) suggests that a crime is "reported" when a campus police officer investigating an incident determines that a crime has occurred or a local police agency notifies a component that it has documented a report of a criminal offense that has occurred "on campus" as defined by this Act.

For the purposes of the Act, the offenses for which statistics must be reported are to be defined in accordance with the FBI's Uniform Crime Report (UCR) system, as modified by the Hate Crimes Statistics Act.

**Arrest**

"A person is arrested when he/she has actually been placed under restraint or taken into custody by an officer or person executing a warrant of arrest, or by an officer or person arresting without a warrant." Article 15.22, Texas Code of Criminal Procedure (located under "Texas Statutes").

**Student**

While not defined in the law, for this policy, all persons who are registered during the current semester, on a leave of absence, or in a break in enrollment may be considered "students."

**Employees**

Full-time and part-time employees of the component with regularly scheduled hours of employment should be considered "employees."

**False Alarms and False Reports**

Under House Bill 1284 (http://www.capitol.state.tx.us/tlodocs/83R/billtext/pdf/HB01284F.pdf#navpanes=0), students must be made aware that making a false alarm or report of an emergency involving the Health Science Center is a state jail felony, and students committing such an offense may be penalized accordingly under Section 42.06 of the Penal Code.
Security Awareness and Crime Prevention/Community Policing Programs

Preventing crimes from occurring, rather than reacting after the fact, is the philosophy of Health Science Center. A primary vehicle for accomplishing this goal is the University Police Department’s comprehensive crime prevention program. It is based upon the dual concepts of eliminating or minimizing criminal opportunities, whenever possible, and encouraging students and employees to share the responsibility for their own security and that of others around them. Below is a listing of crime prevention programs and projects supported and employed by the Health Science Center.

1. Emergency Intercom System: All emergency telephones and intercoms (interior, exterior, late-entry doors, and elevators) throughout the campuses are directly linked to the University Police Department Communications Center. Once activated they must be deactivated by a University Police officer, Public Safety Officers, or communications officer.

2. Closed-Circuit Television. Surveillance: Numerous closed-circuit television cameras are employed throughout the campuses, including parking lots and public areas, and are monitored by the University Police Department.

3. Electronic Security Alarm Systems: A sophisticated computer-based electronic monitoring system located at the University Police Department Communications Center monitors a comprehensive network of intrusion detection and duress alarm systems.

4. Crime Prevention Presentations: Numerous crime prevention presentations are made annually to campus faculty, staff, and students.

5. Printed Crime Prevention Materials: Printed crime prevention brochures, posters, and newsletters related to theft prevention, motor vehicle security, bicycle security, personal security, and escort security are widely distributed at crime prevention presentations and made available at the University Police Building.

6. Daily Crime Logs: The University Police Department maintains a Daily Crime Log for incidents within the most recent 60 day period, the daily crime is available on the university police website, or can be viewed at the University Police Building.

7. Operation Identification: The engraving of driver’s license numbers or other owner-recognized numbers on items of value and the cataloging of these items is an ongoing program.

8. Sexual Assault Awareness, Education, and Prevention: Programs are presented throughout the year to the campus community. This includes RAD (Rape Aggression Defense) courses.

9. Security Surveys: Comprehensive security surveys or audits are made for a number of campus departments and facilities each year.

10. Facilities Surveys: Comprehensive annual surveys of exterior lighting, doors, and grounds are conducted by the University Police Department’s crime prevention specialists.

11. Architectural Design: Crime prevention specialists of the University Police Department make significant input into the design of all new and renovated campus facilities as it relates to physical and electronic security systems.

12. Key Control: The University Police Department is the custodian of all campus building interior and exterior door keys/cardkeys. Cores are not changed and keys are not issued except in those instances that conform to established university policy.

13. Area Crime Analysis: On a quarterly basis, a report is compiled using the information furnished by the San Antonio Police Department and Bexar County Sheriff’s Department, which reflect all Part I Crime occurring within a one-mile radius of the main campus as well as satellite locations. This information is available to campus community members upon request.

14. Shuttle Service: The Shuttle Bus Service operates an East and West route between 7703 and 8403 Floyd Curl Drive campuses. The shuttle buses can seat 32 passengers and are compliant with the Americans with Disabilities Act. No off-route or non-scheduled stops will be made. Riders should have their student or employee identification card available to be shown, upon request, to the officer driving the bus. For shuttle schedules, visit the Health Science Center Police website (https://www.uthscsa.edu/police/shuttle-bus).

HSC Alert and Emergency Information

Important Numbers

Emergencies
911 (from a campus “land line” phone = UT Police)
911 (from a cell phone on campus = San Antonio Police.)

24-hour Message
210-567-7669 (567-SNOW)
956-565-UTEL

Buildings/Utilities
210-567-2885

After Hours
210-567-2947

Computing Resources
210-567-2069

Environmental Health and Safety
210-567-2955

Network/Phones
210-567-2061

Police Non-emergency
Laredo: 956-523-7414
San Antonio: 210-567-2800

Emergency Information Outlets

The Office of Environmental Health and Safety shows emergency exits in campus buildings, and lists procedures for emergency response.

- Emergency Response and Evacuation Plan (http://research.uthscsa.edu/safety/emergencyresponse.pdf)

The National Hurricane Center describes how to prepare for the hazards of a hurricane.

- Hurricane Preparedness (http://www.nhc.noaa.gov/prepare/ready.php)

The Department of Homeland Security rates the risk of a terrorist attack based on the government’s five-color security advisory system. The Homeland Security Advisory System is designed to guide our protective measures when specific information to a particular sector or geographic...
The Health Science Center sponsors numerous off-campus activities involving students. In order to effectively manage these activities while minimizing institutional liability risks, this student travel policy must be followed.

**STUDENT TRAVEL**

In accordance with Texas Education Code Section 51.950, student travel is defined as follows:

The trip is undertaken by one or more currently enrolled students to reach an activity or event that meets all of the following criteria:

1. An activity or event organized and sponsored by the Health Science Center. The event shall be planned and funded by the institution and approved by a designated administrator.
2. The activity or event is located more than 25 miles from Health Science Center campuses.
3. Travel to the activity or event is funded and undertaken using a vehicle owned or leased by the Health Science Center, or attendance at the activity, or event is required by a registered student organization and has prior written approval by the Appropriate Institutional Officer.

**DESIGNATED ADMINISTRATOR (DA)**

The designated administrator shall be the respective Associate Dean of Student Affairs of each school.

**APPROPRIATE INSTITUTIONAL OFFICER (AIO)**

For purposes of this policy, any Health Science Center employee overseeing the off campus activity shall be identified as the Appropriate Institutional Officer (AIO). The AIO is responsible for compliance of this policy.

**UNIVERSITY PROCEDURE**

**Appropriate Institutional Officer (AIO)**

At least one AIO must accompany students on any off-campus activity. AIO is responsible for knowing the University Standard of Conduct and policies as outlined in this document. AIO must make clear to all participants the consequences or non-compliance, and the AIO must take appropriate action when aware that participants are in violation. All AIOs are trained regarding the sexual harassment policy and ADA guidelines.

**Assessment**

AIOs shall assess all health and safety conditions for each activity and all information shall be provided for prospective participants so the participants can make informed decisions concerning preparation, participation and behavior while on the trip.

**Trip Participation Forms**

Each participant or the participant’s parent/guardian in the case of a minor must complete, sign and return the Student Travel Information and Release Form (http://www.uthscsa.edu/hop2000/forms-10/student_release.pdf) to the AIO prior to the trip. The AIO is responsible for maintaining these records in a manner that ensures timely access to the medical information for each participant in case of an accident or health-related emergency. The AIO shall also complete a Student Travel Authorization (http://uthscsa.edu/hop2000/forms-10/student_travel.pdf) form and submit copies to the respective DA (Associate Dean of Student Affairs) and University Police prior to each trip.

**Medical Insurance**

All enrolled Health Science Center students are required by State Law to have continuous medical insurance coverage, including international students. A copy of the student’s proof of insurance shall be attached to the Student Travel Information and Release Form (http://www.uthscsa.edu/hop2000/forms-10/student_release.pdf).

**Weapons, Illegal Substances and Alcohol**

Use, possession or transporting of weapons, illegal substances and/or alcohol is forbidden while on a University sponsored trip.

**University Owned Vehicles/Rental Vehicles/Commercial Carriers**

All operators of University owned or leased vehicles shall be employees of Health Science Center who must be trained as required by law to drive the vehicles and have valid operators’ licenses to drive the vehicle that will be used.

In addition, operators shall have a current “Motor Vehicle Record” on file with the individual department’s personnel administrator. All operators of motor vehicles shall comply with all laws, regulations, and posted signs regarding speed and traffic control and shall not operate the vehicle for a continuous period that is longer than the maximum provided by federal or state law or regulations or guidelines promulgated by the Health Science Center, whichever is lower, without scheduled rest stops or overnight stops. There should be no driving between the hours of 11:00 p.m. and 6:00 a.m. without prior approval of the AIO.

When rental cars are used, the same policy applies and all applicable requirements of the state contracts for rental cars and the University of Texas System Business Procedure Memoranda apply.

All Health Science Center owned or leased motor vehicles must have current proofs of liability insurance coverage and state inspection certification, be equipped with all safety devices or equipment required by federal or state law or regulation, and comply with all other applicable requirements of federal or state law or regulations.

In addition, all Health Science Center owned or leased vehicles must have scheduled periodic service and maintenance by qualified persons.
and comply with all applicable requirements of the University of Texas System Business Procedure Memoranda.

All occupants or motor vehicles shall use seat belts or other approved safety restraint devices required by law or regulation at all times when the vehicle is in operation.

The total number of passengers in any vehicle at any time it is in operation shall not exceed the manufacturer’s recommended capacity or the number specified in applicable federal, state, or local laws or regulations, whichever is lower. In addition, when the luggage load is excessive, its weight shall be distributed evenly throughout the vehicle.

When commercial carriers are used, the same policies apply and all participants shall observe the carrier’s safety guidelines.

Emergency Procedures

All AIOs are to follow the predetermined emergency notification procedures while on trips.

Monitoring

When any incident relating to students occurs on the trip, the AIOs are to notify the supervisors as soon as possible, and the supervisors shall notify the respective DA (Associate Dean of Student Affairs). Following the trip, a report shall be submitted by the AIO’s to the respective DA (Associate Dean of Student Affairs) documenting the incident so appropriate actions could be taken.

Side Trips/Early and Late Departures

Students traveling on institutionally-approved trips must arrive at and depart the site at the same time as the AIOs unless prior approvals are given by the AIOs for special circumstances. Side trips from the predetermined itineraries are at the discretion of the AIOs.

Student Organization Travel

If a proposed trip is organized solely for a student organization, an officer of the student organization will need to submit the Student Travel Authorization form to the Office of Student Life (OSL) no less than one month prior to the scheduled trip.

If the trip is approved by the OSL, the student organization will also need to complete the following steps:

Due at least 2 weeks prior to departure:

- Student Travel Authorization (http://uthscsa.edu/hop2000/forms-10/student_travel.pdf)
- Student Travel Information and Release Form (http://www.uthscsa.edu/hop2000/forms-10/student_release.pdf)
- Provide the OSL with emergency contact information.
- Provide the OSL with a full travel itinerary.

Due 1 week prior to departure:

- Register with the State Department through the Smart Traveler Enrollment Program (https://step.state.gov/step).

International Travel

Students participating in an education abroad program, (examples: credit bearing, experiential/training related, or “Service Learning” Programs) that are delivered by, in association with, or under the auspices of the University, must review and adhere to the Education Abroad Policy (http://uthscsa.edu/15.3.1.pdf). Consultation with the Office of International Services (OIS) is required by all student participants well in advance of the proposed education abroad program departure date. Students must complete the Education Abroad Approval Form, and receive permission from the respective office of the Dean well in advance of departure abroad, as well as submit all required documentation found on the Education Abroad Checklist (http://uthscsa.edu/ois) to OIS.

NOTE: Travel to countries and localities that have been placed under official “Travel Warning” by the U.S. Department of State is prohibited. Please refer to the International Travel to High Risk Areas (http://uthscsa.edu/hop2000/15.2.2.pdf) policy.

Unauthorized Distribution of Copyright Material

Students are subjected to all copyright laws, rules, regulations, and penalties, including the Federal Criminal Intellectual Property Statutes of the United States Code (17 U.S.C. 506 and 18 U.S.C. 2318) and Code of Federal Regulations (34 CFR 668.43(a)(10) and 34 CFR 668.41(c)).

Details of the UT System and university policies regarding use of copyrighted materials may be found in the Handbook of Operating Procedures (http://uthscsa.edu/hop2000/2.3.2.pdf). For additional information, check the UT System’s Office of General Counsel home page (https://www.utsystem.edu/offices/general-counsel/office-general-counsel).

Software Copyrights

Software piracy is a very serious issue. The following standards apply at the Health Science Center:

1. All software should be used only in accordance with the applicable software license agreements.

2. No faculty, staff, or student should make any unauthorized copies of any software under any circumstances.

3. The use of unauthorized copies of software on any university-owned equipment will not be tolerated.

It is not right to illegally copy software or to use illegal software. In addition to possible legal action by the holder of software copyrights, any faculty, staff, and/or student engaging in software piracy will be subject to university discipline up to and including termination.

If you are aware of any software misuse or infringement of copyright laws, notify the head of your department or the Office of Internal Audit and Consulting Services (http://uthscsa.edu/internalaudit) immediately.

Vehicles on Campus

University Police Department is responsible for enforcing Parking and Traffic Regulations that have been established by the President pursuant to the Rules and Regulations of the Board of Regents of the UT System, Rule 80109, as well as enforcement of Texas vehicle inspection laws for vehicles parking or driving on campus. Additional information regarding parking guidelines, including locations and permit information for disabled veterans may be found at http://www.uthscsa.edu/sites/default/files/policy/ParkingTrafficRegs.PDF.
Schools

- School of Dentistry (p. 183)
- Graduate School of Biomedical Sciences (p. 78)
- School of Health Professions (p. 220)
- The Joe R. & Teresa Lozano Long School of Medicine (p. 166)
- School of Nursing (p. 266)

Certificate Programs

Advanced Education in General Dentistry (p. 199)
Cancer Prevention
Emergency Medical Technician-Basic
Emergency Medical Technician-Paramedic
Endodontics (p. 202)
Oral and Maxillofacial Radiology (p. 203)
Oral and Maxillofacial Surgery (p. 205)
Orthodontics and Dentofacial Orthopedics
Pediatric Dentistry
Periodontics
Post MSN Adult-Gerontology Acute Care Nurse Practitioner (p. 299)
Post MSN Family Nurse Practitioner
Post MSN Nursing Education
Post MSN Pediatric Nurse Practitioner Primary Care
Post MSN Psychiatric Mental Health Nurse Practitioner
Prosthodontics
Translational Science

Undergraduate Programs

Bachelor of Science (BS): Medical Laboratory Sciences
Bachelor of Science (BS): Dental Hygiene
Bachelor of Science (BS): Emergency Health Sciences
Bachelor of Science (BS): Respiratory Care
Bachelor of Science in Nursing (BSN): Nursing

Professional/Graduate Programs

Professional
Doctor of Dental Surgery (DDS) (p. 183)
Doctor of Dental Surgery/Doctor of Philosophy (DDS/PhD) (p. 90)

Graduate
Doctor of Philosophy in Nursing Science (PhD) (p. 137)
Doctor of Philosophy (PhD) Biomedical Engineering (p. 93)
Doctor of Philosophy (PhD) Integrated Biomedical Sciences (p. 116)
Doctor of Philosophy (PhD) Pharmacology (p. 148)
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Master of Deaf Education and Hearing Science (MDEHS) (p. 180)
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Master of Science (MS): Immunology and Infection (p. 114)
Master of Science (MS): Medical Health Physics (p. 131)
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Master of Science (MS): Medical Laboratory Sciences (p. 241)
Master of Science (MS): Personalized Molecular Medicine (p. 145)
Master of Science (MS): Respiratory Care (p. 257)
Master of Science (MS): Speech Language Pathology (p. 231)
Master of Science in Nursing: (MSN) (p. 283)
Non-degree Programs

The University of Texas Health Science Center at San Antonio (HSC) does not offer formal non-degree programs. However, individuals may seek to enroll as non-degree seeking students in order to audit approved courses. These individuals should contact the appropriate school or academic department (http://www.uthscsa.edu/schools_roster.shtml) to inquire about such opportunities.

Individuals should further note that non-degree-seeking students are ineligible to qualify for financial aid, although payment installments may be arranged through the Office of the Bursar (http://www.uthscsa.edu/business/bursar) for the amount of tuition and fees owed.

Archives

Copies of previous University catalogs can be found on the Office of the University Registrar website (http://students.uthscsa.edu/registrar/2013/04/catalog-and-course-descriptions).
GRADUATE SCHOOL OF BIOMEDICAL SCIENCES

Mission Statement

The Graduate School of Biomedical Sciences provides an individualized, diverse and multidisciplinary learning environment for students to develop the knowledge, skills and creativity necessary to succeed in evolving biomedical disciplines.

Graduate Programs

The Graduate School of Biomedical Sciences (GSBS) was established in 1972 and currently hosts doctoral programs in Biomedical Engineering, Integrated Biomedical Sciences (IBMS), Nursing Science, Radiological Sciences and Translational Science. A Professional Doctorate in Medical Physics and Master's degrees in Cell Systems and Anatomy, Clinical Investigation and Translational Science, Biomedical Engineering, Dental Hygiene, Dental Science, Immunology and Infection, Medical Health Physics, and Personalized Molecular Medicine are offered. Certificates in Cancer Prevention (CCP) and Translational Science (CTS) are also offered.

The graduate program leading to the Doctor of Philosophy degree in Nursing Science is conducted by the faculty of the UT Health San Antonio’s School of Nursing and administered through the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu). The Master of Science and Doctoral Programs in Biomedical Engineering is jointly offered by the Graduate School of Biomedical Sciences at the UT Health San Antonio and the Graduate School at The University of Texas at San Antonio (UTSA) (http://graduateschool.utsa.edu). The Translational Science Ph.D. (TS Ph.D.) program is a unique interdisciplinary, joint doctoral degree program involving four UT Institutions: The University of Texas at San Antonio, The University of Texas at Austin, The University of Texas School of Public Health, San Antonio Regional Campus and the Health Science Center. A Master’s program in Clinical Investigation and Translational Science is designed for graduate students and health care professionals interested in the design and conduct of clinical studies. Certificates in Cancer Prevention and in Translational Science are administered through the Master’s program in Clinical Investigation and Translational Science. The Master’s degree programs in Dental Science and Dental Hygiene are offered under the joint auspices of the university’s School of Dentistry and the Graduate School of Biomedical Sciences.

These academic programs offered by the GSBS are designed to provide a fundamental foundation of knowledge and scientific inquiry and enable the Graduate School of Biomedical Sciences to assert its primary objective of educating students committed to the advancement of knowledge in contemporary areas of the biomedical sciences. Our educational and research faculty are housed in all five schools of the UT Health San Antonio (http://www.uthscsa.edu). A compelling aspect of graduate education in a health science center is the opportunity for graduate students to interface with health professionals with diverse technological and conceptual capabilities and perspectives in the biomedical sciences. These programs provide opportunities for graduate students to become competent in a specialized field, to attain excellence in the conduct of research, and to gain an understanding of the interdisciplinary nature of biomedical sciences. Our graduate programs in a prominent academic health science university also provides an environment where scientific inquiry can synergize with the healing professions to guide our science in seeking solutions to even the most vexing biomedical issues plaguing mankind. Detailed information about these graduate programs is provided in this Catalog.

The proof of accomplishment or enduring value of any educational process is evidenced in the demonstrated productivity and academic achievement of the graduates of the program. Without question, the doctoral and masters programs of the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu) have, during the past four decades, achieved outstanding success in their educational mission of preparing professional scientists who function well in academic, industrial, and government sectors.

There is a diversity of talent, but also a unity of purpose in teaching and mentoring students in an exciting array of interdisciplinary and discipline-based fields of study and research.

Non-Degree Program

An individual who wishes to enroll in courses in the Graduate School of Biomedical Sciences without entering a formal degree program must apply for admission as a non-degree student. The basic requirements for such admission are the same as those for degree-seeking students except letters of recommendation and GRE scores are not required. Non-degree applicants are also required to provide authorization for a security background and sanction check to be performed at the time of admission.

A non-degree student must receive approval of registration each semester by the Dean of the Graduate School and by the instructor of each course. The student must maintain a grade point average of at least a B (3.0 on a 4.0 scale) in courses taken as a non-degree student. Non-degree students can register for a maximum course load of twelve semester hours in the fall or spring semesters. In general, a student may not maintain non-degree status for more than four consecutive semesters.

All grades received as a non-degree student will be included in the graduate student’s transcript and in computation of the cumulative GPA if the student is subsequently admitted to a graduate program. Under special circumstances, such as the computation of the GPA to determine academic probation, the Dean may grant exceptions to this policy. The grading policy for non-degree students is the same as those for degree-seeking students.

International students currently residing abroad should consult with the Office of International Services prior to applying for the non-degree program. Only degree-seeking applicants are eligible to apply for a student visa status.

Committees on Graduate Studies (COGS)

Each program is supervised by a Committee on Graduate Studies (COGS) composed of members of the graduate faculty of that program. The COGS is responsible for establishing admission requirements specific to the program, recommending approval or denial of admission of applicants to the program, overseeing academic curricula, monitoring its students’ academic progress in didactic and research activities, attesting eligibility for admission to candidacy for a degree, and verifying to the Graduate Faculty Council that the student has fulfilled all requirements for the awarding of the degree. Each graduate program shall have the primary responsibility for the conduct and administration of the program including the appointment of the COGS Chair, the administrative head of the program. The COGS Chair is the voting representative of the program on the Graduate Faculty Council and serves as the liaison officer.
between the COGS and the Graduate School Dean's Office on all matters pertaining to applicant and student affairs. Once selected, the Graduate School Dean's Office must be notified via an official memorandum of the decision within one week. The Graduate Advisor serves as a counselor on academic matters and monitors the student's progress in (a) successfully completing contingencies of admission and course requirements of the program, and (b) selecting an area of research specialization. In several graduate programs, a single graduate faculty member may serve as both Graduate Advisor and COGS Chair.

The Graduate Faculty Council has the responsibility to establish and maintain policies and regulations on matters of graduate education common to all programs administered by the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu). These include such matters as general academic requirements for admission to graduate study and advancement to candidacy, for continuation of studies, and awarding of degrees; standards of student professional conduct; grading systems; graduate program review; and criteria for thesis and dissertation research, supervision of research, and defense of research. Each COGS is responsible to the Graduate Faculty Council and submits recommendations on various graduate program matters, including the submission of degrees, to the Council for review and vote for approval.

The Dean of the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu) is the administrative head of the graduate programs and serves as the Chair of the Graduate Faculty Council. Ex-officio nonvoting members of the Council include the Dean, the Associate Dean(s) of the Graduate School, the Assistant Dean(s) of the Graduate School, the Assistant Vice President for Student Services, and the Registrar. The voting members of the Council consist of the COGS chairs of each graduate program. The president of the Graduate Student Association serves as the non-voting, student representative on the Graduate Faculty Council.

Graduate School of Biomedical Sciences Policies and Procedures

Policies and Procedures

Requirements and Regulations

A student enrolled in the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu) is subject to all established requirements and regulations of the Health Science Center, the Graduate School, and the respective graduate programs. Exceptions to these rules and issues not covered by previously determined guidelines will be decided by the Graduate Faculty Council.

Attendance

Attendance requirements for regularly scheduled classes, laboratories, and clinic periods are the option and prerogative of the course instructor for that particular portion of the curriculum. The policy regarding attendance for each course is announced by the instructor at the first meeting.

Unexcused absences in courses in which attendance is required may be considered sufficient cause for failure. Excused absences may be granted by the course director in such cases as illness, personal emergency, or religious reasons. Such leaves are considered on an individual basis, and verification of the reason for the absence may be required. It is the responsibility of the student to take the initiative in arranging with the faculty to make up work that is missed, or may be specified in the course syllabus.

For student employees, refer to policy 4.3.5 in the Handbook of Operating Procedures (http://uthscsa.edu/hop2000/4-toc.aspx).

Course Syllabus Policy

All course instructors must provide a course syllabus to students and comply with the following:

1. All course syllabi must be posted online, either in the course's learning management system, or on a GSBS web page. This policy is mandated by State law (HB 2504).
2. Course syllabi must be made available to students online on the day web registration begins, but no later than the first class meeting of the semester. After the first class, no changes can be made to the syllabus except for changes to logistical information. If the logistical information is changed, the updated syllabus must be posted within 48 hours so that it remains current.
3. The academic content of a course syllabus remains within the purview of each individual instructor, subject to the program's curricular needs. However, at a minimum, the following elements must be included in each course syllabus:
   - the course number and name
   - the instructor's name and contact information (including email address)
   - the instructor's official office hours and location
   - the course's learning objectives
   - the course prerequisites (if required)
   - a detailed grading scheme, including types of exams/assignments and their weight in determining the final grade
   - a schedule of assignments and exams
   - the textbook, reading assignments and/or reading list
   - the course policies the instructor wishes to impose, such as attendance policies, class participation expectations, late assignment policies, etc.

4. The following Health Science Center policy statements:

REQUESTS FOR ACCOMMODATIONS FOR DISABILITIES

In accordance with the Handbook of Operating Procedures (http://uthscsa.edu/hop2000/4-toc.aspx) policy 4.2.3, Request for Accommodation Under the ADA and the ADA Amendments Act of 2008 (ADAAA), any student requesting accommodation must submit the appropriate request for accommodation under the American with Disabilities Act (ADA, form 100) to his/her appropriate Associate Dean of Student Affairs of their School and a copy to the ADA Coordinator.

ACADEMIC INTEGRITY AND PROFESSIONALISM

The Graduate School of Biomedical Sciences expects all students to exhibit the highest standards of conduct, honesty, and professionalism. Any student who commits an act of academic dishonesty is subject to discipline as prescribed by the UT system Rules and Regulations of the Board of Regents. Academic dishonesty is any activity that undermines the academic integrity of the institution, which includes but is not
limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an exam for another person, signing attendance sheets, for another student, and any act designed to give unfair advantage to a student or attempt to commit such an act. Policies of academic misconduct apply to all course, department, school, and university-related activities including conferences and off-campus performances as well as research work (including lab experiments, data collection, analyses, and publications). All cases of academic misconduct must be reported to the Dean of Student Affairs of the Graduate School of Biomedical Sciences (GSBS) who will assess the seriousness of the violation and determine the nature of the penalty required.

Residence Required for Graduation
Each doctoral student must spend a minimum of two full semesters, or the equivalent, as a full-time student in residence at the Health Science Center Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu). The residence requirement is based on the premise that the scholarship and proficiency necessary for the achievement of a graduate degree in the biomedical sciences are best acquired through endeavors devoted wholly to study and research in the university environment. A candidate for the Ph.D. degree must be registered in the dissertation course for at least two terms. A candidate for the M.S. degree must be registered in the thesis course for at least one term (which can be done via distance education).

Time Limits
The median time for completion of the M.S. degree and the Ph.D. degree in the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu) is 3 years and 5.5 years, respectively. The time to degree for the Doctorate in Medical Physics (DMP) program is 4 years.

Ph.D. Degree: Each program has a written policy on time-to-degree (Plan of Study) that will guide the student. Coursework or major examinations taken more than six years prior to the end of the candidate’s final semester may not be accepted for credit and, if necessary for the degree, must be repeated or specifically approved by the Committee on Graduate Studies.

M.S. Degree: Each program has a written policy on time-to-degree (Plan of Study) that will guide the student.

Credit Hour Requirements
A minimum of 33% of the total semester credit hours taken for an M.S. or Ph.D. degree must be earned at the Health Science Center (http://www.uthscsa.edu). Specific curricula requirements vary depending on individual programs. A minimum of 98 semester credit hours is required for the DMP degree.

Ph.D. Degree: A minimum of 72* semester credit hours is required for the Ph.D. and the Ph.D. component of the dual degree programs. Doctoral students are required to demonstrate intellectual command of the subject area of the graduate program and capability to carry out independent and original investigation in the area. The specific curriculum requirements of each graduate program are defined in the individual programs. The curriculum of each student is supervised by the appropriate Committee on Graduate Studies.

M.S. Degree: A minimum of 30* semester credit hours is required for the M.S. degree. The student must successfully complete at least 12 semester credit hours of coursework in addition to credit hours awarded in Research, Thesis, and Seminar. All work for the M.S. degree is ordinarily done at the Health Science Center’s Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu).

A maximum of six semester hours of graduate course work from another institution may be applied for credit toward the Master of Science degree, but only with the approval of the Committee on Graduate Studies in the student’s program. In cases where such credit is approved, the student must still meet the residence requirement for two full semesters. For students participating in a dual degree program, usually six semester hours in the medical or dental curriculum may be credited toward the M.S. degree. As a rule, these semester hours will come from survey courses in the student’s major area. Students in the doctoral Nursing Program should consult the Transfer of Credit policies under the Program Policies for the Doctor of Philosophy in Nursing Program (http://catalog.uthscsa.edu/biomedicalsciences/nursingscience).

*Some programs may require additional hours

Background Checks
Background checks are required prior to matriculation. Any events that occur after the initial background check that might affect the student’s status in the program must be reported to the department immediately. Students are required to comply with additional requests for background checks at any time during their course of study. Students may be responsible for the cost and fees of any/all required background checks.

Transfer of Credit
Credit for coursework taken at another institution may be transferred if the student submits a Course Waiver/Substitution Request Form available in the Office of the University Registrar. The same procedure should also be used to request transfer of credit from other schools within the Health Science Center (http://www.uthscsa.edu). The transfer of credit is subject to approval by the Committee on Graduate Studies of the program in which the student is enrolled and by the Dean or the Dean’s designee.

Students in M.S. programs may apply no more than 6 semester hours of transferred credit toward satisfaction of the 30 semester credit hours required for the degree. However, the request form should list all courses taken elsewhere, which are approved by the Committee on Graduate Studies to satisfy the course requirements for the M.S. degree set forth by the program in which the student is enrolled.

Students in Ph.D. programs are required to fulfill a minimum of 72 semester credit hours of coursework, and students in the DMP program are required to fulfill a minimum of 98 semester credit hours. Transfer of credit for Ph.D. students may be requested to provide evidence on the student’s transcript of the completion of courses taken elsewhere which are approved by the Committee on Graduate Studies (1) to satisfy the course requirements for the Ph.D. degree or (2) to be appropriate to the specific course of study of the individual graduate student.

Waiver of Courses: With the approval of the Committee on Graduate Studies, graduate credit hours from other universities may be accepted in lieu of required courses. In addition, the Committee may waive certain required courses, based on the student’s previous graduate coursework. These hours will be accepted in the form of credit for the course material rather than by application of credit hours directly to the student’s transcript.
Foreign Language Requirement

Proficiency in a foreign language is not a requirement for either the M.S. or Ph.D. degree.

Ethics Course Requirement

All doctoral students must take the course TSCI 5070 Responsible Conduct of Research or its equivalent, as a requirement for graduation. Master of Science students are strongly encouraged to take the TSCI 5070, but it is not a requirement for graduation.

Supervised Teaching

Each graduate program will decide if supervised teaching is required for a doctoral degree in its respective program. If supervised teaching is required, the student must enroll in a program-designated teaching course for a minimum of one semester credit and receive a grade of S (Satisfactory) or H (Honors). BME students are required to enroll in three semester credit hours of supervised teaching. UTSA offers a supervised teaching course, in which students will receive a letter grade.

Student Employment

Full-time doctoral students are strongly counseled against accepting any outside employment. Before seeking outside employment, graduate students are urged to discuss their plans with their faculty advisor.

Full-time graduate students may be awarded stipends as teaching assistants (TAs) or graduate research assistants (GRAs) when funds are available. Student stipends funded from federal sources are governed by federal regulations. Full-time students who are GRAs or TAs are discouraged from taking employment; as stipends serve as scholarships to meet financial need.

There may be circumstances under which part-time graduate student’s desire gainful employment within the Health Science Center (http://www.uthscsa.edu) (or full-time employees desire to pursue part-time graduate studies), and the following guidelines should apply:

- When funds are available, part-time graduate students who are gainfully employed part-time within the Health Science Center in addition to pursuing graduate studies may be paid prorated rates within salary scales of job classification for which they are qualified and/or to which they are assigned. This procedure is permitted primarily to allow gainful part-time employment in an area unrelated to the student’s formal academic program. The Committee on Graduate Studies (COGS) should be consulted in advance when a part-time student desires part-time employment within the student’s own supervising department, or when the student is employed in a work situation that exists whereby the employment will be of direct benefit in meeting the graduate degree requirements. The COGS should then recommend an appropriate part-time rate of pay consistent with the objectives of the graduate program in general with due consideration to the pay rates of other graduate students. Departments requesting employment of a part-time graduate student outside the supervising department (and in an area unrelated to the student’s academic program) should determine the number of hours for which the student is registered prior to contacting the Office of Human Resources regarding appointment of such students. This will enable the Office of Human Resources (http://uthscsa.edu/hr) to provide proper salary rate information.

The present policy permits an employee to enroll in a 3-semester credit hour course without reduction in pay.

Records

Registration

The Office of the University Registrar (http://students.uthscsa.edu/registrar) will announce and provide the registration process to all students. Committee on Graduate Studies (COGS) Chairs, Departmental Chairs, and their assistants prior to the start of each semester. For individual registration concerns, students should confer with the program’s Committee on Graduate Studies (COGS) Chair.

A student must register each semester that he or she is enrolled in a course. This includes courses in Research, Thesis, and Dissertation. No student can receive credit for a course for which he or she has not registered.

Consequences for Non-Payment of Tuition and Fees

In graduate programs where students are responsible for paying their own tuition and fees, payment must be made by the census date of each semester (which is always the 12th class day). The fall semester has two official start dates for new students, and thus, two census dates are listed on the school’s official Academic Calendar. Students should refer to the Academic Calendar to determine their census date based on their start date. Consequences of non-payment of tuition and fees are listed below. International students who fail to pay tuition by the census date must also contact the Office of International Services (http://www.uthscsa.edu/ois).

Failure to pay tuition will result in the following:

- Discontinued enrollment in the graduate program
- Termination from the program with loss of pay, benefits, and privileges.
- Necessity to re-apply for admission for the following semester.
- Barred from readmission for the current semester.
- Initiation of loan repayments (if applicable).
- Potential loss of visa status and possible deportation for international students.
- Withholding of a student’s official transcript.
- Withholding of a diploma to which a student would otherwise be entitled.

Waiver of Fitness Fee: Graduate students enrolled at the Health Science Center are required to pay a fitness fee. Only students enrolled in 100% online programs may submit a petition to waive the fitness center fee. Students enrolled in a joint degree program (e.g. Translational Science, Biomedical Engineering) where the home institution is not the Health Science Center may request the fitness fee to be waived. Waiver requests must be submitted by the student in writing to the Associate Dean of Student Affairs in the Graduate School no later than 10 days prior to the beginning of classes. Students enrolled in final hours may also request the fitness fee to be waived. All waiver requests are forwarded by the Associate Dean of Student Affairs for review by the Vice President for Academic, Faculty and Student Affairs, and require the approval of both the Vice President for Academic, Faculty and Student Affairs and the Vice President and Chief Financial Officer.

If the waiver is approved, the GSBS will forward the waiver to the Bursar’s Office with a copy sent to the Office of Veteran Services & Financial Aid. Waivers are valid for one year after which the student must re-apply.
**Full-Time Status**

Doctoral students must be enrolled for a minimum of 12 semester credit hours each fall and spring semester in order to be considered full-time (equivalent to 24 semester credit hours for a full academic year). The minimum half-time course load for doctoral graduate students is 6 credit hours per semester.

Master’s students must be enrolled for a minimum of 8 semester credit hours each fall and spring semester in order to be considered full-time. The minimum half-time course load for master’s graduate students is 4 credit hours per semester.

Exception(s) to this policy include:

1. A student enrolled in a THECB-approved Certificate program
2. A student enrolled for Final Hours.
3. A student enrolled in the Ph.D. Nursing Science program.
4. A Health Science Center student enrolled in the Translational Science Ph.D. program; Credit hours earned in trailing summer semesters at other participating institutions will count toward the total required credit hours each academic year.
5. A Health Science Center student enrolled in the Biomedical Engineering Ph.D. program or Biomedical Engineering M.S. program; Credit hours earned in trailing summer semesters at other participating institutions will count toward the total required credit hours each academic year.

Students appointed in Graduate Research Assistant (GRA) and Teaching Assistant (TA) positions in the GSBS will be required to enroll in a minimum of 12 credit hours per semester, with the exception of a Health Science Center student in the Translational Science PhD and Biomedical Engineering PhD programs, which will require enrollment in a total of 24 credit hours over the fall, spring, and trailing summer semesters each academic year. GRAs and TAs are allowed to enroll in final hours and remain as full-time students per the Final Hours Policy (http://catalog.uthscsa.edu/generalinformation/generalacademicpolicies/finalcredithourspolicy) found in the catalog under General Academic Policies.

Students enrolling for less than half-time will be responsible for repayment of federal student loans.

**Adding Courses**

Students may add courses during official add days as designated by the Office of the University Registrar (http://students.uthscsa.edu/registrar) each semester. Students are not permitted to add classes to their schedules after the census date, which is typically the 12th class day of the spring and fall semesters.

**Dropping Courses**

A student who is not on academic probation may drop a course at any time during the semester provided the student is passing the course at the time and has obtained the signed approval of the course director and COGS chair.

The Registrar will record the symbol **W** if a course is dropped before the first evaluation period in that course. After that time, the course director will assign a grade of either **WP** (Withdrawn Passing) or **WF** (Withdrawn Failing). A student on academic probation will not be allowed to drop a course.

In case of illness and with the consent of the Dean, a student may drop a course without penalty at any time prior to the beginning of final examinations.

**Registration for Thesis**

Students in M.S. programs may register for the Thesis course XXXX 6098 where XXXX represents one of the following: BIME, BIOL, CSBL, DENH, IBMS, MEDI, MICR, MSDS, NURS, RADI, or TSCI. Registration for Thesis is only permitted after the following three actions have been taken:

1. Approval of admission to candidacy for the M.S. degree by the Dean;
2. Approval of the thesis research proposal by the Committee on Graduate Studies of the program and the Dean;
3. Appointment of a Supervising Committee for the thesis research by the Committee on Graduate Studies of the program and the Dean.

Candidates for the M.S. degree with thesis must register for the thesis course for at least one term, unless they participate in a graduate program with a non-thesis option.

**Registration for Dissertation**

Students in Ph.D. programs may register for the Dissertation course XXXX 7099 where XXXX represents one of the following: BIME, BIOL, CSBL, IBMS, MEDI, MICR, NURS, RADI, or TSCI. Registration for Dissertation is only permitted after the following three actions have been taken:

1. Approval of admission to candidacy for the Ph.D. degree by the Dean or the Dean’s designee;
2. Approval of the dissertation research proposal by the Committee on Graduate Studies of the program and the Dean or the Dean’s designee;
3. Approval of the membership of the candidate’s Supervising Committee by the Committee on Graduate Studies of the program and the Dean or the Dean’s designee.

A candidate for the Ph.D. degree must register for the Dissertation course for at least two terms.

**Registration for Final Term**

It is a requirement that a student be registered for the semester in which he or she graduates.

**Final Credit Hours**

A student in his/her final semester registering only for thesis or dissertation course may register for “final hours”. A Ph.D. student must register for a minimum of 3 semester credit hours; a M.S. student must register for a minimum of 1 semester credit hour. When a student declares “final hours” for a semester, the student shall be considered enrolled in a full-time course load for that semester. The student pays tuition based upon the number of credit hour for which he/she registers.

Because of requirements dictated by certain types of visas, international students must consult with their COGS Chair and the Office of International Services prior to registering for final hours.
A student may register for final credit hours only once during his/her degree program. The "Request for Designation of Final Hours" form is available in the Office of the University Registrar or on their website (http://students.uthscsa.edu/registrar/2013/03/forms/) and it requires the signature approval of the program COGS Chair.

**Registration for Audit**

Permission to audit one or more courses is sometimes granted. Auditing conveys only the privilege of observing and excludes handing in papers or taking part in a class discussion, laboratory exercises, or fieldwork. An AU grade is given and no credit is reported. Graduate students must obtain permission to register to audit a course from the course director and the COGS chair of the program in which they are enrolled. Others who wish to register to audit a graduate course must apply through the Graduate School’s application system for admission as a Non-Degree Student. The Associate Dean of Academic Affairs serves as the program director for the non-degree program.

**Grading System**

Credit hours are earned in the graduate programs only for the grades A, B, C, and S. All letter grades except H and S are included in the computation of the grade point average. Grade points are assigned as follows:

- A = 4 (above average graduate work)
- B = 3 (average graduate work)
- C = 2 (below average graduate work)
- D = 1 (failing graduate work)
- F = 0 (failing graduate work)

Grades of D and F are not acceptable for graduate credit. If a course is repeated, the last grade earned is used in computing the cumulative grade point average. The original grade will remain listed on the transcript but will not be used in computing the cumulative grade point average.

A grade of S (satisfactory), U (unsatisfactory), or H (honors) is not included in the computation of the grade point average. These grades are given in the following courses in all programs: Supervised Teaching, Research, Thesis, and Dissertation. S/U and/or H (Honors) may also be given in specific courses in specific programs.

Other symbols used in reporting the standing of students in their classes are: WP and WF (see “Withdrawal”), W (course dropped while receiving a passing grade with no penalty), and I (incomplete). The course director will record the symbol W if a course is dropped before the first evaluation period in that course. After that time, the course director will assign a grade of either WP (withdrew passing) or WF (withdrew failing).

An I is used only to report cases in which the student has not completed all of the assignments and/or examinations before the conclusion of the course. Unless the student has been granted a leave of absence, all work must be completed within one year, at which time the grade of I (incomplete) will be changed to the appropriate letter grade.

The grading system described above applies to courses in the medical and dental curricula in which graduate students may be enrolled as well as to courses in the graduate programs. Grades for courses taken to satisfy a contingency or condition of admission or those transferred for credit are not included in computation of the grade point average.

**Student Academic Grievance Process**

An Academic Grievance is a complaint regarding an academic decision or action that affects a student’s academic record. For the definition of terms see: http://catalog.uthscsa.edu/generalinformation/generalacademicpolicies/grievances/.

As required by the University of Texas System and the policies of the Health Science Center, a formal grievance procedure is a process to allow students the opportunity to report any perceived act, omission, or issue of an academic nature which may adversely affect the student. The student grievance may include grade disputes or other academically related issues. All efforts should be made by the student and the faculty member involved to resolve the issue before proceeding through the grievance process. If the issue cannot be resolved to the student’s satisfaction, the student is encouraged to submit their grievance through the grievance process. The sequence of procedures involved in the grievance process is outlined below.

**Grievance Process:**

1. The student has up to 10 business days from the date he/she was issued the grade or evaluation in question to file a formal complaint.
2. A formal complaint is filed by submitting the Student Complaint Form (https://www.uthscsa.edu/academics/biomedical-sciences) to the Chair of COGS Chair for the Program with a copy delivered to the GSBS Dean's office.
3. A committee consisting of the COGS Chair, the Program Director and the GSBS Associate Dean of Student Affairs*, will have up to 30 business days to investigate the grievance. The COGS Chair will chair the committee. If the Program Director also serves as the COGS Chair, the Program Director will appoint a senior graduate faculty member of the Program to serve on the committee. Documentation from the student and faculty will be collected as well as face-to-face meetings scheduled by the COGS Chair.
4. A written and signed summary of the decision rendered will be provided to the student by the COGS Chair and a copy of the signed summary will be sent by the COGS Chair to the GSBS Dean's Office.
5. If the student is not satisfied with the final decision reached by the COGS Chair, Program Director, and Associate Dean of Academic Affairs, the student may appeal the decision to the Dean of the GSBS within 10 business days of receiving the written summary (described below).
6. All documents (emails/memos/letters/written summaries) will be maintained by the GSBS.

*If the formal academic grievance is filed against the COGS Chair or Program Director then the Associate Dean of Student Affairs or designee will serve as the chair of the grievance committee and will identify a senior faculty member as the third member to serve on the committee. If the Associate Dean of Student Affairs is named in the complaint, then the Associate Dean of Academic Affairs or his/her designee will represent the GSBS on this committee.

**Appeal Process**

The student has up to 10 business days of receiving the written summary of the formal grievance process to file an appeal.

An appeal is filed by submitting to the Dean of the GSBS a letter signed by the student outlining the arguments for the appeal together with the Student Complaint Form and the written summary from the grievance process.
The Dean will have up to 30 business days following the formal grievance process to render a decision. The Dean's decision will be considered final and provided to the student in writing.

**Texas Higher Education Coordinating Board**

If a student exhausts the Graduate School of Biomedical Sciences grievance process, a complaint may be filed to The Texas Higher Education Coordinating Board. More information on the types of complaints it investigates, processes, and the complaint form can be accessed on [The Texas Higher Education Coordinating Board website](http://www.thecb.state.tx.us).

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**Continuation, Probation, and Dismissal**

Continuation in the graduate programs is dependent upon the following conditions:

1. Satisfactory progress in removing any conditions imposed at the time of admission;
2. Maintenance of a minimum cumulative B (3.0) average for all courses taken while enrolled in the Graduate School of Biomedical Sciences ([http://gsbs.uthscsa.edu](http://gsbs.uthscsa.edu)). A student whose cumulative grade point average falls below 3.0 will be placed on probation and warned by the Dean of the Graduate School that continuation in the graduate program is in jeopardy. A student will remain on probation as long as her or his cumulative GPA is below 3.0. While on probation, a student must maintain a B average in those courses for which he or she is registered or be considered for dismissal by the Committee on Graduate Studies. Except in the case of illness, permission to drop courses will not be given while the student is on probation. The length of time a student is allowed to remain on probation is at the discretion of the program Committee of Graduate Studies. The probationary period should not impede on the student's academic progress in the program. A student on probation may not be admitted to candidacy or awarded a degree. Grades achieved during enrollment as a non-degree student are not used to determine academic probation.
3. A satisfactory rate of progress toward the degree as determined by the Committee on Graduate Studies is required throughout the student's enrollment. The Committee, with the Dean's consent, may terminate a student's enrollment for lack of satisfactory progress. Any graduate student who receives two unsatisfactory (U) grades in consecutive semesters will be considered for dismissal by the program Committee on Graduate Studies. Any recommendation for dismissal requires final approval by the Dean of the Graduate School.
4. A student that has been recommended for dismissal from a graduate program can appeal the decision according to the Student Academic Grievance Policy outlined above. If the student decides to appeal the recommendation for dismissal, the student may still register and attend courses in the subsequent semester; however, the student is not required to do so. If the student elects to appeal the dismissal and attend classes in the subsequent semester, an expedited appeal review process may be requested to ensure that a decision on the appeal is reached prior to the census day for the semester in which the courses are being taken. In order to initiate the expedited appeal review process, the process outlined below must be followed:
   a. The student has up to 5 business days from the date he/she received the recommendation for dismissal to file a formal appeal by submitting to the Dean of the Graduate School a letter signed by the student outlining the arguments for the appeal and requesting an expedited review process.
   b. The GSBS Dean will assemble a committee consisting of the Program COGS Chair, the Program Director and the Associate Dean of Academic Affairs in the Graduate School. The Program COGS Chair will chair the committee. If the Program Director serves as COGS Chair, the Program Director will appoint a senior graduate faculty member of the Program to serve on the committee.
   c. The Committee will have up to 3 business days following the receipt of the appeal to render a decision and provide a written summary to the Dean. All documentation will be collected by the COGS Chair and provided to the GSBS Dean.
   d. The GSBS Dean will have up to 2 business days to provide a written and signed summary of his/her decision to the student. A copy of the signed summary will be sent by the COGS Chair.
   e. The GSBS Dean's decision will be considered final and is not subject to further appeal.

All documents (emails/memos/letters/written summaries) will be maintained by the Graduate School Dean's Office.

For students enrolled in dual degree programs, please refer to your program's handbook for additional information concerning continuation in the program.

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**Withdrawal**

Permission for withdrawal from a graduate program may be granted by the Dean upon concurrence by the Committee on Graduate Studies of the program. The student who wishes to withdraw must complete and sign the [Student Clearance Form](available from the Office of the University Registrar), submit the form for signature to the COGS Chair and the Graduate School dean or designee, and then obtain authorized signature clearance from each area listed on the lower portion of the form.

In the case of withdrawal before the end of the semester (and thus the dropping of all courses), the grading symbol WP or WF will be recorded for each course not completed, depending on the student's standing on the last day of enrollment. In the case of withdrawal at the end of a semester, the appropriate grade will be recorded for each completed course.

An application for readmission by a student who has previously withdrawn is subject to the same requirements, procedures, and acceptance considerations that apply to first-time applicants.

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**Leave of Absence**

Permission for a leave of absence from a graduate program for a maximum period of one year may be granted by the Dean subject to prior approval by the Committee on Graduate Studies of the program. Such permission will be granted only for extenuating circumstances and indicates that the student will be allowed to return to the program within the one-year time limit. For students funded through a stipend, there is no guarantee that the stipend will be reinstated upon return.

The student should make a written request for a leave of absence to the Chair of the Committee on Graduate Studies for her/his program, including the reasons for the request and the expected time of return. If the request for leave of absence is approved, the student is so notified by a letter from the Dean and provided by the Graduate School Dean's Office. The student must then complete a [Student Clearance Form](available from the Office of the University Registrar). The student should then complete and sign the upper portion of this Form, obtain the signatures
of the COGS Chair and the Graduate School Dean for designee, and obtain authorized signature clearance from each area listed on the form. The student should also drop any courses for which they are currently enrolled.

In Absentia (INTD 1000)

Students must be registered for the semester in which they graduate and all fees and tuition apply. In Absentia status is a type of registration that allows students to maintain student status at the university while completing research elsewhere. In Absentia may also allow students who have completed all requirements for graduation to enroll for purposes of a degree conferral. Registration In Absentia is designated as a zero credit hour and the student is assessed a fee. Students using the In Absentia designation must successfully defend the dissertation or thesis within the 2 weeks prior to the final Graduate Faculty Council meeting of the semester. All forms required by the Graduate School and the final approved dissertation or thesis must be submitted in accordance with the timeline for the first degree conferral date of the new semester. Final approved version of the dissertation or thesis must also be electronically submitted in accordance with the relevant timeline.

The student who expects to defend the dissertation or thesis in this interval should register for one credit hour for the next semester. Following the successful defense of the dissertation, the student may drop the one credit hour and register In Absentia for the coming semester. This must be accomplished before the first class day of the new semester. Registration In Absentia is designated as zero credit hours and the student will be charged a $25 fee.

Non-registration

A student who fails to register for two or more consecutive semesters and does not elect to take a leave of absence or to enroll In Absentia will be considered for dismissal from the program. The Registrar will notify the GSBS Dean's Office of the student's failure to register.

If dismissed, the student may reapply for admission. Such application is subject to the same requirements, procedures, and acceptance considerations that apply to first-time applicants.

Transfer between Graduate Programs

Any student who wishes to change the course of study from one graduate program to another must submit an application to that program, and the application is subject to the same requirements, procedures, and acceptance considerations that apply to other applicants to the program. Students who are considering such a transfer must have an interview with the GSBS Associate Dean of Academic Affairs. Upon approval, a Change of Program form must be signed by all relevant parties and submitted to complete the process.

Graduation

The degree of Doctor of Philosophy is awarded by the Board of Regents (http://www.utsystem.edu/board-of-regents) upon the satisfactory completion of a minimum of 98 semester credit hours, the requirements documented by the Committee on Graduates Studies, recommendation of the Graduate Faculty Council, and certification of the candidate by the Dean and the President to the Board of Regents. The degree of Doctorate in Medical Physics is awarded upon the satisfactory completion of a minimum of 98 semester credit hours, the requirements documented by the Committee on Graduates Studies, recommendation of the Graduate Faculty Council, and certification of the candidate by the Dean and the President to the Board of Regents.

*Some programs may require additional hours

Commencement

Graduation exercises are held each year in May.

The Graduate School's Dean will be present to address the students and participate in the presentation of diplomas. Candidates for graduation in the Nursing Science Ph.D. program, the Pharm.D. program and the Master's in Dental Science and Dental Hygiene program also participate in the Graduate School (http://gsbs.uthscsa.edu) Commencement.

Sequential Procedures

Doctor of Philosophy degree

Phase 1 - From matriculation through admission to candidacy

1. Assignment of faculty advisor: The Committee on Graduate Studies assigns a member of the graduate faculty as advisor to each student entering a program. The advisor serves as counselor on academic matters and monitors the student's progress in (a) successfully completing contingencies of admission and course requirements of the program and (b) selecting an area of research specialization.

2. Selection of the supervising professor: No later than three months after the student's admission to candidacy, the member of the graduate faculty of the program who will serve as the supervising professor of the dissertation research shall be decided upon with mutual agreement among the candidate, the faculty member, and the Committee on Graduate Studies. Normally, the research advisor who guided the student's preliminary research activities continues as supervising professor, but this arrangement is not obligatory.

3. Approval of research advisor (supervising professor): When the student selects the area of research specialization and the faculty member to serve as research preceptor, the Committee on Graduate Studies reviews the proposed selections. If the selections are approved, the faculty member is designated by the Committee on Graduate Studies as the student's research advisor in concert with, or in replacement of, the original faculty advisor. The faculty advisor may, of course, be selected as the research advisor. The student's potential for productive and independent investigation is assessed by the research advisor.

4. Compact and Milestone Agreement: No later than one month after the student selects their faculty mentor, Compact and Milestone Agreements between the student and mentor are required. The student and mentor will discuss and sign the Compact and Milestone. The Compact and Milestone documents will be reviewed by the Program Director and/or COGS Chair of the respective program. Following this initial process, Milestone accomplishments should be reviewed on an annual basis by the Program Director and/or COGS Chair. If Milestones are not being adequately met, the Program Director and/
or COGS Chair along with the supervising professor should create a plan of action to correct the deficiencies. If the issue(s) remain and/or are not adequately being resolved after six months then the GSBS Dean’s Office should be notified of the issue(s) and be provided with a proposed plan of action to ensure student success in the program.

5. **Qualifying examination**: The Qualifying Examination is comprehensive in nature and may be written, oral, or both. The Committee on Graduate Studies or its designee determines the format of the examination and the composition of the Qualifying Examination Committee, with the proviso that one member is not on the graduate faculty of the student’s program. The Qualifying Examination Committee administers the examination(s), evaluates the student’s performance, and reports its judgment on whether the student passed (indicated by a grade of “Satisfactory”) or failed (indicated by a grade of “Unsatisfactory”) to the Committee on Graduate Studies or its designee.

6. **Admission to candidacy**: Recommendation by the Committee on Graduate Studies that the student be admitted to candidacy for the Doctor of Philosophy degree requires the following:
   a. Satisfactory completion of all required courses; in exceptional cases, permission to proceed to Phase II without having completed all required courses can be granted by the Dean of the Graduate School.
   b. Cumulative grade point average of at least 3.0 in all coursework undertaken since matriculation in the program.
   c. Report by the Qualifying Examination Committee that the student has passed the examination.
   d. Report by the student’s research advisor and other graduate faculty members, as appropriate, that the student has clearly evidenced the potential for productive and independent investigation.

If, in its overall evaluation of the eligibility of the student for admission to candidacy, the Committee on Graduate Studies is in favor of admission, it shall submit a Petition of Admission to Candidacy Form (GSBS Form 32) to the Dean for approval with documentation of satisfaction of the requirements listed above. Each research advisor is required to sign the form to certify her/his view of the student’s potential for productive and independent investigation. The Dean may approve or disapprove the recommendation or request further documentation. When the Dean has approved admission of the student to candidacy, the candidate enters Phase II of the program.

In the event a student does not advance to candidacy, the student is given the opportunity to repeat the Qualifying Examination to earn a “Satisfactory” grade. If the student fails the second attempt at the Qualifying Examination then the COGS will recommend to either dismiss the student from the program or to allow the student to enter a Master’s program.

**Phase II - From admission to candidacy through granting of the degree**

1. **Draft of dissertation research proposal**: The candidate shall identify a research question that will serve as a focus for the dissertation research. The candidate shall prepare a draft of a research proposal that specifies the research to be undertaken, its significance in the scientific field, and the general methods and techniques to be utilized. The proposal shall be submitted to the supervising professor for review and modification. Subsequent drafts of the proposal should then be submitted for review and modification to members of the dissertation supervising committee (see below). The final draft of the dissertation research proposal is subject to review and approval by the Committee on Graduate Studies, which may specifically designate a group of faculty members to review the proposal draft(s).

2. **Composition of the dissertation supervising committee**: After approval of the proposal by the Committee on Graduate Studies, the supervising professor and the candidate shall make recommendations to the Committee on Graduate Studies regarding the composition of the Supervising Committee for the dissertation research. Recommendations may include adjunct faculty members who have been approved as Graduate Faculty of a program at the UT Health San Antonio and are eligible to serve on a dissertation supervising committee. The Supervising Committee must consist of at least five persons, as follows:
   a. The supervising professor, also a member of the program’s graduate faculty, designated as Supervising Professor and Chair of the Supervising Committee;
   b. One member must be from outside of UT Health San Antonio and must be an expert in the field of the proposed dissertation;
   c. Two members must be members of the graduate faculty of the program;
   d. One member must be a faculty member of UT Health San Antonio in a supporting area outside the program but need not necessarily be a member of the graduate faculty.

The Committee on Graduate Studies may nominate additional members in categories (b), (c), and (d) if necessary. Nomination is contingent upon the willingness of the designated person to serve on the Supervising Committee. The composition of the Supervising Committee should, in principle, provide a group of research scientists who constitute an important resource to the candidate and her or his dissertation research. Their functions are, with the Supervising Professor, to provide feedback and guidance to the student to ensure progression towards their degree in a timely manner. Specific responsibilities include critique and approval or denial of a student’s research proposal; attendance of the dissertation defense to approve or deny the degree to the program COGS; and to certify to the Committee on Graduate Studies that the candidate has, in fact, carried out a meritorious research investigation of the caliber appropriate for a Ph.D. dissertation and, in their opinion, defended it satisfactorily. Upon selection of the supervising committee, the chair of the Committee on Graduate Studies (COGS) will submit to the Graduate School Dean’s Office a completed GSBS Form 30 Recommendation for Approval of Dissertation Research Proposal and Supervising Committee. A copy of the proposal must be uploaded along with the form 30.

3. **Approval of the dissertation proposal and supervising committee**: The Graduate Faculty Council and the Dean (of a designee of the Dean) will review the recommendation of COGS on the proposal and supervising committee. After approval by the Dean (or a designee of the Dean) of both the proposal and the Supervising Committee, the candidate may register for their respective program’s Dissertation course. Any subsequent change in the Composition of the Supervising Committee must be approved by the COGS and approved by the Dean (or designee or the Dean), who will then report the change at a regularly scheduled GFC meeting.

4. **Supervision of the dissertation research**: Within one month after formal approval of the Supervising Committee, the Supervising Professor shall convene the Supervising Committee to discuss with the candidate the progress of the dissertation research and the projected future work. At appropriate intervals thereafter (at least every six months), the Supervising Committee shall meet with
the candidate for presentation of progress reports (written and/or oral), so that current status of the research may be evaluated and direction of future work planned. If the external Committee member is unable to attend these meetings, it is the responsibility of the candidate and the Supervising Professor to provide this member with progress reports for review and recommendations. It is essential that the Supervising Committee be fully informed of the research progress and be able to provide continued supervision throughout and that the Committee on Graduate Studies receive reports of the research progress from the Supervising Committee after each of its meetings with the candidate. The Supervising Committee and/or the Committee on Graduate Studies may approve or direct alterations in the research plans within the general context of the dissertation proposal. Major changes in the candidate's research status (such as selection of a new Supervising Professor, new Supervising Committee members, or a new research question) must be reported to the Graduate Faculty Council and the Dean for consideration.

5. **Submission of the dissertation:** After agreement by the members of the Supervising Committee that the research has progressed sufficiently for submission of the dissertation, a draft of the dissertation shall be submitted to the Supervising Professor. Additionally, the candidate will be required to upload their dissertation into a plagiarism detection software through the learning management system course specifically created by the Graduate School Dean's Office for the purpose of safeguarding the institution's reputation and integrity. After uploading their dissertation into the plagiarism detection software, the candidate will receive a similarity report and score that will help to determine the originality of the work. This report should be submitted to the Supervising Professor along with the draft of their dissertation. Following discussion of the report with the mentor, recommended changes will be made to the dissertation including those intended to lower the similarity report score (if necessary) and then the revised draft will be uploaded to the plagiarism detection software for a second time. The revised draft and the second similarity report will be submitted to all other members of the Supervising Committee for review and recommendations for modification of content. An electronic copy will also be submitted via ProQuest to the Graduate School Dean's Office for review of formatting. It is the responsibility of the candidate to follow the guidelines of preparation of the dissertation provided by the Graduate School Dean's Office in Dissertation/Thesis Workshop and in the *Instructions for Preparation and Submission of Electronic Theses, Dissertations and Dissertation Abstracts* and associated rubric. If the alternative chapter format is preferred, the candidate must obtain approval for such format from the Supervising Committee and the Committee on Graduate Studies.

6. **Final oral examination:** When the Supervising Committee judges the dissertation to be suitable for defense, the final similarity report from the plagiarism detection software and the *Request for Final Oral Examination Form* (GSBS Form 40), which both need to be signed by the Supervising committee and Chair of the Committee on Graduate Studies, should be submitted to the Dean for request of scheduling the Final Oral Examination. A copy of the Abstract and Vitae must accompany the *Request for Final Oral Examination Form* at the time it is submitted to the Graduate School Dean's Office. Public announcement of the Final Oral Examination is made by the Graduate School Dean's Office. This examination is conducted by the Supervising Committee. All members of the Supervising Committee are expected to participate in the final oral examination. Interested persons may attend the public defense and have the right to question the candidate. After the public defense, the Final Oral Examination continues with an intensive oral examination by the Supervising Committee that is not customarily open to the public. The Supervising Committee members vote on the candidate's success or failure on the Final Oral Examination; more than one vote for failure signifies failure on the examination. The Supervising Committee submits the *Report on Final Oral Examination Form* (GSBS Form 43) to the Committee on Graduate Studies. In the event of a failing performance by the candidate, the Supervising Committee shall also submit to the Committee on Graduate Studies and the Dean a recommendation regarding remedial action; in such case, the Committee on Graduate Studies shall decide on the recommendation or other action to be taken. In the event of a successful performance by the candidate, the Committee on Graduate Studies shall vote on whether to approve the recommendation by the Supervising Committee for granting of the degree.

7. **Recommendation for granting of the degree:** If the Committee on Graduate Studies approves the favorable recommendation by the Supervising Committee, the Chair of the Committee on Graduate Studies shall so indicate by signature on the *Report on Final Oral Examination* and submit the Report to the Graduate Faculty Council for consideration. The candidate shall submit to the Graduate School Dean's Office the final electronic version of the dissertation via ProQuest. The dissertation Approval Page signed by the Supervising Professor and Committee members must also be submitted to the Graduate School Dean's Office. When the Report, the Approval Page, the electronic dissertation approved in ProQuest and the Survey of Earned Doctorates have been received in the Graduate School Dean's Office, the Graduate Faculty Council will consider the recommendation for granting of the degree. If the Council does not approve the recommendation, it will refer the matter to the Committee on Graduate Studies with a recommendation for remedial action. If the Council does approve the recommendation, the Dean of the Graduate School of Biomedical Sciences will notify the Office of the University Registrar that the candidate has fulfilled all requirements of the Graduate School of Biomedical Sciences for the degree of Doctor of Philosophy. Upon the candidate's certification by the President, the degree is conferred by the Board of Regents of The University of Texas System. (See "Registration for Dissertation," "Registration for Final Term," and "Graduation" previously discussed in this section.)

Dissertations will be made available to the public. A student may request permission from the graduate dean to temporarily delay making the dissertation available to the public in order to protect patent or other rights. This request must be supported by a written recommendation from the Supervising Professor. The graduate dean makes the final decision regarding delayed publication.

**Master of Science Degree**

The Graduate School of Biomedical Sciences offers Master of Science degrees with some programs offering either a thesis, non-thesis or manuscript option. The Graduate School of Biomedical Sciences does not require a comprehensive Qualifying Examination or a Petition for Admission to Candidacy form for the Master of Science Degree. The Sequential Procedures for each program can be modified to correlate with the curricula and requirements of that individual program. The general Sequential Procedure for the Master of Science degree is listed below but the appropriate Sequential Procedures may be obtained from the Graduate Advisor of the specific program.

**Phase I - From matriculation to admission to candidacy**
1. **Assignment of faculty advisor:** The Committee on Graduate Studies assigns a member of the graduate faculty as advisor to each student entering a program. The advisor serves as counselor on academic matters and monitors the student’s progress in:
   a. successfully completing contingencies of admission and course requirements of the program and
   b. selecting an area of research specialization.

2. **Approval of research advisor (supervising professor):** By the end of the first semester a student selects the area of research specialization and the faculty member to serve as research preceptor, the Committee on Graduate Studies reviews and documents the proposed selections. If the selections are approved, the faculty member is designated by the Committee on Graduate Studies as the student’s research advisor in concert with, or in replacement of, the original faculty advisor. The faculty advisor may, of course, be selected as the research advisor. During this period, the student’s potential for productive and independent investigation is assessed by the research advisor.

3. **Qualifying examination:** The Graduate School of Biomedical Sciences does not require a comprehensive Qualifying Examination for the M.S. degree. However, the Committee on Graduate Studies for particular programs may require the student to pass a written and/or oral Qualifying Examination prior to consideration for admission to candidacy. The appropriate Sequential Procedures should be obtained from the Graduate Advisor of the specific program.

4. **Compact and Milestone Agreement:** No later than one month after the student selects their faculty mentor, Compact and Milestone Agreements between the student and mentor are required. The student and mentor will discuss and sign the Compact and Milestone. The Compact and Milestone documents will be reviewed by the Program Director and/or COGS Chair of the respective program. Following this initial process, Milestone accomplishments should be reviewed on an annual basis by the Program Director and/or COGS Chair. If Milestones are not being adequately met, the Program Director and/or COGS Chair along with the supervising professor should create a plan of action to correct the deficiencies. If the issue(s) remain and/or are not adequately being resolved after six months then the GSBS Dean’s Office should be notified of the issue(s) and be provided with a proposed plan of action to ensure student success in the program.

5. **Admission to candidacy:** Recommendation by the Committee on Graduate Studies that the student be admitted to candidacy for the Master of Science degree requires the following:
   a. Satisfactory completion of all required courses;
   b. Cumulative grade point average of at least 3.0 in all coursework undertaken since matriculation in the program;
   c. Report by the Qualifying Examination Committee that the student passed the examination or that the examination has been waived;
   d. Report by the student’s research advisor and other graduate faculty members, as appropriate, that the student has clearly evidenced the potential for productive and independent investigation. GSBS Form 31 should be submitted to the Graduate School Dean’s Office for approval.

6. **Selection of the supervising professor:** No later than three months after the student’s admission to candidacy, the member of the graduate faculty of the program who will serve as the supervising professor of the thesis research shall be decided upon by mutual agreement among the candidate, the faculty member, and the Committee on Graduate Studies. Normally, the research advisor who guided the student’s preliminary research activities continues as supervising professor, but this arrangement is not obligatory.

**Phase II - From Admission to candidacy through granting of the degree**

1. **Draft of thesis research proposal:** No later than three months after admission to candidacy, the candidate shall submit a draft of a proposal for the thesis research to the supervising professor for review and modification. Subsequent drafts of the proposal may then be submitted for review and modification to other faculty members who have knowledge and expertise in the area of the research proposal. After approval of the final proposal draft by the supervising professor, the proposal is submitted to the Committee on Graduate Studies for consideration of approval.

2. **Appointment of the supervising committee:** During the Fall semester of the second year and after approval of the thesis proposal by the Committee on Graduate Studies, the supervising professor and the candidate shall make recommendations to the Committee on Graduate Studies regarding the composition of the Supervising Committee for the thesis research. Recommendations may include adjunct faculty members who have been approved as Graduate Faculty of a program at the UT Health San Antonio and are eligible to serve on a thesis supervising committee. The Supervising Committee must consist of at least four persons, as follows:
   a. The supervising professor, also a member of the program’s graduate faculty, designated as Supervising Professor and Chair of the Supervising Committee;
   b. Two members must be members of the graduate faculty of the program;
   c. One member must be a faculty member of UT Health San Antonio in a supporting area outside the program or a person outside of UT Health San Antonio who is an expert in the field of the proposed thesis.

The composition of the Supervising Committee should, in principle, provide a group of research scientists who constitute an important resource to the candidate and her or his thesis research. Their functions are, with the Supervising Professor, to provide feedback and guidance to the student to ensure progression towards their degree in a timely manner. Specific responsibilities include critique and approval or denial of a student’s research proposal, attendance of the thesis defense to approve or deny the degree to the program COGS; and to certify to the Committee on Graduate Studies that the candidate has, in fact, carried out a meritorious research investigation of the caliber appropriate for a M.S. thesis and, in their opinion, defended it satisfactorily.

Immediately upon selection of the Supervising Committee, GSBS Form 30, Research Proposal and Supervising Committee, must be signed by each member of the supervising committee and submitted to the Graduate School Dean’s Office. Committee member signatures certify the committee’s approval of the proposal and his/her approval to serve on the committee. A copy of the proposed work in electronic form must accompany the form. An electronic addendum is required for any subsequent changes in the Composition of the Supervising Committee or research proposal and must be approved by the Chair of COGS and the GSBS Dean.

3. **Supervision of the thesis research:** Within one month after appointment of the Supervising Committee, the Supervising
Professor shall convene the Supervising Committee to discuss with the candidate the progress of the thesis research and the projected future work. At least once per semester, the Supervising Committee shall meet with the candidate for progress reports (written and/or oral) so that current status of the research may be evaluated and direction of future work planned. It is essential that the Supervising Committee be fully informed of the research progress and be able to provide continued supervision throughout, and that the Committee on Graduate Studies receive reports of the research progress from the Supervising Committee after each of its meetings with the candidate.

4. **Submission of a thesis:** When members of the Supervising Committee agree that the research has progressed sufficiently for submission of the thesis, a draft of the thesis shall be submitted to the Supervising Professor. Additionally, the candidate will be required to upload their thesis into the plagiarism detection software through the learning management system course specifically created by the Graduate School Dean’s Office for the purpose of safeguarding the institution’s reputation and integrity. After uploading their thesis into the plagiarism detection software, the candidate will receive a similarity report and score that will help to determine the originality of the work. This report should be submitted to the Supervising Professor along with the draft of their thesis. Following discussion of the report with the mentor, recommended changes will be made to the thesis including those intended to lower the similarity report score (if necessary) and then the revised draft will be uploaded to the plagiarism detection software for a second time. The revised draft and the second similarity report will be submitted to the other members of the Supervising Committee for review and recommendations for modification of content. An electronic copy must also be submitted via ProQuest to the Graduate School Dean’s Office for review of formatting and recommendations for modification. It is the responsibility of the candidate to follow the guidelines for preparation of the thesis provided by the Graduate School Dean’s Office in Dissertation/Thesis Workshop and in the Instructions for Preparation and Submission of Electronic Theses, Dissertations and Dissertation Abstracts and associated rubric. If an alternative chapter format is preferable, the candidate must obtain approval for such format from the Supervising Committee and the Committee on Graduate Studies. The candidate also has the responsibility to ensure adequate time for review and modification of the thesis.

b. **Submission of a manuscript:** When members of the Supervising Committee have approved the manuscript, the student must submit the manuscript to a peer reviewed scientific journal. The manuscript must be written within the publication specifications of the selected journal. The manuscript must be submitted, in press, or published during the interval that the student was enrolled in the program. Manuscripts unrelated to the approved research project, such as case reports or book chapters, are not acceptable for completion of the manuscript requirement. The manuscript should be provided to the Supervising Committee for review and approval prior to submission to the program COGS. The manuscript can be submitted to the program COGS at any time, however, in cases with impending graduation deadlines, the approved manuscript should be provided to the program COGS at least one month prior to the regularly-scheduled graduation date established by the Graduate School of Biomedical Sciences (GSBS). The candidate also has the responsibility to ensure adequate time for review and modification of the thesis. When a manuscript is submitted to the GSBS Dean’s Office, it should be accompanied by:
   i. A copy of the letter from the Supervising Professor
   ii. A dated notice (letter or email) from the publisher that indicates manuscript submission or acceptance.
   iii. The completed Manuscript Approval Form

5. **Final oral examination:** The Graduate School requires that the thesis be defended by the candidate in a Final Oral Examination conducted by the Supervising Committee; the format in which this examination is conducted (see Options 1 and 2 below) shall be decided by the Committee on Graduate Studies and it is recommended that it be uniform for all M.S. candidates in a specific program. All members of the Supervising Committee are expected to participate in the final oral examination.

a. **Option 1:** If the Committee on Graduate Studies elects to require that the thesis be defended in a formal Final Oral Examination scheduled through the Graduate School Dean’s Office and open to all interested persons, then the procedures in number 6 for Master of Science Candidates should be followed.

b. **Option 2:** If the Committee on Graduate Studies chooses a non-public notification due to intellectual property concerns, without public notification through the Graduate School Dean’s Office, the following procedures apply. The Request for Final Oral Examination Form (GSBS Form 40), signed by the Supervising Committee members, should be submitted to the Chair of the Committee on Graduate Studies, who shall indicate approval by signature and transmit the Request to the Graduate School Dean’s Office for approval by the Dean.

c. A copy of the Abstract, Vita and CV should be submitted with the request for the candidate’s file in their department, the Office of the University Registrar, and the Graduate School Dean’s Office.

d. The Supervising Committee members vote on the candidate’s success or failure on the Examination; more than one vote for failure signifies failure on the Final Oral Examination. The Supervising Committee submits the Report on Final Oral Examination (GSBS Form 41) to the Committee on Graduate Studies. In the event of a failing performance by the candidate, the Supervising Committee shall also submit to the Committee on Graduate Studies and the Dean a recommendation regarding remedial action or further examinations; in such cases, the Committee on Graduate Studies shall decide upon the recommendation or other action to be taken. In the event of a successful performance by the candidate, the Committee on Graduate Studies shall vote on whether to approve the recommendation by the Supervising Committee for granting of the degree.

e. **Recommendation for granting of the degree:** If the Committee on Graduate Studies approves the favorable recommendation by the Supervising Committee, the Chair of the Committee on Graduate Studies shall so indicate by signature on the Report on Final Oral Examination and submit the Report to the Graduate Faculty Council for consideration. The candidate shall submit to the Graduate School Dean’s Office the final electronic version of the thesis in ProQuest. The thesis Approval Page signed by the Supervising Professor and Committee members must also be submitted to the Graduate School Dean’s Office. When the Report, the Approval Page and the electronic thesis approved in ProQuest have all been received in the Graduate School Dean’s Office, the Graduate Faculty Council will consider the recommendation for granting the degree. If the Council does not approve the recommendation, it will refer the matter to the Committee.
on Graduate Studies with a recommendation for remedial action. If the Council does approve the recommendation, the Dean of the Graduate School of Biomedical Sciences will notify the Office of the University Registrar that the candidate has fulfilled all requirements for the degree Master of Science. Upon the candidate’s certification by the President, the degree is conferred by the Board of Regents of the University of Texas System.

Theses will be made available to the public. A student may request permission from the graduate dean to temporarily delay making the thesis available to the public in order to protect patent of other rights. This request must be supported by a written recommendation from the Supervising Professor. The graduate dean makes the final decision regarding delayed publication.

Instructions for Preparation and Submission of Electronic Theses, Dissertations, and Dissertation Abstracts

The candidate should obtain these instructions online at https://www.uthscsa.edu/academics/biomedical-sciences/student-life/graduation before writing the thesis or dissertation.

Dual Degree D.D.S./Ph.D. Program

The combined D.D.S./Ph.D. (https://www.uthscsa.edu/academics/dental/programs/phd-in-dentistry) (Doctor of Dental Surgery and Doctor of Philosophy) training program available through the School of Dentistry is a component of the Craniofacial Oral-Biology Student Training in Academic Research (COSTAR) T32 Training Program that is funded by the National Institutes of Health/National Institute of Dental and Craniofacial Research. Only 17 universities in the country have COSTAR programs. This national program focuses on creating the next generation of clinician scientists to ensure the future of the nation’s oral health.

Students will become a clinician-scientist who can perform sponsored research in dental and craniofacial-related areas. Another goal of the program is to have trainees become dental school faculty.

Admissions Requirements

A student who wishes to obtain both a D.D.S. and a Ph.D. must obtain the entrance prerequisites of both the School of Dentistry (http://www.uthscsa.edu/academics/dental) and the Graduate School of Biomedical Sciences (https://www.uthscsa.edu/academics/biomedical-sciences). Students submit applications for admission to the Dual Degree Program through the Texas Medical and Dental Schools Application Service (http://www.tmdsas.com) and to the Health Science Center Graduate School of Biomedical Sciences (https://www.uthscsa.edu/academics/biomedical-sciences) during the fall prior to attendance. Approval for admission is made by the D.D.S./Ph.D. Admissions Review Panel (through the School of Dentistry Dean and Associate Dean for Student Affairs) and by the Graduate School of Biomedical Sciences.

Degree Requirements

Students will spend the first three years focusing on the Ph.D. component. They will enter the customized dental school training component only after completing the Ph.D. qualifying exam and making significant progress with their dissertation research.

The remaining requirements of the Ph.D. program (dissertation research and preparation) will be conducted concurrently with requirements of the D.D.S. curriculum. The combined program will take at least seven years to complete.

Accepted applicants must meet the full requirements defined for both the professional and the graduate degree. The total time for the dual degree program curriculum is designed to be at least seven years. However, utilization of summer sessions and elective periods is mandatory for this total time span.

The detailed logistics of pursuing a dual degree program will depend on the specific graduate program undertaken and, in every instance, should be worked out among the student, the appropriate Committee on Graduate Studies, the faculty mentor, the Associate Dean of the Graduate School of Biomedical Sciences, and the Associate Deans for Academic Affairs and Research of the School of Dentistry.

Dual Degree M.D./Ph.D. Program

On July 1, 2018, the Dual-Degree M.D./Ph.D. Program became an NIH-awarded Medical Scientist Training Program (NIH T32GM113896). This prestigious award distinguishes UT Health San Antonio as an exceptional physician-scientist training program at a national level.

The goals of the MSTP are:

- to prepare physician-scientists to become accomplished health care providers and investigators with problem-solving knowledge and skills
- to train physician-scientists in the conduct of clinical and translational research in culturally diverse settings
- to develop future leaders in academic health care and biomedical research

Admissions Requirements

To apply for the M.D./Ph.D. Program, applicants must submit a completed and verified application using the American Medical College Application Service (AMCAS) prior to the application deadline. Applicants who also seek to be considered for admission into the M.D. program at the Long SOM must also submit an application using the Texas Medical and Dental School Application Service (TMDSAS) prior to the application deadline. The precise deadlines for these applications vary, but for the AMCAS application, the deadline is typically on November 1 of the year preceding enrollment.

The Long SOM Admissions Committee has full and final authority for all students admitted to the M.D. program. The M.D./Ph.D. subcommittee of the Long SOM Admissions Committee will assist the M.D./Ph.D. Program with reviews, interviews, assessments, and selections of potential applicants. The members of the M.D./Ph.D. subcommittee present at deliberations will approve applicants on behalf of the entire Long SOM Admissions Committee.

Degree Requirements

The M.D./Ph.D. Program is seven to nine years in length. Students usually begin with two years of the preclinical curriculum in the Long SOM. After successful completion of USMLE Step 1, they enter a three- to five-year Ph.D. program in the Graduate School of Biomedical Sciences (GSBS), after which they return to the Long SOM for two years of clinical rotations. With the guidance and approval of the M.D./Ph.D. dean and M.D./Ph.D. Program Steering Committee, students select laboratory rotations, graduate program affiliation in one of several Ph.D. disciplines or programs, and a Supervising Professor from the graduate school faculty throughout the institution. Enrichment activities include a
monthly “Bench-to-Bedside” course, two annual M.D./Ph.D. retreats, a M.D./Ph.D. journal club, several clinician-scientist competencies workshops, and a clinical refresher course to provide smooth transition from graduate school into the remaining clinical years. Opportunities exist for student research during the fourth year of medical school. With completion of this program, M.D./Ph.D. graduates are prepared for careers as dual-degree physician-scientists.

Program Policies
The M.D./Ph.D. Program is under the supervision of the M.D./Ph.D. program directors, deans of the Long SOM and the GSBS, and the M.D./Ph.D. Steering Committee. The M.D./Ph.D. Advisory Committee, with representation from the Long SOM and GSBS, provides direction and oversight of all activities of the M.D./Ph.D. Program and advises the M.D./Ph.D. program directors. The M.D./Ph.D. Steering Committee provides strategic planning and oversight of financial support of the M.D./Ph.D. Program. An independent M.D./Ph.D. Program Promotions Board reviews the progress of M.D./Ph.D. students every six months throughout medical and graduate school enrollment. Progression is assessed on the basis of academic performance, USMLE Step 1 and USMLE Step 2CK/USMLE Step 2CS scores, research rotation reports, research and scholarly activities, evaluations from the Supervising Professor, and student self-assessments. Recommendations from the M.D./Ph.D. Promotions Board are reviewed at the next monthly meeting of the M.D./Ph.D. Advisory Committee.

The M.D./Ph.D. Program expects students who are pursuing the dual degree to maintain standards of academic excellence, to progress in a timely fashion toward both M.D. and Ph.D. degrees, and to maintain professionalism. Students will be subject to the academic guidelines and progression policies of both the Long SOM and the GSBS. However, they will be subject to additional requirements as specified by the M.D./Ph.D. Program in order to remain members of that program. The M.D./Ph.D. Program provides for stipend, tuition and fees during the entire course of studies (M.D. and Ph.D.) for students in good standing in the program.

Students in the M.D./Ph.D. Program must satisfactorily achieve milestones and criteria established by the M.D./Ph.D. Advisory Committee and the Long SOM Student Progression and Promotions Committee (SPPC) policies. Failure to meet or achieve the established standards will result in denial of advancement and dismissal from the M.D./Ph.D. Program. A student’s academic standing and ability to progress with respect to either the Long SOM or the GSBS are administered through the appropriate dean’s office or their designees. M.D./Ph.D. students shall have the right to appeal a decision of dismissal from the program. The appeal may be heard by the M.D./Ph.D. Advisory Committee or the Long SOM SPPC based on the body taking dismissal action. Solely on procedural concerns can a student appeal to a higher institutional administration.

Biochemistry

*IMPORTANT Note About the Doctor of Philosophy in Biochemistry Degree*
This program is no longer accepting students at this time as this field of study is now the Molecular Biophysics and Biochemistry discipline within the Integrated Biomedical Sciences (IBMS) Program.

The graduate program in Biochemistry offers students the training necessary for them to conduct independent biochemical research in an academic, industrial, or clinical environment. The Biochemistry curriculum is designed to provide a synergistic series of formal courses, seminars, teaching opportunities, and individualized biochemical research experiences in the laboratories of participating faculty. Students are encouraged to broaden their scientific experience by taking courses in other biomedical science tracks.

Doctor of Philosophy (Ph.D.)

*IMPORTANT Note About the Doctor of Philosophy in Biochemistry Degree*
This program is no longer accepting students at this time as this field of study is now the Molecular Biophysics and Biochemistry discipline within the Integrated Biomedical Sciences (IBMS) Program. All information in this section of the Catalog is for the current Biochemistry students only.

The graduate program in Biochemistry offers students the training necessary for them to conduct independent biochemical research in an academic, industrial, or clinical environment. The Biochemistry curriculum is designed to provide a synergistic series of formal courses, seminars, teaching opportunities, and individualized biochemical research experiences in the laboratories of participating faculty. Students are encouraged to broaden their scientific experience by taking courses in other biomedical science tracks.

Biochemistry Degree Requirements
A minimum of 72 credit hours and a minimum overall GPA of 3.0 is required for the Ph.D. degree. In addition, all doctoral candidates must register for the BIOC 7099 Dissertation for at least two semesters in order to graduate. The student is required to demonstrate intellectual command of the subject area of the graduate program and capability to carry out independent and original investigation in the area. The student must successfully defend a dissertation and be recommended by their program COGS for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.

Biochemistry Plans of Study

First Year

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Second Year

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<tr>
<td>MBB Journal Club and Student Research Presentations</td>
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</table>
**Biochemistry Objectives/Program Outcomes**

1. Review/interpret research literature
2. Communicate effectively in writing
3. Communicate effectively in verbal presentations
4. Display potential for conducting independent research

**Master of Science (M.S.)**

The master's degree is offered only under special circumstances and upon recommendation by the program COGS and approval by the Graduate Dean.

*IMPORTANT Note About the Doctor of Philosophy in Biochemistry Degree*

This program is no longer accepting students at this time as this field of study is now the Molecular Biophysics and Biochemistry discipline within the Integrated Biomedical Sciences (IBMS) Program. All information in this section of the Catalog is for the current Biochemistry students only.

The graduate program in Biochemistry offers students the training necessary for them to conduct independent biochemical research in an academic, industrial, or clinical environment. The Biochemistry curriculum is designed to provide a synergistic series of formal courses, seminars, teaching opportunities, and individualized biochemical research experiences in the laboratories of participating faculty. Students are encouraged to broaden their scientific experience by taking courses in other biomedical science tracks.

**Biochemistry Degree Requirements**

A minimum of 30 credit hours and a minimum overall GPA of 3.0 is required for the M.S. degree. In addition, all master's candidates must register for BIOC 6098 Thesis for at least one semester in order to graduate. The student must successfully defend a thesis and be recommended by their program COGS for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.
Biochemistry Master's Plan of Study

First Year

Fall
- IBMS 5000 Fundamentals Of Biomedical Sciences 8
- IBMS 5008 Lab Rotations 2
- Total Credit Hours: 10.0

Second Year

Fall
- IBMS 6029 MBB Journal Club and Student Research Presentations 2
- BIOC 6097 Research 1-12
- Electives 2-3
- Total Credit Hours: 5.0-17.0

Spring
- IBMS 6029 MBB Journal Club and Student Research Presentations 2
- Electives 2-3
- BIOC 6098 Thesis 1-12

Total Credit Hours: 6.0-17.0

Biochemistry Objectives/Program Outcomes
1. Review/interpret research literature
2. Communicate effectively in writing
3. Communicate effectively in verbal presentations
4. Display potential for conducting independent research

Biomedical Engineering

The M.S. and the Ph.D. in Biomedical Engineering are jointly offered between the Health Science Center and The University of Texas at San Antonio (UTSA). The primary objective of this program is to broadly train students in the principles of biomedical engineering so they are well prepared to participate in the development of new approaches for the diagnosis and treatment of human diseases.

As the program is multidisciplinary, the curriculum is designed to provide a synergistic combination of formal courses, seminars, teaching opportunities, interactions with clinicians, and individualized biomedical engineering research experiences in the laboratories of the biomedical engineering faculty. All students are required to take core courses in the areas of Biomaterials, Biomechanics, Bioelectronics/Imaging and Biology, Psychology, as well as Responsible Conduct of Research, and Experimental Design and Data Analysis. In addition to the basic core curriculum, students are required to take additional coursework in the area of specialization. Students have access to the bioengineering and biosciences laboratories at both the Health Science Center and UTSA. This provides a unique opportunity to have learning experiences in medical, dental, bioscience, and engineering environments.

Doctor of Philosophy (Ph.D.)

The M.S. and the Ph.D. in Biomedical Engineering are jointly offered between the Health Science Center and The University of Texas at San Antonio (UTSA). The primary objective of this program is to broadly train students in the principles of biomedical engineering so they are well prepared to participate in the development of new approaches for the diagnosis and treatment of human diseases.

As the program is multidisciplinary, the curriculum is designed to provide a synergistic combination of formal courses, seminars, teaching opportunities, interactions with clinicians, and individualized biomedical engineering research experiences in the laboratories of the biomedical engineering faculty. All students are required to take core courses in the areas of Biomaterials, Biomechanics, Bioelectronics/Imaging and Biology, Psychology, as well as Responsible Conduct of Research, and Experimental Design and Data Analysis. In addition to the basic core curriculum, students are required to take additional coursework in the area of specialization. Students have access to the bioengineering and biosciences laboratories at both the Health Science Center and UTSA. This provides a unique opportunity to have learning experiences in medical, dental, bioscience, and engineering environments.

Biomedical Engineering Admissions Requirements

Baccalaureate or master's degree in a natural science or engineering discipline, competitive academic history (minimum GPA of 3.0/4.0), references, Graduate Record Exam (GRE), Test of English as a Foreign Language (TOEFL) [international applicants only], 3 letters of recommendation, a statement of applicant's research experience(s) and interest in graduate study in BME. A typical successful applicant will have completed one year of calculus-based/engineering Physics, Chemistry, Biology, and Mathematics (up to Differential Equations or Engineering Analysis I). Students deficient in one or more of these will be required to take selected courses as a condition of acceptance. All facets of each applicant are considered in the admission process. Application to this joint degree program is managed through a central application process through UTSA. All applicants are required to follow UTSA's admissions requirements, and the requirements of UT Health San Antonio (background checks, GRE scores, immunizations and international transcript review/translation/certification).

Biomedical Engineering Degree Requirements

A minimum of 82.0 credit hours and a minimum overall GPA of 3.0 is required for the Ph.D. degree in Biomedical Engineering. Undergraduate courses, general education courses, and prerequisites for graduate courses cannot be counted toward this total. For students with a
master’s degree, course credit allowed for transfer will be decided on a case-by-case basis by the Biomedical Engineering COGS. If recommended by the COGS, the request will then be submitted to the Dean of the Graduate School for approval. In addition, all doctoral candidates must register for the Dissertation course (BME 7099) for at least two semesters in order to graduate; only one of the terms may be a summer session. The student is required to demonstrate intellectual command of the subject area of the graduate program and capability to carry out independent and original investigation in the area. The student must successfully defend a dissertation and be recommended by their program COGS for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.

**Biomedical Engineering Plan of Study**

* Please note that courses with the prefix BME are taken at the University of Texas at San Antonio.

### First Year

#### Fall

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<td>BIME 6090</td>
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Total Credit Hours: 10.0

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### Second Year

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### Third Year

#### Fall

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#### Spring

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**Third Year**

**Summer**

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Total Credit Hours: 3.0-25.0

**Spring**

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Total Credit Hours: 3.0-25.0

**Fifth Year**

**Fall**

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Total Credit Hours: 3.0-25.0

**Spring**

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Total Credit Hours: 3.0-25.0

**Summer**

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Total Credit Hours: 3.0-25.0
Biomedical Engineering Objectives/Program Outcomes

1. BME students will demonstrate their understanding of biology concepts for biomedical applications. Fundamental knowledge of biology is evaluated.
2. BME students will demonstrate their understanding of biomaterials concepts. Fundamental biomaterials knowledge and the students' ability to apply knowledge of biomaterials are evaluated.
3. BME students will demonstrate their understanding of biomechanics concepts. Fundamental knowledge of biomechanics is evaluated.
4. BME students will be able to design and carry out research experiments. Foundation of knowledge, application of knowledge, and research skills are evaluated.
5. BME students will be able to communicate research findings to diverse audiences.
6. BME students will be able to teach and disseminate knowledge.
7. BME students will conduct themselves in a professional and ethical manner in all biomedical engineering research.
8. BME students will critically evaluate scientific literature.

Master of Science (M.S.)

The M.S. and the Ph.D. in Biomedical Engineering are jointly offered between the Health Science Center and The University of Texas at San Antonio (UTSA). The primary objective of this program is to broadly train students in the principles of biomedical engineering so they are well prepared to participate in the development of new approaches for the diagnosis and treatment of human diseases.

As the program is multidisciplinary, the curriculum is designed to provide a synergistic combination of formal courses, seminars, teaching opportunities, interactions with clinicians, and individualized biomedical engineering research experiences in the laboratories of the biomedical engineering faculty. All students are required to take core courses in the areas of Biomaterials, Biomechanics, Bioelectronics/Imaging and Biology, Physiology, as well as Responsible Conduct of Research, and Experimental Design and Data Analysis. In addition to the basic core curriculum, students are required to take additional coursework in the area of specialization. Students have access to the bioengineering and biosciences laboratories at both the Health Science Center and UTSA. This provides a unique opportunity to have learning experiences in medical, dental, bioscience, and engineering environments.

Biomedical Engineering Admissions Requirements

The minimum requirements for admission to the Master of Science degree in Biomedical Engineering program are described below. Note that admission is competitive and satisfying these requirements does not guarantee admission.

Biomedical Engineering Degree Requirements

Thesis Option

A minimum of 32.0 semester credit hours beyond the bachelor’s degree and a minimum overall GPA of 3.0 is required for the M.S. degree in Biomedical Engineering thesis option. Undergraduate courses, general education courses, and prerequisites for graduate courses cannot be counted toward this total. For transferring students, course credit allowed for transfer will be decided on a case-by-case basis by the Biomedical Engineering Committee on Graduate Studies (COGS). If recommended by COGS, the request will then be submitted to the Dean of the Graduate School for approval. Regardless of their area of specialization, all students are required to take a total of 17.0 semester credit hours of Required Core Courses. In addition, all students must register for three semesters of Research seminar, a minimum of 6 semester credit hours of approved Elective Courses, and a minimum of 6 semester credit hours of biomedical engineering Master’s Thesis Research. The courses taken by students are intended to focus and support the individual’s mastery of his or her particular area of specialization. The student must successfully present their Thesis and be recommended by their program COGS for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.

Non-thesis Option

A non-thesis option is available upon approval from the Program Director and the Graduate Advisor of Record. Typically, a Master’s degree (non-thesis option) plan of study will consist of at least 36.0 semester credit hours beyond the bachelor’s degree. Undergraduate courses, general education courses, and prerequisites for graduate courses cannot be counted toward this total. For transferring students, course credit allowed for transfer will be decided on a case-by-case basis by the Biomedical Engineering Committee on Graduate Studies (COGS). If recommended
by COGS, the request will then be submitted to the Dean of the Graduate School for approval. Regardless of their area of specialization, all students are required to take a total of 18.0 semester credit hours of Required Core Courses. In addition, all students must register for three semesters of Research seminar and a minimum of 15 semester credit hours of approved Elective courses.

**Biomedical Engineering Plans of Study**

For the thesis option, a minimum of 32.0 semester credit hours is needed to obtain a Master of Science in Biomedical Engineering.

For the non-thesis option, a minimum of 36.0 semester credit hours is needed to obtain a Master of Science in Biomedical Engineering.

* Please note that courses with the prefix BME are taken at the University of Texas at San Antonio.

**M.S., thesis option**

**First Year**

**Fall**

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<td>Elective(s)</td>
<td>varies</td>
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**Spring**

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**Total Credit Hours:** 7.0

**Second Year**

**Fall**

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**Credit Hours:**

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**Total Credit Hours:** 4.0

**M.S., Non-thesis Option**

**First Year**

**Fall**

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**Second Year**

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<td>BIME 6001</td>
<td>Elective(s)</td>
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**Total Credit Hours:** 4.0
### Cancer Prevention

#### First Year

**Spring**
- TSCI 5070 Responsible Conduct of Research 2
- BIME 6090 or BME 6001 Seminar 1
- BME 6803 3
- Elective(s)-see department varies

Total Credit Hours: 6.0

**Summer**
- Elective(s)-see department varies

Total Credit Hours: 0.0

#### Second Year

**Fall**
- BIME 6090 or BME 6001 Seminar 1
- BME 6703 3
- BME 6033 3
- Elective(s)-see department varies

Total Credit Hours: 7.0

**Spring**
- BME 6961 (take during last semester) 1
- Elective(s)-see department varies

Total Credit Hours: 1.0

**Summer**
- Elective(s)-see department varies

Total Credit Hours: 0.0

#### Third Year

**Fall**
- BME 6961 (take during last semester) 1
- Elective(s)-see department varies

Total Credit Hours: 1.0

### Biomedical Engineering Objectives/Program Outcomes

1. BME students will demonstrate their understanding of fundamental biology concepts for biomedical applications. Fundamental knowledge of biology is evaluated.

2. BME students will be able to design and carry out research experiments. Fundamental research skills are evaluated.

3. BME students will be able to communicate research findings to diverse audience.

4. BME students will demonstrate their understanding of biomaterials concepts. Fundamental biomaterials knowledge and the students’ abilities to apply the knowledge of biomaterials are evaluated.

5. BME students will demonstrate their understanding of biomechanics concepts. Fundamental knowledge of biomechanics is evaluated.

6. BME students will conduct themselves in a professional and ethical manner in all biomedical engineering research.

7. BME students will critically evaluate scientific literature.

#### Cancer Prevention

The Certificate in Cancer Prevention (CCP) is designed to provide fundamental curricular activities in the science of cancer prevention to UT Health San Antonio students, postdoctoral trainees, clinical residents and fellows, and faculty from the Schools of Medicine, Nursing, Dentistry, Health Professions, and Graduate School of Biomedical Sciences as well as from local organizations that are partnered with UT Health San Antonio.

The CCP Program is an alternative for health professionals who do not have the time to complete the requirements of an advanced Master or Doctoral degree and to graduate students, fellows, and others who desire additional training in the evolving discipline of cancer prevention to supplement their clinical or basic science training.
Certificate in Cancer Prevention
Admissions Requirements

The CCP Program has an open application policy and will accept on-line applications for admission at any time.

However, GSBS deadlines (for submission of on-line applications and required documentation) for matriculation in a specific academic semester are listed below.

- Fall Semester: April 1
- Spring Semester: October 1

All applicants should have a sufficient educational background in the biological or biomedical sciences prior to admission to the program.

All transcripts from foreign institutions (including GPA) must be evaluated and submitted by an approved foreign credentialing evaluation agency (http://www.naces.org/members.html). Applicants should submit course by course transcript evaluations (including GPA) from the Educational Credential Evaluators, Inc. (ECE) or the World Education Services, Inc. (WES).

A grade point average (GPA) no lower than B (3.0 in a 4.0 system) in the last 60 hours of coursework for a BS/BA degree or a GPA of at least 3.0 for applicants with a MS degree.

A minimum score of 300 score for the combined verbal and quantitative portions of the Graduate Record Examination (GRE) is required. Scores on the GRE tests taken more than five (5) years prior to the date of application will not be accepted.

Applicants who have completed a graduate degree in a health-related discipline (M.D., D.D.S., D.N.P., D.V.M., M.S., M.S.N. or Ph.D.) will be exempted from the requirement to complete the GRE.

A minimum score of 560 on the paper version or 68 on the internet version of the Test of English as a Foreign Language (TOEFL) or 6.5 on the academic version of the International English Language Testing System (IELTS) for applicants from countries where English is not the native language.

Scores on TOEFL or IELTS tests taken more than two years prior to the date of matriculation will not be accepted.

Letters of recommendation (three) attesting to the applicant's readiness for graduate level studies in translational science.

If a matriculated graduate student has a Supervising Professor, one letter must be provided by this individual.

A Personal Statement (1-2 pages) that includes a brief description of the applicant's background, long term research and/or career goals, and an indication of the basis for application into the CCP Program including how this program fits into the applicant's career objectives.

A current curriculum vitae is required.

Certificate in Cancer Prevention
Certificate Requirements

Twelve semester credit hours of didactic coursework are required to obtain the CCP. Satisfactory completion of required and elective coursework is also needed in order to be recommended for awarding of the certificate.

Certificate in Cancer Prevention Sample Plan of Study

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<tr>
<td>TSCI 5070</td>
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<td>TSCI 5071</td>
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<td>TSCI 5072</td>
<td>Patient-Oriented Clinical Research Biostatistics-1</td>
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<td>TSCI 6105</td>
<td>Topics in Cancer Prevention</td>
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<td>TSCI 6001</td>
<td>Introduction To Translational Science</td>
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<tr>
<td>TSCI 6106</td>
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CCP Elective Courses (may be taken in any semester when offered)

| TSCI 5073         | Integrated Molecular Biology With Patient-Oriented Clinical Research | 1 |
| TSCI 5074         | Data Management, Quality Control And Regulatory Issues | 2 |
| TSCI 5075         | Scientific Communication | 2 |
| TSCI 5076         | Introduction To Informatics | 1 |
| TSCI 5077         | Translational Science Training (TST) Practicum | 1-3 |
| TSCI 5078         | Introduction to Intellectual Property, Technology Transfer and Commercialization | 1 |
| TSCI 5079         | Practicum in Intellectual Property, Technology Transfer and Commercialization | 0.5-1 |
| TSCI 5080         | Integrating Molecular Biology with Patient-Oriented Clinical Research Practicum | 1 |
| TSCI 6060         | Patient-Oriented Clinical Research Methods-2 | 2 |
| TSCI 6061         | Patient-Oriented Clinical Research Biostatistics-2 | 2 |
| TSCI 6064         | Grantsmanship and Peer Review | 1 |
| TSCI 6065         | Health Services Research | 2 |
| TSCI 6066         | Instrument Development And Validation | 1 |
| TSCI 6067         | Genomic Healthcare | 1 |
| TSCI 6068         | Cross-Cultural Adaptation Of Research Instruments | 1 |
Certificate in Cancer Prevention Objectives and Program Outcomes

The goal of this program is to provide graduate students, postdoctoral fellows, faculty, and other health care professionals with formal education in the essential components of the science of cancer prevention.

Specific aims are to support the intellectual environment at UT Health San Antonio for cancer prevention science, and to provide fundamental curricular activities in science of cancer prevention to UT Health San Antonio students, postdoctoral trainees, clinical residents and fellows, and faculty from the Schools of Medicine, Nursing, Dentistry, Health Professions, and the Graduate School of Biomedical Sciences as well as from local organizations that are partnered with UT Health San Antonio. The aims will be achieved via participation and successful completion of required didactic coursework.

Certificate in Cancer Prevention Program-Specific Policies for Laptop Computers

Students are required to have a laptop computer that can connect to and operate over a wireless network.

Software Required:

- Microsoft Office Suite (A personal copy of the latest version can be purchased at the Health Science Center bookstore at student pricing with a student ID).

Laptops with an Apple based Operating System must be able to also operate using a Windows based Operating System.

Cell Systems and Anatomy

The graduate program in Cell Systems and Anatomy provides a rewarding opportunity for students wishing to pursue the M.S. degree for preparation for a fulfilling career in biomedicine.

The strength of our program is its diversity; faculty perform state-of-the-art research using animal models of human disease in diverse areas such as cancer biology, stem cell biology, aging, molecular genetics, DNA repair and mutagenesis, neurobiology, bone biology and computational biology (bioinformatics) as well as the anatomical sciences. The curriculum and research experiences are aimed at producing trainees armed with critical thinking skills, competent in contemporary techniques and with broad scholarly background to become independent investigators, capable of designing and executing programs of excellence in research and teaching. All graduate students pursue a program of study designed to develop both their scholarly and laboratory aptitudes through one-on-one mentoring by members of the graduate faculty. In addition, in-depth instruction is also provided on effective research data presentation.

Doctor of Philosophy (Ph.D.)

*IMPORTANT Note About the Doctor of Philosophy in Cellular and Structural Biology Degree*

This program is no longer accepting students at this time as this field of study is now a discipline within the new Integrated Biomedical Sciences (IBMS) (http://gsbs.uthscsa.edu/graduate_programs/integrated-biomedical-sciences) Program. All information in this section of the Catalog is for the current Cellular and Structural Biology students only.

The graduate program in Cellular and Structural Biology provides a rewarding opportunity for students wishing to pursue a Ph.D. degree for preparation for a fulfilling career in biomedicine.

The strength of our program is its diversity; faculty are performing state-of-the-art research in areas of animal models of human disease, cancer biology, stem cell biology, development and reproduction, molecular basis of aging, molecular genetics as well as neurobiology and endocrinology. The curriculum and research experience is aimed at producing trainees armed with critical thinking skills, competent in contemporary techniques and with broad scholarly background to become independent investigators, capable of designing and executing programs of excellence in research and teaching. All graduate students pursue a program of study designed to develop both their scholarly and laboratory aptitudes through one-on-one mentoring by members of the graduate faculty. In addition, in-depth instruction is also provided on effective seminar presentation as well as grant and manuscript preparation.

Cellular and Structural Biology Degree Requirements

A minimum of 72 credit hours and a minimum overall GPA of 3.0 is required for the Ph.D. degree. In addition, all doctoral candidates must register for the CSAT 7099 Dissertation for at least two semesters in order to graduate. The student is required to demonstrate intellectual command of the subject area of the graduate program and capability to carry out independent and original investigation in the area. The student must successfully defend a dissertation and be recommended by their program Committee on Graduate Studies (COGS) for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.

Biology of Aging Track- Plan of Study

<table>
<thead>
<tr>
<th>First Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
</tr>
<tr>
<td>IBMS 5000</td>
</tr>
<tr>
<td>CSAT 6097</td>
</tr>
<tr>
<td>INTO 5082</td>
</tr>
<tr>
<td><strong>Total Credit Hours:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>First Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring</td>
</tr>
<tr>
<td>CSAT 5089</td>
</tr>
<tr>
<td>CSAT 5095</td>
</tr>
<tr>
<td>CSAT 6097</td>
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<tr>
<td>CSAT 6049</td>
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<td><strong>Total Credit Hours:</strong></td>
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**Second Year**

<table>
<thead>
<tr>
<th>Fall</th>
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<tbody>
<tr>
<td>CSAT 5077 Scientific Writing</td>
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<tr>
<td>CSAT 6090 Seminar</td>
<td>1-9</td>
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<tr>
<td>CSAT 6097 Research</td>
<td>1-12</td>
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Total Credit Hours: 4.0-23.0

<table>
<thead>
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<tbody>
<tr>
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<td>1-9</td>
</tr>
<tr>
<td>CSAT 6097 Research</td>
<td>1-12</td>
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</table>

Total Credit Hours: 2.0-21.0

**Third Year**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>CSAT 6090 Seminar</td>
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<tr>
<td>CSAT 6097 Research</td>
<td>1-12</td>
</tr>
<tr>
<td>CSAT 6071 Supervised Teaching</td>
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Total Credit Hours: 3.0-33.0

<table>
<thead>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>CSAT 6090 Seminar</td>
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<tr>
<td>CSAT 6097 Research</td>
<td>1-12</td>
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<tr>
<td>Elective</td>
<td>3</td>
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Total Credit Hours: 5.0-24.0

**Fourth Year**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>CSAT 6090 Seminar</td>
<td>1-9</td>
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<tr>
<td>CSAT 7099 Dissertation</td>
<td>0.5-12</td>
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</tbody>
</table>

Total Credit Hours: 1.5-21.0

<table>
<thead>
<tr>
<th>Spring</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSAT 6090 Seminar</td>
<td>1-9</td>
</tr>
<tr>
<td>CSAT 7099 Dissertation</td>
<td>0.5-12</td>
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</table>

Total Credit Hours: 1.5-21.0

**Fifth Year**

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSAT 6090 Seminar</td>
<td>1-9</td>
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<tr>
<td>CSAT 7099 Dissertation</td>
<td>0.5-12</td>
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</table>

Total Credit Hours: 1.5-21.0

**Fifth Year**

<table>
<thead>
<tr>
<th>Spring</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSAT 6090 Seminar</td>
<td>1-9</td>
</tr>
<tr>
<td>CSAT 7099 Research</td>
<td>1-12</td>
</tr>
</tbody>
</table>

Total Credit Hours: 1.5-21.0

All students admitted to PhD Candidacy no longer register for CSAT 6097 Research. They will register for CSAT 7099 Dissertation.

CSAT 6049 (2 SCH) & CSAT 6050 (2 SCH) together constitute the Biology of Aging core courses that is mandatory for all Biology of Aging students. Biology of Aging students do not register for each individually. Rather, students take CSAT 6048 (4SCH), which is a combination of both CSAT 6049 and CSAT 6050. However, students in other tracks can take either or both of the 2 courses as electives in the same semester or in separate semesters.

**Cancer Biology Track- Plan of Study**

<table>
<thead>
<tr>
<th>First Year Fall</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBMS 5000</td>
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<td>INTD 5082</td>
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Total Credit Hours: 10.5-21.5

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>CSAT 6068</td>
<td>1.5</td>
</tr>
<tr>
<td>CSAT 6069</td>
<td>2.5</td>
</tr>
<tr>
<td>CSAT 5089</td>
<td>2</td>
</tr>
<tr>
<td>CSAT 6097</td>
<td>1-12</td>
</tr>
<tr>
<td>CSAT 5095</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 10.0-21.0

**Second Year Fall**

| CSAT 5077 Scientific Writing | 2            |
| CSAT 6097 Research           | 1-12         |

Total Credit Hours: 4.0-23.0

**Second Year Spring**

| CSAT 6090 Seminar           | 1-9          |
| CSAT 6097 Research          | 1-12         |

Total Credit Hours: 2.0-21.0
### Third Year

#### Fall

<table>
<thead>
<tr>
<th>Elective(s)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSAT 6097 Research</td>
<td>1-12</td>
</tr>
<tr>
<td>CSAT 6090 Seminar</td>
<td>1-9</td>
</tr>
</tbody>
</table>

Total Credit Hours: **5.0-24.0**

#### Spring

<table>
<thead>
<tr>
<th>Elective(s)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSAT 6097 Research</td>
<td>1-12</td>
</tr>
<tr>
<td>CSAT 6090 Seminar</td>
<td>1-9</td>
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</tbody>
</table>

Total Credit Hours: **5.0-24.0**

### Fourth Year

#### Fall

<table>
<thead>
<tr>
<th>Elective(s)</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>CSAT 7099 Dissertation</td>
<td>0.5-12</td>
</tr>
<tr>
<td>CSAT 6090 Seminar</td>
<td>1-9</td>
</tr>
</tbody>
</table>

Total Credit Hours: **1.5-21.0**

#### Spring

<table>
<thead>
<tr>
<th>Elective(s)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSAT 6090 Seminar</td>
<td>1-9</td>
</tr>
<tr>
<td>CSAT 7099 Dissertation</td>
<td>0.5-12</td>
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</table>

Total Credit Hours: **4.5-24.0**

### Fifth Year

#### Fall

<table>
<thead>
<tr>
<th>Elective(s)</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>CSAT 7099 Dissertation</td>
<td>0.5-12</td>
</tr>
<tr>
<td>CSAT 6090 Seminar</td>
<td>1-9</td>
</tr>
</tbody>
</table>

Total Credit Hours: **1.5-21.0**

#### Spring

<table>
<thead>
<tr>
<th>Elective(s)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSAT 7099 Dissertation</td>
<td>0.5-12</td>
</tr>
<tr>
<td>CSAT 6090 Seminar</td>
<td>1-9</td>
</tr>
</tbody>
</table>

Total Credit Hours: **1.5-21.0**

---

All students admitted to PhD Candidacy no longer register for CSAT 6097 Research. They will register for CSAT 7099 Dissertation.

CSAT 6068 (2 SCH) & CSAT 6069 (2 SCH) together constitute the Cancer Biology core course that is mandatory for all Cancer Biology students.

However, students in other tracks can take either or both of the 2 courses as electives in the same semester or in separate semesters.

### Cellular and Molecular Medicine Track - Plan of Study

#### First Year

**Fall**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>IBMS 5000 Fundamentals Of Biomedical Sciences</td>
<td>8</td>
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<tr>
<td>INTD 5082 Responsible Conduct of Research</td>
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</tr>
<tr>
<td>CSAT 6097 Research</td>
<td>1-12</td>
</tr>
</tbody>
</table>

Total Credit Hours: **10.5-21.5**

**Spring**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSAT 5089 Graduate Colloquium</td>
<td>2</td>
</tr>
<tr>
<td>CSAT 6097 Research</td>
<td>1-12</td>
</tr>
<tr>
<td>CSAT 5095 Experimental Design And Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>INTD 6007 Advanced Cell Biology</td>
<td>2</td>
</tr>
<tr>
<td>INTD 6009 Advanced Molecular Biology</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours: **10.0-21.0**

---

All students admitted to PhD Candidacy no longer register for CSAT 6097 Research. They will register for CSAT 7099 Dissertation.

CSAT 6068 (2 SCH) & CSAT 6069 (2 SCH) together constitute the Cancer Biology core course that is mandatory for all Cancer Biology students.

However, students in other tracks can take either or both of the 2 courses as electives in the same semester or in separate semesters.
### Fourth Year

**Fall**
- CSAT 6090 Seminar 1-9
- CSAT 7099 Dissertation 0.5-12

**Total Credit Hours:** 1.5-21.0

**Spring**
- CSAT 6090 Seminar 1-9
- CSAT 7099 Dissertation 0.5-12

**Total Credit Hours:** 1.5-21.0

### Fifth Year

**Fall**
- CSAT 6090 Seminar 1-9
- CSAT 7099 Dissertation 0.5-12

**Total Credit Hours:** 1.5-21.0

**Spring**
- CSAT 7099 Dissertation 0.5-12
- CSAT 6090 Seminar 1-9

**Total Credit Hours:** 1.5-21.0

1. Students can tailor the required coursework for the CMM track to their specific interests including aging, cancer, immunology, neuroscience, metabolism and genetic disorders. They have two options to fulfill the 4-credit advanced course requirement:

   - **Option 1:** Take the full course (INTD 5007 Advanced Cellular and Molecular Biology), which is a combination of INTD 6009 & INTD 6007.
   - **Option 2:** Take only one of the advanced course modules, either INTD 6009 Advanced Molecular Biology (2 credits) or INTD 6007 Advanced Cell Biology (2 credits), then add 2 credit hours of required core coursework from any of the other IMGP tracks (list provided below).

These changes provide CMM students with the greatest flexibility, while emphasizing the importance of molecular and cellular approaches to studying health and disease.

### Genomics, Genetics & Development Track - Plan of Study

#### First Year

**Fall**
- IBMS 5000 Fundamentals Of Biomedical Sciences 8
- INTD 5082 Responsible Conduct of Research 1.5
- CSAT 6097 Research 1-12

**Total Credit Hours:** 10.5-21.5

**Spring**
- CSAT 5023 Development 1
- CSAT 5024 RNA Biology and Genomics 1
- CSAT 5025 Genetics 1
- CSAT 6059 Stem Cells & Regenerative Medicine 1
- CSAT 5089 Graduate Colloquium 2
- CSAT 6097 Research 1-12
- CSAT 5095 Experimental Design And Data Analysis 3

**Total Credit Hours:** 10.0-21.0

#### Second Year

**Fall**
- CSAT 5077 Scientific Writing 2
- CSAT 6090 Seminar 1-9
- CSAT 6097 Research 1-12

**Total Credit Hours:** 4.0-23.0

**Spring**
- CSAT 6090 Seminar 1-9
- CSAT 6097 Research 1-12

**Total Credit Hours:** 2.0-21.0

#### Third Year

**Fall**
- Elective(s) see department 3
- CSAT 6097 Research 1-12
- CSAT 6090 Seminar 1-9

**Total Credit Hours:** 5.0-24.0

**Spring**
- Elective(s) see department 3
- CSAT 6097 Research 1-12
- CSAT 6090 Seminar 1-9

**Total Credit Hours:** 5.0-24.0

#### Fourth Year

**Fall**
- CSAT 6071 Supervised Teaching 1-12
- CSAT 7099 Dissertation 0.5-12
- CSAT 6090 Seminar 1-9

**Total Credit Hours:** 2.5-33.0
Fourth Year

Spring

Credit Hours
Elective(s) see department 3
CSAT 6090 Seminar 1-9
CSAT 7099 Dissertation 0.5-12
Total Credit Hours: 4.5-24.0

Fall

CSAT 7099 Dissertation 0.5-12
CSAT 6090 Seminar 1-9
Total Credit Hours: 1.5-21.0

Fifth Year

Spring

CSAT 6090 Seminar 1-9
CSAT 7099 Dissertation 0.5-12
Total Credit Hours: 1.5-21.0

All students admitted to PhD Candidacy no longer register for CSAT 6097 Research. They will register for CSAT 7099 Dissertation.

CSAT 5023 (1 SCH), CSAT 5024 (1 SCH), CSAT 5025 (1 SCH) and CSAT 6059 (1 SCH) together constitute the Genomics, Genetics & Development Track core course that is mandatory for all Genomics, Genetics & Development students. Genomics, Genetics & Development students do not register for each individually. Rather, students take CSAT 6064 (4SCH), which is a combination of CSAT 5023, CSAT 5024, CSAT 5025 and CSAT 6059. However, students in other tracks can take either or both of the 2 courses as electives in the same semester or in separate semesters.

Cellular and Structural Biology Objectives/Program Outcomes

Students in the CSB graduate program will have the ability to review, interpret and critically evaluate scientific literature related to areas of biomedical science relevant to cellular and molecular biology in general and specifically to their project. Students will be trained to review and interpret original scientific literature through coursework and in their research.

Students in the CSB graduate program will have the ability to conduct original biomedical research. Students in the program will be able to analyze, plan, organize, and conduct high-quality biomedical research under the direction of supervising professors and guidance of research advisory (dissertation/thesis) committees as appropriate.

Students in the CSB graduate program will have the ability to communicate effectively in written and verbal presentations. Students will learn to effectively communicate ideas in written format via coursework, examinations and their research and to communicate ideas/concepts in verbal presentations during progress report seminars, research advisory committee meetings, oral examinations/defenses, and participation in scientific meetings.

Students in the CSB graduate program will demonstrate foundational knowledge and expertise in a select area appropriate to the research project. Students will be able to define, explain, and apply key concepts and fundamental principles related to the areas of biomedical science relevant to their track and to their specific research projects.

Students in the CSB graduate program will demonstrate fundamental knowledge of ethics in biomedical research. Students will be able to recognize ethical dilemmas and behave in accordance with ethical standards of conduct in the design, implementation, analysis, and dissemination of scientific research.

Master of Science (M.S.)

The M.S. Degree Program in the Department of Cell Systems & Anatomy (hereinafter referred to as the Program) offers training in areas of anatomical sciences and biotechnology. The curriculum prepares students seeking a Master of Science degree for a fulfilling biomedical career in academic, industrial or clinical settings. The overall mission of the Program is to prepare the next generation of life-long learners and critical thinkers, prepared to design and execute innovative basic and translational research, and to address the most important and challenging knowledge gaps in basic biology, human health and disease. There are two parallel tracks in the Program, Anatomical Sciences and Biotechnology, with some overlapping requirements but distinct curricula. The program of graduate study (i.e. the track elected) leading to the Master’s Degree will depend upon the student and the professional career for which the student is preparing. A Committee on Graduate Studies (COGS) oversees all aspects of the Program.

Cell Systems & Anatomy Admission Requirements

Students beginning graduate study ordinarily matriculate during the fall semester, which starts mid-August. Spring semester admission (January start date) will not be considered except in very unusual circumstances.

The following are the basic admission criteria to the Program. On a case-by-case basis and at the discretion of the M.S. Admissions Committee and with approval of COGS and the Graduate Faculty Council (GFC), one or more admission requirement(s) may be waived.

Applicants are required to have a minimum of a Bachelor's degree in a Life Science or Biomedical Engineering from an accredited institution and a minimum GPA of 3.0/4.0. Applicants should have received credit for courses taken in:

- Biology* - A minimum of 2 years of general biology with labs for science majors.
- Chemistry* - A minimum of 1 year general chemistry and organic chemistry
- Physics - A minimum of 1 year of general physics
- Mathematics - A minimum of 1 semester of calculus

* course should include laboratory experience.

All applicants must provide either Graduate Record Examination (GRE), MCAT or DAT scores; taken within 5 years of application. A minimum combined verbal and quantitative GRE score ≥ 308 (160 verbal, 148 quantitative), MCAT score of 500 or a DAT score of 19 is recommended; however, lower scores may be considered based on overall potential of the applicant.
International applicants are also required to take one of two English proficiency tests: Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS: Academic module only) within two years of matriculation into the program. The minimum required scores for the TOEFL are 550 for the paper test and 68 for the internet test. The minimum required score on the academic International English Language Testing System (IELTS) is 6.5.

An essay describing the applicant’s prior research and/or teaching experiences that evoked an interest in research as well as the applicant’s long-term career goals and rationale for applying to the Cell Systems & Anatomy graduate program is required.

Three letters of recommendation are required.

The admission committee uses a holistic approach in making its decision. Consideration is given to a candidate’s research experience, grade point average, essay, GRE/MCAT/DAT score, letters of recommendations, interviews, and the overall ranking is compared to other interested applicants.

**Cell Systems & Anatomy Degree Requirements**

All students require a minimum of 30 semester credit hours (SCH) and a minimum overall GPA of 3.0 to graduate with a M.S. degree. See track-specific Academic Plans of Study for details of required coursework. All students must successfully defend their thesis and be recommended by the program COGS for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.

A student must maintain an overall cumulative grade point average (GPA) of ≥ 3.0 ("B" average) each semester to continue in good academic standing. Student should receive a "B" or better in their core courses. If a student receives a grade that is worse than a "B" in core courses, or a grade that is worse than a "C" in one of the courses, or a final grade of a "C" in more than one course in the curriculum, he/she shall be dismissed from the program unless an appeal from the student is approved by COGS. If the cumulative GPA drops below 3.0, the student shall be placed on academic probation. While on probation, a student must maintain a “B” average in all courses in which he/she is enrolled. If the GPA drops below 3.0 in any semester during the probationary period or remains below 3.0 for one calendar year, the student shall be dismissed from the program unless an appeal from the student is approved by COGS. If remediation of a course is agreed upon by a course director and COGS, the director(s) of a required course will determine the mechanism for remediation. However, course directors are not required to remediate students. Situations that involve potential remediation will be resolved on a case by case basis. A student who is not required to remediate a required course may not engage in the remediation process with the intent of improving his/her original grade. This policy will be reviewed annually.

**Anatomical Sciences Track**

**First Year**

**Fall**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSAT 5030 Basic Histology</td>
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<tr>
<td>CSAT 5060 Advanced Histology</td>
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<tr>
<td>CSAT 6060 Anatomical Sciences Thesis</td>
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<tr>
<td>INTD 5047 Neuroanatomy</td>
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**Credit Hours:** 9.0

**Spring**

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CSAT 5022 Inter-professional Human Gross Anatomy</td>
<td>5.5</td>
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<tr>
<td>CSAT 6100 Anatomy Practicum</td>
<td>1.5</td>
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<tr>
<td>CSAT 6060 Anatomical Sciences Thesis</td>
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**Total Credit Hours:** 8.5

**Second Year**

**Fall**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CSAT 6071 Supervised Teaching *</td>
<td>4</td>
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<tr>
<td>CSAT 6072 Presentation Skills</td>
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</tr>
<tr>
<td>CSAT 6060 Anatomical Sciences Thesis</td>
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**Total Credit Hours:** 8.0

**Spring**

<table>
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<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>CSAT 6072 Presentation Skills</td>
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<tr>
<td>CSAT 6060 Anatomical Sciences Thesis</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 4.5

* Must be taken in the 2nd year, either semester. CSAT 6060 should be adjusted accordingly.

**Biotechnology Track**

**First Year**

**Fall**

<table>
<thead>
<tr>
<th>Course</th>
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</tr>
</thead>
<tbody>
<tr>
<td>CSAT 6077 Eucaryotic Cell Biology</td>
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</tr>
<tr>
<td>CSAT 6076 Eucaryotic Molecular Biology</td>
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**Second Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSAT 6071 Supervised Teaching *</td>
<td>3</td>
</tr>
<tr>
<td>CSAT 6072 Presentation Skills</td>
<td>0.5</td>
</tr>
<tr>
<td>CSAT 6060 Anatomical Sciences Thesis</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 4.5
Biotechnology Track

Students will have the ability to review, interpret and critically evaluate scientific literature related to areas of biomedical sciences, relevant to cellular and molecular biology in general and specifically to their project. Students will be trained to review and interpret original scientific literature through coursework and in their research.

Students will have the ability to conduct original biomedical research. Students in the program will be able to analyze, plan, organize, and conduct high quality biomedical research under the direction of supervising professors and guidance of research advisory (thesis) committees as appropriate.

Students will have the ability to communicate effectively in written and verbal presentations. Students will learn to effectively communicate ideas in written format via coursework, examinations and their research and to communicate ideas/concepts in verbal presentations during progress report seminars, research advisory committee meetings, oral examinations/thesis defences, and participation in scientific meetings.

Students will demonstrate foundational knowledge and expertise in selecting a select area appropriate to the research project. Students will be able to define, explain, and apply key concepts and fundamental principles related to the areas of biomedical science relevant to their track and to their specific research projects.

Students will demonstrate fundamental knowledge of ethics in biomedical research. Students will be able to recognize ethical dilemmas and behave in accordance with ethical standards of conduct in the design, implementation, analysis, and dissemination of scientific research.

Clinical Investigation and Translational Science

The Master of Science in Clinical Investigation and Translational Science (MSCI-TS) Degree Program trains clinicians and health care professionals from diverse backgrounds and disciplines in the conduct of clinical investigations. MSCI-TS program applicants must provide proof of a health professional degree (e.g., M.D., D.D.S./D.M.D., or B.S. in nursing and/or allied health) or a B.S./B.A. or M.S. degree with emphasis in a health-related discipline. Students in the MSCI-TS Program must complete a mentored research project over two years while participating in a highly integrated set of didactic courses leading to the MSCI-TS degree.

The goal of this program is to prepare investigators skilled in the conduct of outstanding clinical and translational research in culturally diverse settings.

Admissions Requirements

The MSCI-TS Program has an open application policy and will accept online applications for admission at any time.

However, GSBS deadlines (for submission of online applications and required documentation) for matriculation in a specific academic semester are listed below.
• Fall Semester (Require F-1 or J-1 Visa): February 1
• Fall Semester: April 1
• Spring Semester: October 1

• Applications for applicants who will require a student visa (F-1 or J-1) will only be accepted for consideration for matriculation in the Fall semester.

All applicants should have a sufficient educational background in the biological or biomedical sciences prior to admission to the program.

All transcripts from foreign institutions (including GPA) must be evaluated and submitted by an approved foreign credentialing evaluation agency (http://uthscsa.edu/vpaa/foreign_cred.asp). Applicants should submit course by course transcript translations (including GPA) from the Educational Credential Evaluators, Inc. (ECE) or the World Education Services, Inc. (WES).

A grade point average (GPA) no lower than B (3.0 in a 4.0 system) in the last 60 hours of coursework for a B.S./B.A. degree or a GPA of at least a 3.0 for applicants with a M.S. degree.

Scores on the Graduate Record Examination (GRE) tests taken more than five (5) years prior to application will not be accepted.

Applicants who have completed a graduate degree or an U.S. equivalent degree as determined by an evaluation from the ECE or the WES (if awarded from a foreign institution) in a health-related discipline (M.D., D.D.S., R.N., D.V.M., M.S., or Ph.D.) will be exempted from the requirement to complete the GRE.

A minimum score of 560 on the paper version or 68 on the internet version of the Test of English as a Foreign Language (TOEFL) or 6.5 on the academic version of the International English Language Testing System (IELTS) for applicants from countries where English is not the native language.

Scores on TOEFL or IELS tests taken more than two years prior to the date of matriculation will not be accepted.

Letters of recommendation (three) attesting to the applicant's readiness for graduate level studies in clinical investigation.

• Residents or fellows in an approved Health Science Center residency or fellowship program are required to submit a letter from the departmental Chair with a statement indicating the availability and approval of release time for the completion of MSCI-TS educational and research activities.

• Similarly, for Health Science Center staff, an authorized supervisor must provide a statement indicating the availability of release time for MSCI-TS educational and research activities.

• Faculty who are not tenured, or will not be tenured prior to completing the MSCI-TS Program, are required to submit a letter from the department Chair with approval signatures of the Dean and the Health Science Center President in accordance with the HOP 3.2.5 Policy (http://uthscsa.edu/hop2000/3-toc.aspx).

A personal statement (1-2 pages) that includes a brief description of the applicant's background, long term research and career goals, and an indication of the basis for application into the MSCI-TS Program including how this program fits into the applicant's career objectives.

A current curriculum vitae is required.

Applicants requiring a student visa (requires full-time enrollment) are required to obtain a Supervising Professor, Research Supervising Committee (RSC) on or before the application deadline for the Fall semester they are applying for.

Degree Requirements

Successful completion of the MSCI-TS Program requires the satisfactory completion of all required coursework, completion of a MSCI-TS COGS approved research project, submission of a manuscript to a peer-reviewed publication, and MSCI-TS COGS approval of the student's manuscript. (Note: The manuscript must be related to the student's approved research project and approved by the MSCI-TS COGS in order to satisfy the manuscript requirement of the MSCI-TS Program.) A total of thirty (30) semester credit hours (SCH) are required to obtain the MSCI-TS degree.

Coursework. Students must satisfactorily complete all required didactic courses. MSCI-TS elective courses may be taken and counted towards the thirty (30) SCH graduation requirement.

Research Project. A Supervising Professor, Research Supervising Committee (RSC), and written research proposal must be submitted (prior to the one-year anniversary of the student's acceptance into the MSCI-TS Program) and approved by the MSCI-TS COGS.

Student/Supervising Professor Compact. The Compact Between MSCI-TS Student and Supervising Professor form must be submitted with the student's initial research proposal packet. The Compact will be reviewed by the student and their supervising professor and submitted with the Student Semi-Annual Evaluation for approval by the MSCI-TS COGS for approval each fall semester.

Semi-Annual Student Evaluation. Students are required to submit a Semi-annual Student Evaluation form each semester while enrolled in the MSCI-TS Program.

Manuscript. Upon satisfactory completion of all required courses, students must submit a manuscript to the MSCI-TS COGS for review for their eligibility of candidacy for the MSCI-TS degree. (Note: Details and requirements are provided in the Manuscript Requirement section of the MSCI-TS Handbook.)

Plan of Study

First Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>TSCI 5070</td>
<td>Responsible Conduct of Research</td>
<td>2</td>
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<tr>
<td>TSCI 5071</td>
<td>Patient-Oriented Clinical Research Methods-1</td>
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<tr>
<td>TSCI 5072</td>
<td>Patient-Oriented Clinical Research Biostatistics-1</td>
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<tr>
<td>TSCI 6097</td>
<td>Research</td>
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Total Credit Hours: 7.0-18.0

First Year

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<thead>
<tr>
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<tbody>
<tr>
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<td>Integrated Molecular Biology With Patient-Oriented Clinical Research</td>
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<tr>
<td>TSCI 5074</td>
<td>Data Management, Quality Control And Regulatory Issues</td>
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TSCI 6060 Patient-Oriented Clinical Research Methods-2  2
TSCI 6061 Patient-Oriented Clinical Research  2
Biostatistics-2
TSCI 6097 Research  1-12

Total Credit Hours: 8.0-19.0

Second Year
Fall
TSCI 5075 Scientific Communication  2
TSCI 5080 Integrating Molecular Biology with Patient-Oriented Clinical Research Practicum  1
TSCI 6065 Health Services Research  2
TSCI 6097 Research  1-12

Total Credit Hours: 6.0-17.0

Second Year
Spring
TSCI 6098 Thesis  1  1-12
TSCI 6097 Research  1  1-12

Total Credit Hours: 2.0-24.0

1 No formal classes should be required during this semester. The research project should be completed and a manuscript prepared and submitted.

Objectives/Program Outcomes
• Fundamental knowledge of and practice of ethics in research.
• Competence in principles of research design/methods and data management/analysis.
• Communicate research effectively in written and verbal communication.
• Competence in research literature review and interpretation.
• Conduct mentored research and submit results for publication.

Program Specific Policies for Student Research Projects
A Supervising Professor, Research Supervising Committee (RSC), and written research proposal must be approved by the MSCI-TS COGS before a student can enroll in TSCI 6097 Research (Mentored Research in Clinical Investigation).

Any changes to a student’s Supervising Professor, RSC, and written research proposal must be approved by the MSCI-TS COGS.

MSCI-TS students with an approved research project are required to prepare a semi-annual written report of progress for consideration by their RSC prior to the fall (August 31st) and spring (February 28th) semester deadlines.

Program Specific Policies for Laptop Computers
Students are required to have a laptop computer that can connect to and operate over a wireless network.

Software required:
• Microsoft Office Suite (A personal copy of the latest version can be purchased at the Health Science Center bookstore at student pricing with a student ID)
• Stata/IC (latest version required for TSCI 5072 Patient-Oriented Clinical Research Biostatistics-1)

Laptops with an Apple based Operating System must be able to also operate using a Windows based Operating System.

Master of Science in Dental Hygiene

The Master of Science in Dental Hygiene (MSDH) degree program offers graduate students in-depth learning experiences in research methods, teaching, and the health care sciences. The mission of the program is to educate professionals for positions of leadership in their profession. The goal of this program is to prepare dental hygienists to expand their knowledge base and skill set of the profession by nurturing the intellectual development of the professional. The Master of Science in Dental Hygiene degree prepares professional dental hygienists with specialized skills in one or more of the following areas: health promotion/education, management/administration, research, advanced clinical practice, and consumer advocacy.

Admissions Requirements
This is a fully online graduate program that typically enrolls 6 qualified students each Fall. In addition to the academic admission requirements, non-academic factors may be considered when selecting students for admission to this competitive graduate program.

1. Bachelor’s degree from a nationally and regionally accredited institution of higher education in the United States.
2. Graduation from an accredited dental hygiene program recognized by the American Dental Association Commission on Dental Accreditation (CODA) within the United States or Canada.
4. Current licensure as a Registered Dental Hygienist in any state in the United States or Canada.
5. Satisfactory grades in undergraduate courses. The undergraduate grade point average should be no lower than a 3.0 on a 4.0 point scale system.
6. Complete the Graduate Record Examinations General Aptitude Test (GRE) or the Miller Analogies Test (MAT). Scores on GRE and MAT tests must be within the previous 5 years. No minimum score is required.
7. Applicants from countries where English is not the native language, are required to submit scores on the Test of English as a Foreign Language (TOEFL). A minimum score of 68 (Internet), 220 (computer), or 560 (paper) is required.

Application Requirements
Applicants must meet all qualifications and submit all required information by April 15th. Transcripts containing fall courses must be submitted by then as well. Contact the Program Director, Melanie V. Taverna MSDH, RDH, with questions at 210-567-3858.

Degree Requirements
A Master of Science in Dental Hygiene is awarded following successful completion of the core curriculum and electives to earn a total of 36 semester credit hours. The Master degree requires the student develop original research to be conducted and shared with the oral health professions.
Sample Plan of Study

Core Courses
DENH 5026 Research Principles & Application 3
DENH 5924 Biostatistics 3
DENH 5024 Professional Communication 3
DENH 5050 Educational Principles and Application 3
INTD 5023 Research Ethics 1
DENH 5022 Research Apprenticeship 3
DENH 6098 Thesis 6
All Master students are required to successfully complete all core coursework.

Course Electives 1
Select three or four of the following: 14

Education Offerings
DENH 5003 Current Issues In Dental Hygiene
DENH 5007 Clinical Administration Practicum
DENH 5010 Teaching Internship
DENH 5017 Clinical Teaching Practicum
DENH 5903 Organizational Leadership
DENH 5926 Preclinical Teaching Practicum
DENH 5091 Special Topics in Dental Hygiene
DENH 6091 Independent Study

Public Health Offerings
DENH 5015 Public Health Practicum
DENH 5027 The Summer Institute In Aging
DENH 5025 Dental Hygienist Role in the Management of Elder Abuse
DENH 5028 Public Health Policy
DENH 5036 Health Promotion
DENH 5091 Special Topics in Dental Hygiene

Total Credit Hours 36

1 Master students should choose a minimum of 14 credit hours from the course electives. This may be accomplished by choosing courses from the Education Offerings, the Public Health Offerings, or a combination of the two.

Objectives/Program Outcomes
Objectives of this program are to promote a student-centered on-line learning environment that will allow dental hygienists the opportunity to further their education without relocating to San Antonio. The curriculum will allow students to gain knowledge and skills to become competent health care educators, managers of community oral health care centers, and conduct original research. Self-evaluation and self-direction are encouraged throughout the program. Students have the opportunity to share their experiences, knowledge and skills, work cooperatively with colleagues, and explore a variety of resources to help them reach their maximum potential.

Outcomes:

1. Demonstrate proficiency in core dental hygiene principles—Students in the Graduate Program in Dental Hygiene will be able to define, explain, and apply key concepts and fundamental principles related to dental hygiene.

2. Critically review and interpret research literature—Students in the Graduate Dental Hygiene Program will be able to conduct a comprehensive systematic literature search, critically analyze and synthesize evidence gathered, and apply the research process to an identified problem.

3. Completion of required Core coursework (DENH 5026, DENH 5924, DENH 5024, DENH 5050, INTD 5023), & (DENH 5022). Plus submission of a publishable manuscript of original research to a juried journal as a Thesis project (DENH 6098).

4. Communicate effectively in writing—Students in the Graduate Dental Hygiene Program will be able to demonstrate effective communication through writing using correct grammar, syntax, and purpose of thought.

5. Conduct independent research in an ethical manner—Students in the Graduate Dental Hygiene Program will be able to demonstrate ethical principles in the course of conducting research and writing a thesis.

Dental Science

Master of Science in Dental Science

The Master of Science in Dental Science (MSDS) Program is directed toward providing extensive training and development of well-trained clinicians, leading edge critical thinkers in evidence-based decision making with the education and background in basic scientific and clinical research methodology. The interdisciplinary education across dental specialties supports a high level, postdoctoral professional education environment.

The MSDS Program is supported by the School of Dentistry and the degree is conferred by the Graduate School of Biomedical Sciences. This Program is open only to students who have been accepted into, and continue in good standing in, a Health Science Center Certificate Program in either Advanced Education in General Dentistry, Oral and Maxillofacial Radiology, Endodontics, Orthodontics and Dentofacial Orthopedics, Pediatric Dentistry, Periodontics, or Prosthodontics.

Each MSDS student follows a Plan of Study consisting of both (a) a Core curriculum common to all MSDS students, and (b) a Track-specific curriculum tailored to the student's clinical discipline. The MSDS courses and Certificate courses are integrated throughout the Plan of Study. Therefore, in those Tracks in which the MSDS is offered as an option, students should notify their Program Director, upon acceptance into the Certificate Program, of their intention to pursue the MSDS.

Admissions Requirements

The applicant must have been accepted into one of the seven corresponding School of Dentistry Certificate programs or accepted into the United States Air Force Periodontics Certificate program, and recommended by the USAF for the MSDS.

Upon successful completion of the MSDS Program, the student will be able to:

• Apply fundamentals of scientific inquiry through development of a research question.
• Apply research methodology through management of a research protocol, data collection, and data analysis.
• Apply skills in review of the scientific literature to synthesize a concept based on best available evidence.
• Interpret basic statistical analyses in scientific literature and in protocol design
• Defend and discuss application of research protocol through data interpretation of scientific results.

Program Policies
• Admission to a particular track of the MSDS program is restricted to those who have been accepted into the Health Science Center or, in the case of Periodontics, also the United States Air Force, advanced dental education Certificate Program corresponding to the particular MSDS track.
• Continuation in the MSDS program is contingent upon continuing in the certificate program in good standing.
• A student will not be awarded the MSDS from the Graduate School of Biomedical Sciences any earlier than the semester in which the student completes the Certificate program in the School of Dentistry.

Advanced Education in General Dentistry

Plan of Study

First Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>MSDS 5090 Grad Research Methodology</td>
<td>2</td>
</tr>
<tr>
<td>MSDS 5020 Dental Biomed Core 1</td>
<td>4</td>
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<tr>
<td>MSDS 5121 Biostatistics</td>
<td>1</td>
</tr>
<tr>
<td>INTD 5013 Perio/Pros/Endo/Orth Interdisciplinary Course</td>
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Total Credit Hours: 8.0

First Year

<table>
<thead>
<tr>
<th>Spring</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>MSDS 5021 Dental Biomed Core 2</td>
<td>1</td>
</tr>
<tr>
<td>MSDS 6357 Research 2: Data Collection</td>
<td>3</td>
</tr>
<tr>
<td>MSDS 5357 Research 1: Project Proposal</td>
<td>3</td>
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<tr>
<td>INTD 5013 Perio/Pros/Endo/Orth Interdisciplinary Course</td>
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Total Credit Hours: 8.0

Second Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>MSDS 6058 Research 3: Data Analysis</td>
<td>2</td>
</tr>
<tr>
<td>MSDS 6357 Research 2: Data Collection</td>
<td>3</td>
</tr>
<tr>
<td>INTD 6014 Perio/Pros/Endo/Orth Interdisciplinary Course</td>
<td>2</td>
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<td>Electives</td>
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Total Credit Hours: 8.0

Second Year

<table>
<thead>
<tr>
<th>Spring</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>MSDS 6098 Thesis</td>
<td>1-4</td>
</tr>
<tr>
<td>INTD 6014 Perio/Pros/Endo/Orth Interdisciplinary Course</td>
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<td>Electives</td>
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Total Credit Hours: 5.0–8.0

Fall and Spring Electives

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>DIAG 5016 Head &amp; Neck Anatomy</td>
<td>1</td>
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<tr>
<td>DIAG 5037 Oral And Maxillofacial Radiology Interpretation</td>
<td>1</td>
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<tr>
<td>ENDO 5060 Current Concepts In Endo</td>
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<tr>
<td>INTD 6002 Ethics In Research</td>
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<tr>
<td>PERI 5031 Periodontics Lecture Series</td>
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<tr>
<td>PROS 5067 Supervised Teaching 1</td>
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<td>PROS 5068 Supervised Teaching 1</td>
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<td>RESD 5044 Occlusion &amp; TMD</td>
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<tr>
<td>RESD 6021 Advanced Dental Materials</td>
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Endodontics

Plan of Study

First Year

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<tbody>
<tr>
<td>MSDS 5157 Research 1: Project Proposal</td>
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<tr>
<td>MSDS 5020 Dental Biomed Core 1</td>
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<td>MSDS 5121 Biostatistics</td>
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<td>MSDS 5900 Grad Research Methodology</td>
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<tr>
<td>ENDO 5020 Introduction to Advanced Endodontics</td>
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Total Credit Hours: 11.5

First Year

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<tr>
<td>MSDS 5257 Research 1: Project Proposal</td>
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<tr>
<td>ENDO 5052 Endodontic Surgical Anatomy</td>
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<td>ENDO 6077 Current Literature Review</td>
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Total Credit Hours: 6.5
**Oral and Maxillofacial Radiology**

**Plan of Study**

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<td>MSDS 5121</td>
<td>Biostatistics</td>
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<tr>
<td>DIAG 5040</td>
<td>Basic Principles Of Oral And Maxillofacial Imaging</td>
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<td>DIAG 5015</td>
<td>Panoramic Radiology</td>
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<td>DIAG 5026</td>
<td>Diagnostic Imaging Of The Jaws</td>
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<td>Research 1- Project Proposal</td>
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<tbody>
<tr>
<td>MSDS 6357</td>
<td>Research 2- Data Collection</td>
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<td>Research 2- Data Collection</td>
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<tr>
<td>DIAG 6025</td>
<td>Diagnostic Imaging Of The Head And Neck</td>
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<tr>
<td>ENDO 6013</td>
<td>Clinical Endodontics 3</td>
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<td>ENDO 6080</td>
<td>Focused Regendo Research</td>
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<td>ENDO 6075</td>
<td>Current Literature Review</td>
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<td>ENDO 6087</td>
<td>Case Presentations 3</td>
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<td>MSDS 5090</td>
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<td>MSDS 5020</td>
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<td>ORTH 5010</td>
<td>Introduction to Orthodontics</td>
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<td>Orthodontic Treatment Planning</td>
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<td>Perio/Pros/Endo/Orth Interdisciplinary Course</td>
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<td>ORTH 5037</td>
<td>Orthodontic Lecture Series 1</td>
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<tr>
<td>MSDS 5357</td>
<td>Research 1- Project Proposal</td>
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<tr>
<td>MSDS 5021</td>
<td>Dental Biomed Core 2</td>
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### Pediatric Dentistry

**Plan of Study**

#### First Year

**Fall**
- **MSDS 5090** Grad Research Methodology 2
- **MSDS 5020** Dental Biomed Core 1 4
- **MSDS 5121** Biostatistics 1
- **PEDO 5042** Pediatric Dentistry I 2

Total Credit Hours: 9.0

**Spring**
- **MSDS 5021** Dental Biomed Core 2 1
- **PEDO 5028** Orthodontics 3 1.5

Total Credit Hours: 6.0

#### Second Year

**Fall**
- **INTD 5013** Perio/Pros/Endo/Orth Interdisciplinary Course 1

Total Credit Hours: 5.0

**Spring**
- **MSDS 6357** Research 2- Data Collection 3
- **INTD 6014** Perio/Pros/Endo/Orth Interdisciplinary Course 2 1

Total Credit Hours: 4.0

#### Third Year

**Fall**
- **MSDS 6058** Research 3- Data Analysis 2
- **MSDS 6098** Thesis 1-4

Total Credit Hours: 3.0-6.0

**Spring**
- **INTD 6115** Perio/Pros/Endo/Orth Interdisciplinary Course 3 1

Total Credit Hours: 2.0-5.0

### Periodontics

**Plan of Study**

#### First Year

**Fall**
- **MSDS 5157** Research 1- Project Proposal 1
- **MSDS 5020** Dental Biomed Core 1 4
- **MSDS 5090** Grad Research Methodology 2
- **MSDS 5121** Biostatistics 1
- **PERI 5031** Periodontics Lecture Series 2
- **PERI 5073** Literature Seminars 1
- **INTD 5013** Perio/Pros/Endo/Orth Interdisciplinary Course 1
- **PATH 5035** Oral Pathology 2
- **PERI 5052** Surgical Anatomy 1
- **PROS 5050** Dental Implantology 1

Total Credit Hours: 16.0

**Spring**
- **MSDS 5257** Research 1- Project Proposal 2
- **MSDS 5021** Dental Biomed Core 2 1
- **INTD 5013** Perio/Pros/Endo/Orth Interdisciplinary Course 1
- **PERI 5035** Peri Lecture Series 1
- **PERI 5073** Literature Seminars 1

Total Credit Hours: 6.0

---

**Pediatric Dentistry**

**Plan of Study**

#### First Year

**Fall**
- **MSDS 5090** Grad Research Methodology 2
- **MSDS 5020** Dental Biomed Core 1 4
- **MSDS 5121** Biostatistics 1
- **PEDO 5042** Pediatric Dentistry I 2

Total Credit Hours: 9.0

**Spring**
- **MSDS 5021** Dental Biomed Core 2 1
- **PEDO 5028** Orthodontics 3 1.5

Total Credit Hours: 6.0

#### Second Year

**Fall**
- **INTD 5013** Perio/Pros/Endo/Orth Interdisciplinary Course 1

Total Credit Hours: 5.0

**Spring**
- **MSDS 6357** Research 2- Data Collection 3
- **PEDO 6083** Investigative Project 1

Total Credit Hours: 4.0

#### Third Year

**Fall**
- **MSDS 6058** Research 3- Data Analysis 2
- **MSDS 6098** Thesis 1-4

Total Credit Hours: 3.0-6.0

**Spring**
- **INTD 6115** Perio/Pros/Endo/Orth Interdisciplinary Course 3 1

Total Credit Hours: 2.0-5.0
Courses

INTD 5013. Perio/Pros/Endo/Orth Interdisciplinary Course 1. 1 Credit Hour.
A seminar that brings together the residents and graduate staff from the periodontic, prosthodontic, endodontic and orthodontic postdoctoral programs to share clinically relevant multidisciplinary information. Patient diagnostic evaluations and treatment plans are evaluated in an interactive environment. Selected topics involving new advancements are presented and discussed.

MSDS 5020. Dental Biomedical Core 1. 4 Credit Hours.
The Biomedical Core Course will provide a multidisciplinary approach to basic science instruction as it relates to the clinical practice of dentistry. Both basic science and clinical science faculty will participate to provide a sound base of material required by each program. Individual programs will supplement the Biomedical Core Course in the basic science areas particular to that discipline. This combination of core instruction with individual supplementation should provide the advanced education student the appropriate background in biomedical science.

MSDS 5021. Dental Biomedical Core 2. 1 Credit Hour.
This course is a continuation of MSDS 5020 Dental Biomedical Core Course 1.

MSDS 5090. Grad Research Methodology. 2 Credit Hours.
This course is an introduction to methods and techniques used in dental research. Topics will include basic assumptions and concepts of scientific research, selecting research topics, specifying objectives and hypotheses, literature reviews, and experimental design.

MSDS 5121. Biostatistics. 1 Credit Hour.
This course is designed to prepare the advanced education dentist with the knowledge of common statistical methods in order to critically evaluate the literature and to perform necessary analyses in support of their own research projects, particularly those directed at the completion of the Certificate from the Dental School and/or the Master of Science degree from the Graduate School of Biomedical Sciences.

MSDS 5157. Research 1- Project Proposal. 1 Credit Hour.
The introductory course in research design and protocol development is limited to postdoctoral students enrolled in advanced education programs. It is the 1st of four required core research courses for the Master of Science in Dental Science curriculum. Registration for this course requires permission by the respective program director for a particular Master of Science educational track. The course occurs during the PGI year offered in the spring semester. In fulfillment of the Master of Science degree, registration for this course requires completion of MSDS 5257 in the preceding semester.

MSDS 5257. Research 1- Project Proposal. 2 Credit Hours.
The introductory course in research design and protocol development is limited to postdoctoral students enrolled in advanced education programs. It is the 1st of four required core research courses for the Master of Science in Dental Science curriculum. Registration for this course requires permission by the respective program director for a particular Master of Science educational track. The course occurs during the PGI year offered in the spring semester.

MSDS 6058. Research 3- Data Analysis. 2 Credit Hours.
The course focuses on refining research design, implementation, and data collection. Enrollment limited to postdoctoral students enrolled in advanced education programs who have completed successfully MSDS 6057. This is the 3rd of four required core research courses for the Masters of Science in Dental Science curriculum. Registration for this course requires permission by the respective program director for a particular Masters of Science education track. The course occurs during the PG II year offered and is offered in both fall and spring semesters. Credit hours vary between educational tracks for a semester from 1-2 hours, with a total of 2 credit hours required for course completion.

MSDS 6098. Thesis. 1-4 Credit Hours.
The research thesis course is limited to postdoctoral students in advanced education programs who have completed successfully MSDS 6058. This is the 4th of four required core research courses for the Masters of Science in Dental Science curriculum. Registration for this course requires permission by the respective program director from a particular Masters of Science educational track. The course is offered in fall, and spring semesters. Credit hours vary between educational tracks for a semester from 1-4. The course occurs during the PG II and PG II year offered in summer, fall, and spring semesters. Credit hours vary between educational tracks for a semester from 1-4, with a total of 4 credit hours required for course completion.

MSDS 6357. Research 2- Data Collection. 3 Credit Hours.
This course focuses on refining research design, implementation, and data collection. Enrollment limited to postdoctoral students enrolled in advanced education programs who have completed successfully MSDS 5257 and MSDS 5157 or MSDS 5357 in PG1. This is the 2nd of four required core research courses for the Master of Science in Dental Science curriculum. Registration for this course requires permission by the respective program director for a particular Master of Science education track. The course occurs during the PG2 year offered in fall and spring semesters. In fulfillment of the Master of Science degree, registration for this course requires registration for MSDS 6357 for two semesters.

PATH 5035. Oral Pathology. 2 Credit Hours.
Clinicopathologic correlations, differential diagnosis, and therapeutic rationale are emphasized. The integration of history, physical findings, and clinical laboratory data with pertinent radiographic findings, clinical presentations, and anatomic pathology will be emphasized.
PERI 5031. Periodontics Lecture Series. 2 Credit Hours.
This course is designed to instruct the student in all aspects of periodontology. It is meant to be an adjunct to the PERI 6073 Literature Seminar. Topics dealing with basic science, pathobiology, and clinical and surgical aspects of periodontal disease will be discussed.

PERI 5035. Peri Lecture Series. 1 Credit Hour.
This course is designed to instruct the student in all aspects of periodontology. It is meant to be an adjunct to the PERI 6073 Literature Seminar. Topics dealing with basic science, pathobiology, and clinical and surgical aspects of periodontal disease will be discussed. Cross-listed/Concurrent: PERI 6030/6031.

PERI 5052. Surgical Anatomy. 1 Credit Hour.
This course emphasizes the learning of the head and neck anatomy that is related directly to surgical procedures performed by periodontists and endodontists and the practice of prosthodontic dentistry. Anatomic structures related to implant placement receive special emphasis. Surgical complications related to anatomy are described. A prosection on human cadavers is presented with a strong emphasis on surgical anatomy.

PERI 5073. Literature Seminars. 1 Credit Hour.
This course is designed to familiarize the student with the historical and contemporary literature related to periodontics. The first-year course is concerned mainly with basic science literature while second- and third-year courses concentrate on the clinical literature. Students have the opportunity to evaluate the data in the literature, critique experimental design, abstract articles, critically evaluate research findings, and learn to use library resources.

PROS 5050. Dental Implantology. 1 Credit Hour.
This course offers graduate level students an introduction to the basics of the osseointegrated implant surgical and prosthetic technique. Lectures on advanced concepts of osseointegration therapy related to several implant systems are included.

### Prosthodontics

#### Plan of Study

**First Year**

**Fall**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSDS 5020</td>
<td>Dental Biomed Core 1</td>
<td>4</td>
</tr>
<tr>
<td>MSDS 5090</td>
<td>Grad Research Methodology</td>
<td>2</td>
</tr>
<tr>
<td>MSDS 5121</td>
<td>Biostatistics</td>
<td>1</td>
</tr>
<tr>
<td>INTD 5013</td>
<td>Perio/Pros/Endo/Orth Interdisciplinary Course</td>
<td>1</td>
</tr>
<tr>
<td>PERI 5052</td>
<td>Surgical Anatomy</td>
<td>1</td>
</tr>
<tr>
<td>PROS 5015</td>
<td>Concepts Of Occlusion</td>
<td>1</td>
</tr>
<tr>
<td>PROS 5050</td>
<td>Dental Implantology</td>
<td>1</td>
</tr>
<tr>
<td>PROS 5053</td>
<td>Advanced Implant Prosthodontics</td>
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</tr>
<tr>
<td>PROS 5067</td>
<td>Supervised Teaching 1</td>
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<td><strong>Total Credit Hours:</strong></td>
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**Spring**

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<tr>
<td>MSDS 5021</td>
<td>Dental Biomed Core 2</td>
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<tr>
<td>INTD 5013</td>
<td>Perio/Pros/Endo/Orth Interdisciplinary Course</td>
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**Second Year**

**Fall**

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<th>Course Code</th>
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<tbody>
<tr>
<td>MSDS 5257</td>
<td>Research 1-Project Proposal</td>
<td>2</td>
</tr>
<tr>
<td>MSDS 6357</td>
<td>Research 2-Data Collection</td>
<td>3</td>
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**Spring**

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<th>Course Title</th>
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<tr>
<td>MSDS 6357</td>
<td>Research 2-Data Collection</td>
<td>3</td>
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<tr>
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**Third Year**

**Fall**

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<tbody>
<tr>
<td>MSDS 6058</td>
<td>Research 3-Data Analysis</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Credit Hours:</strong></td>
<td></td>
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**Spring**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>MSDS 6098</td>
<td>Thesis</td>
<td>1-4</td>
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<tr>
<td><strong>Total Credit Hours:</strong></td>
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<td>1.0-4.0</td>
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</table>

### Immunology & Infection

The Master of Science in Immunology & Infection (MSI&I) degree program allows training in a health science campus environment with direct access and constant exposure to the biomedical community. The program ensures that our graduates will experience, first hand, and in ways unavailable to students at non-health campuses, how their training is relevant and applicable to the health care, biotech and educational professions.

All graduate students are trained by world-class scientists and educators in a cutting-edge 21st century environment. The program offers classroom and laboratory training concerned with fundamental scientific principles that link immunology and microbial infection. The curriculum achieves two main objectives: provides in the classroom an extensive knowledge base of fundamental scientific principles and provides in the laboratory opportunities to develop skills of problem solving and clinical application.

Thus, the curriculum and two-year progression through the MSI&I degree program are designed to integrate the fields of immunology and infectious disease (i.e., microbiology) so as to provide a big-picture multidimensional view of host-pathogen relationships. This will produce graduates who are also multidimensional, and prepared to contribute solutions to countless challenges that face our biotechnology research and development industries, health care infrastructure, and teaching needs. The MSI&I program is not designed simply to become just another line in a student's resume, but to offer a rigorous and full-immersion experience that will produce thinkers and problem solvers.
Master of Science in Immunology & Infection Admissions Requirements

All of the required application information, including official transcripts from all institutions attended, must be submitted in order for an applicant to be considered by the MSI&I program Admissions Committee. In general, students should have some educational background in the biological or biochemical sciences prior to admission to the program.

Applicants must have a bachelor’s degree from an accredited institution in the U.S. or proof of an equivalent degree/training at a foreign institution, a grade point average (GPA) no lower than B (3.0 in a 4.0 system) in the last 60 hours of coursework for a BS/BA degree, a graduate Record Examination score (GRE) for the combined verbal and quantitative portions, and three letters of recommendation attesting to the applicant’s readiness for graduate level studies.

International applicants from countries where English is not the native language must earn a satisfactory score on the Test of English as a Foreign Language (TOEFL) (usual minimum of 68 is typical). A 6.5 on International English Language Testing System (IELTS) may also apply.

Application Process

Each applicant should submit online applications through the Graduate School of Biomedical Sciences application website. After receipt of an online application, together with all of the required admission materials, the MSI&I degree program Admissions Committee will review the application by considering the minimal admission requirements listed above. The MSI&I program Admissions Committee will make a recommendation to accept or decline the application. Recommendations will be forwarded to the Dean of the GSBS for final approval. Applicants will be formally notified of the outcome by the Graduate Dean of the GSBS. Recommendation for admission to the MSI&I program will be made for the most highly qualified applicants regardless of ethnicity, gender, age, sexual orientation, nation of origin, or disability.

Commitment to Underrepresented Minorities

The Health Science Center is designated as an Hispanic-Serving Institution by the U.S. Department of Education. Thus, the Health Science Center and the Department of Microbiology, Immunology & Molecular Genetics have a long history of recruiting and retaining underrepresented racial/ethnic minority students into our programs.

Master of Science in Immunology & Infection Degree Requirements

Over a 2-year (4-semester) period, students are expected to fulfill all requirements of the M.S. in Immunology & Infection Program. Each semester will include a minimum of 8.0 credit hours, approximately 32 credit hours for the entire program.

Year 1: Students must enroll in all required courses and maintain a grade point average at or above 3.0 for all class work. In addition, in order to maintain satisfactory research/academic progress, students are required, prior to the end of the Year 1 Fall semester, to identify and engage a faculty member in the program who will serve as the student’s Research Advisor.

Year 2: Students must perform original research in the laboratory of their Research Advisors. Guidance and evaluation of research progress will be aided by a Research Supervising Committee. This committee, together with the Research Advisor will determine if the thesis research is adequate for granting the M.S. degree. This decision is confirmed by a public presentation of the thesis research and a closed-door oral defense of the thesis for the benefit of the Research Supervising Committee.

Master of Science in Immunology & Infection Sample Plan of Study

First Year

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>MICR 5031 Pathogenic Microbiology</td>
<td>MICR 5025 Eukaryotic Pathogens</td>
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<tr>
<td>2.0</td>
<td>MICR 5051 Intro To Immunology</td>
<td>MICR 5026 Bacterial Pathogenesis</td>
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<td>1.0</td>
<td>MICR 5091 Current Topics In Microbiology And Immunology</td>
<td>MICR 5027 Immunology</td>
</tr>
<tr>
<td>2</td>
<td>TSCI 5070 Responsible Conduct of Research</td>
<td>CSAT 5095 Experimental Design And Data Analysis</td>
</tr>
<tr>
<td></td>
<td>Total Credit Hours: 8.0</td>
<td>Total Credit Hours: 8.0</td>
</tr>
</tbody>
</table>

Research: Meet with faculty to identify research opportunities and seek approval for appointment of Research Advisor.

Second Year

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>MICR 6097 Research (*)</td>
<td>MICR 6097 Research (*)</td>
</tr>
<tr>
<td>2</td>
<td>Elective *</td>
<td>Elective *</td>
</tr>
<tr>
<td></td>
<td>Total Credit Hours: 8.0</td>
<td>Total Credit Hours: 8.0</td>
</tr>
</tbody>
</table>

Research: Meet with Research Supervising Committee, seek approval of Research Proposal, and advance to Candidacy.

The University of Texas Health Science Center at San Antonio
* The elective taken will determine how many hours of research would be required for each semester.

**Elective Courses**

Each MSI&I student is required to take one elective course during each of the final two semesters. Courses that will satisfy this requirement may be selected from courses provided from the MSI&I program or from elective courses provided on a regular basis for PhD or MS students in Graduate School programs other than MSI&I. Regardless of who gives the course, it is expected that students will select elective courses in consultation with their Research Advisors and based on predicted enhancement of their studies and their research projects.

**Advanced Elective Courses from MSI&I and IBMS Programs**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBMS 6090</td>
<td>Seminar</td>
<td>1.5</td>
</tr>
<tr>
<td>MICR 5029</td>
<td>Building Scientific Thinking Skills (Fall)</td>
<td>2</td>
</tr>
<tr>
<td>MICR 5035</td>
<td>Emerging Trends in Immunology and Infection (Fall)</td>
<td>2</td>
</tr>
<tr>
<td>IBMS 7010</td>
<td>Student Journal Club &amp; Research Presentation</td>
<td>1-2</td>
</tr>
<tr>
<td>MICR 5095</td>
<td>Current Topics in Immunobiology and Host-microbe Interactions (Not available during all semesters)</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: Some courses are associated with a letter grade that can impact your grade point average (GPA), while some are graded S/U and do not impact your GPA.

**Elective Courses from Other Department Suggestions**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOC 6010</td>
<td>Gene Expression and Omics</td>
<td>2</td>
</tr>
<tr>
<td>BIOC 6033</td>
<td>Cell Signaling Mechanisms</td>
<td>2</td>
</tr>
<tr>
<td>BIOC 6036</td>
<td>Macromolecular Structure &amp; Mechanism</td>
<td>2</td>
</tr>
<tr>
<td>BIOC 6037</td>
<td>Integration Of Metabolic Pathways</td>
<td>2</td>
</tr>
<tr>
<td>BIOC 6043</td>
<td>Structure &amp; Function Of Membrane Proteins</td>
<td>2</td>
</tr>
<tr>
<td>CSAT 5007</td>
<td>Methods In Cell Biology</td>
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</tr>
<tr>
<td>CSAT 5023</td>
<td>Development (Spring semester only)</td>
<td>1</td>
</tr>
<tr>
<td>CSAT 5024</td>
<td>RNA Biology and Genomics (Spring semester only)</td>
<td>1</td>
</tr>
<tr>
<td>CSAT 5025</td>
<td>Genetics (Spring semester only)</td>
<td>1</td>
</tr>
<tr>
<td>CSAT 5083</td>
<td>Practical Optical Microscopy</td>
<td>1</td>
</tr>
<tr>
<td>CSAT 6021</td>
<td>Animal Models</td>
<td>3</td>
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<tr>
<td>CSAT 6048</td>
<td>Biology of Aging</td>
<td>4</td>
</tr>
<tr>
<td>CSAT 6049</td>
<td>Cellular and Molecular Mechanisms of Aging (Spring semester only)</td>
<td>2</td>
</tr>
<tr>
<td>CSAT 6050</td>
<td>Aging and Longevity Mechanisms (Spring semester only)</td>
<td>2</td>
</tr>
<tr>
<td>CSAT 6059</td>
<td>Stem Cells &amp; Regenerative Medicine</td>
<td>1</td>
</tr>
<tr>
<td>CSAT 6064</td>
<td>Genes &amp; Development</td>
<td>4</td>
</tr>
<tr>
<td>CSAT 6068</td>
<td>Cancer Biology Core 1: An Introductory Course (Fall semester only)</td>
<td>1</td>
</tr>
</tbody>
</table>

**Master of Science in Immunology & Infection Objectives/Program Outcomes**

As reported by Sean Gallagher in the April 4, 2014 edition of Forbes Magazine, as well as according to many in the profession of providing doctoral education in the biomedical sciences, we are on the verge of a major transformation (B. Alberts et al, “Rescuing US biomedical research from its systemic flaws”; Proc. Natl. Acad. Sci. early edition). Programs are in high demand that offer alternatives for individuals who wish to pursue careers in the biomedical sciences without needing to graduate from Ph.D. programs. The Master of Science in Immunology & Infection (MSI&I) degree program offers such an option.

Graduates of the MSI&I degree program will compete effectively for:

- Entry-level, mid-level, and leadership positions in research and clinical laboratories, as well as in the teaching workforce.
- Positions that expect a broad deep knowledge base.
- Positions that require real-world problem-solving (research) skills.
- Positions that require employees who are prepared to become immediately productive.
- Positions in 2-year community colleges that more and more are requiring instructors in the biological sciences to have master's degrees.

**Integrated Biomedical Sciences (IBMS) Overview**

This Overview is designed 1) to describe the academic and administrative structure that serves as the framework for the IBMS Graduate Program, and 2) to define for IBMS Ph.D. students and faculty mentors the mechanics for meeting programmatic expectations and successfully achieving the academic and research milestones required for graduation. Information provided herein is limited to essential elements of the Program; additional details may be found in the IBMS Handbook of Policies and Procedures posted on the IBMS website.

The Integrated Biomedical Sciences (IBMS) Graduate Program is a dynamic, integrated, multidisciplinary program structured as seven thematic disciplines led by faculty from across numerous basic science and clinical departments. The academic organization of the IBMS Graduate Program is shown below as part of UT Health San Antonio, and divided into 7 academic/research disciplines.

**Academic Organization**

UT Health San Antonio
The primary mission of the IBMS Graduate Program is to train Ph.D. students to become highly skilled thinkers and problem solvers who are thoroughly prepared to successfully enter and sustain careers in research and education. Students matriculating into the IBMS Graduate Program are given the opportunity to select a dissertation mentor from among the many IBMS Graduate Faculty, to customize their educational experiences, and to pursue their unique research interests and professional aspirations.

Faculty Mentoring. Based on the research interests of individual members of the IBMS Graduate Faculty, seven thematic “disciplines” have been designated that provide a structure and mechanism to foster interactions and facilitate teaching and research collaborations among faculty members with common interests. Therefore, each faculty member has an affiliation with one or more IBMS discipline(s).

The 7 thematic IBMS disciplines (brief descriptions can be found below and on the IBMS website):

- Biochemical Mechanisms in Medicine (https://www.uthscsa.edu/academics/biomedical-sciences/programs/integrated/biochemicalmechanismsofmedicine) [BMM]
- Biology of Aging (https://www.uthscsa.edu/academics/biomedical-sciences/programs/integrated/biology-aging) [BA]
- Cancer Biology (https://www.uthscsa.edu/academics/biomedical-sciences/programs/integrated/cancer-biology) [CB]
- Cell Biology, Genetics, & Molecular Medicine (CGM) (https://www.uthscsa.edu/academics/biomedical-sciences/programs/integrated/cellbiology-genetics-molecularmedicine) [CGM]
- Molecular Immunology & Microbiology (MIM) (https://www.uthscsa.edu/academics/biomedical-sciences/programs/integrated/molecular-immunology-microbiology) [MIM]
- Neuroscience (https://www.uthscsa.edu/academics/biomedical-sciences/programs/integrated/neuroscience) [NS]
- Physiology & Pharmacology (https://www.uthscsa.edu/academics/biomedical-sciences/programs/integrated/physiology-pharmacology) [PP]

Only members of the IBMS Graduate Faculty may serve as dissertation mentors for IBMS graduate students. In order to join the IBMS Graduate Faculty, candidates must demonstrate credentials indicating that they are prepared to offer effective student mentoring, sufficient research resources, and a laboratory environment and research projects appropriate for the training of graduate students. Following review and approval by the IBMS COGS (see below), all faculty members with full-time UT Health San Antonio appointments are eligible to be appointed to the IBMS Graduate Faculty. An individual from non-UT Health San Antonio institutions may also be eligible for appointment to the IBMS Graduate Faculty, but must first receive an adjunct appointment to the faculty of a UT Health San Antonio department before consideration.

Student Training. Although each IBMS graduate student has access to all offerings of the IBMS Graduate Program, all students are required to identify one of the disciplines of the Program as a “primary discipline-of-interest”, and each student will follow the core curriculum (Plan of Study) provided by the executive leadership of the chosen discipline. The Plans of Study may vary slightly from discipline-to-discipline, but all Plans guarantee that the needs and preparation of each student are satisfied. Also, appropriate coordination and communication is in place to ensure that discipline activities remain consistent with the expectations and requirements of the IBMS Graduate Program.

Administrative Structure and Responsibilities. The IBMS Committee on Graduate Studies (COGS) is the primary governing body of the IBMS Graduate Program and is responsible for developing policies and procedures for the Program, monitoring and maintaining the academic progress of all IBMS students, and overseeing the activities of the IBMS Student Admissions Committee, IBMS Student Recruitment Committee and the IBMS Curriculum Committee. The IBMS COGS provides the organization and facilitates the communication between students and faculty, and among faculty members of all disciplines, in order to promote the primary missions of the IBMS Graduate Program and to ensure consistency, cohesiveness, integration and quality control across disciplines.

Each Discipline has a Discipline Executive Committee that is responsible for directing, monitoring and evaluating all aspects of a student’s graduate education, and ensuring that the policies and procedures established by the IBMS COGS are followed. Each Discipline is responsible for implementing its Plan of Study and for monitoring the conduct of its students. As part of the execution of its responsibilities, Disciplines report student progress to the IBMS COGS (e.g., reports of major student advances or failures in academic progress such as Qualifying Exam results, Admission to Candidacy, Research Progress, Defense of Dissertation, etc.) and, where appropriate, seek COGS approvals. Although the overall structure and procedures of the individual disciplines are designed to promote integration and collaboration among the disciplines, in order to provide the most effective training to its students, there are some expectations that are “discipline-specific”. Furthermore, although the Disciplines of the IBMS Graduate Program are not academically aligned with any specific department, strong administrative relationships with the departmental structure is maintained.

Brief Discipline Descriptions (detailed descriptions can be found on the IBMS website)

### Biochemical Mechanisms in Medicine (BMM)

The Biochemical Mechanisms in Medicine (BMM) discipline focuses on the molecular mechanisms underlying fundamental life processes ranging from DNA replication and repair, RNA/DNA epigenetics, protein folding and complex assembly, intercellular communication and signaling networks, and host defense against pathogens. Dysfunctions in these processes often give rise to debilitating conditions such as cancer, neurological disorders, developmental abnormalities, infectious diseases, and metabolic syndromes. BMM laboratories place special emphasis on the development of small molecules as chemical biology tools and as lead candidates in drug discovery programs.
BMM students work with faculty members dedicated to mentoring and are treated as colleagues while learning fundamental principles of biochemistry to develop new treatments for various illnesses. The BMM Discipline strives to educate its students to develop a vision of health, disease and therapy that integrates knowledge from the atomic to the cellular level, while stressing the development of core skills such as critical thinking and problem solving. Our curriculum is tailored to each student and can include courses from across all IBMS disciplines to provide the most relevant coursework for their chosen project. BMM is unique in its innovative integration of advanced tools of biochemistry, biophysics, structural biology, molecular biology, cell biology, and chemical biology in our scientific pursuits, and is well recognized for its quantitative rigor.

**Biology of Aging** (http://barshop.uthscsa.edu/main/graduate/biologyofaging) (BA). The mission of the BA discipline is to train the next generation of scientists to be leaders in Geroscience, the interdisciplinary field that aims to elucidate the biological mechanisms of aging and develop therapies to ameliorate its deleterious consequences. The BA discipline is headquartered in the Barshop Institute for Longevity and Aging Studies, one of the nation’s only freestanding research buildings solely devoted to Geroscience. We offer trainees intellectual, technological and physical resources dedicated to aging research that are among the best.

Our faculty are leaders in aging research, cover a broad spectrum of biomedical disciplines, and are dedicated to mentoring students to become independent scientists with expertise in the basic biology of aging as well as translational and clinical research. Resource strengths include 1) world class aging animal cores (mice, rats, naked mole rats and marmosets); 2) a functional and behavioral assessment core, 3) an aging pathology core, and 4) a core for drug development, delivery and pharmacodynamics. The Barshop Institute’s faculty, Core facilities, and Research Centers are well funded by NIH and other agencies—most notably, by the National Institute on Aging at one of the highest funding levels in the nation.

**Cancer Biology** (http://gsbs.uthscsa.edu/cb) (CB). The Cancer Biology discipline is a vibrant and successful community of researchers and educators with expertise across the spectrum of bench research to bedside application and a track record of training successful graduates. Our 62 faculty members have successful programs in genomics/proteomics, DNA repair, cell signaling and receptor biology, structural biology, RNA biology, tumor immunology, metastasis, tumor microenvironment, radiology, radiation therapy, drug discovery, chemoprevention, experimental therapeutics and clinical trials. These experienced mentors, many of whom are members of the NCI-designated Mays Cancer Center, bring in nearly $50M in funding per year and collaborate with investigators across academia and industry. Our innovative curriculum integrates both basic and translational research with a strong focus on critical thinking to provide our trainees with the skills and knowledge needed for productive careers in many areas, including academia, industry, patent law/intellectual property, government, public policy, research administration and patient/survivor advocacy. After meeting academic milestones, students are eligible to apply for training grant support through our CPRIT- and NCI-funded Cancer Biology Training Programs; many are successful in securing independent funding. Our comprehensive training environment brings together faculty, curricula and infrastructure to guide our trainees in defining their own, unique, educational paths and in developing and executing research projects that contribute to our understanding of cancer biology to meet the growing demand for scientists trained in multiple facets of cancer biology.

**Cell Biology, Genetics and Molecular Medicine** (http://gsbs.uthscsa.edu/ibms_disciplines/cgm) (CGM). The CGM discipline is the gateway to all basic, medical, and translational research by emphasizing the importance of cell, molecular, and genomic approaches to study the foundations of life, health, and disease. The CGM discipline is designed for graduate students with an interest in understanding biological systems and molecular mechanisms by investigating how cells function as a living unit, respond to external cues, communicate with other cells, and contribute to the homeostatic and pathological processes in complex systems. The program offers maximum flexibility and can be individually tailored to a student’s specific interests in aging, cancer, genetics, immunology, virology, neuroscience, metabolism, or genomic medicine. We stress the development of a student’s ability to think critically and to pursue hypothesis-driven research. We also encourage students to combine our advanced curriculum in CGM with the advanced core courses in other IBMS disciplines. Overall, the CGM discipline provides students with a comprehensive foundation in systems-based science and interdisciplinary training that can be utilized for future career development in more specialized areas of biomedical research and education.

**Molecular Immunology & Microbiology** (http://gsbs.uthscsa.edu/disciplines/infection-inflammation-immunity-triple) (MIM). The MIM discipline integrates studies of immunology with studies of host defense against microbial infection, autoimmune diseases, allergy, and cancer. These investigations lead to an understanding of mechanisms that: i) allow the host to resist infections by bacteria, viruses, fungi, or parasites, or ii) allow the hosts immune system to “cross the line” into pathological inflammation or allergy or autoimmunity, or iii) allow investigators to develop successful vaccines, or iv) to better predict influences of the immune system on diseases such as cancer. Together with newly renovated labs and state-of-the-art equipment and the Flow Cytometry Core, recent aggressive recruitment of numerous young faculty investigators provides a high energy integrated research environment for our students and faculty.

**Neuroscience** (http://uthscsa.edu/neuroscience) (NS). The NS discipline provides didactic and laboratory training in subject areas and levels of analysis ranging from molecular, cellular, and neurochemical to systems, behavioral, and clinical, all focused on the regulation and function of the nervous system. Drawing on the expertise of over 50 faculty from 5 basic science departments and 8 affiliated departments or divisions within the medical and dental schools, we emphasize a flexible program of study and research tailored to the individual needs and interests of all students in the neurosciences. Neuroscientists probe the intricate machinery of the nervous system to address such fundamental issues as how we think, move, perceive, learn and remember. Our students receive training that emphasizes analytical thinking and problem solving in a scientific environment, that is applicable to many related careers. Neuroscientists are employed in universities and medical centers, government agencies and private industry, and in related fields such as scientific publishing, policy, administration and law. The pharmaceutical and biotechnology industries hire many neuroscientists for productive and exciting careers developing new therapeutic agents to improve human health. Regardless of their ultimate career path, students will leave our program equipped with an education, research experience and a way of thinking that will prepare them for a successful future.

**Physiology and Pharmacology** (http://pharmacology.uthscsa.edu/ppgd.asp) (P&P). The P&P discipline encompasses the study of fundamental mechanisms of normal and disease function. Investigators seek to integrate information from molecular, cellular and organ/system levels to spur discoveries, which will lead to new and improved drug treatments for human and animal disease. Using sophisticated genetic and molecular tools, our scientists are unraveling the fundamental mechanisms that underlie tissue and cellular physiology, and how these processes are compromised in injury and disease. Using multidisciplinary approaches, our scientists offer a unique perspective in determining
the effects of chemical agents upon biological processes at the subcellular, cellular, organ system, physiological and behavioral levels. Internationally recognized research expertise is assembled in areas of neuropharmacology, cancer pharmacology, cardiovascular disease, neurodegeneration, diabetes, addiction and pain research.

Admissions Requirements

Applications to the IBMS Graduate Program are reviewed and evaluated by the IBMS Admissions Committee. Recommendations for admission are submitted to the Dean of the Graduate School of Biomedical Sciences.

The decision to admit a candidate is based on several criteria:

Grade Point Average (GPA). Applicants to the Integrated Biomedical Sciences (IBMS) Graduate Program must have, or be in the process of completing, a bachelor's degree with a final Grade Point Average of 3.0 or above. The average GPA of students entering the IBMS Graduate Program over the last 3 years was 3.4 on a 4.0 point scale. Transcripts from all colleges and universities attended must be provided, indicating grades and GPAs. **International transcripts** must be appropriately translated by an accredited agency.

Course Requirements. Although there are no specific course requirements for admission into the IBMS Graduate Program, past experience has shown that undergraduates entering our interdisciplinary program benefit from having completed upper-level courses in cell or molecular biology, biochemistry, and genetics. In addition, successful applicants often have evidence of previous research experience.

Graduate Record Examination (GRE). To be considered for admission, an applicant must provide GRE scores from tests taken within five years of applying for admission. While there is no official minimum requirement, successful applicants generally have Verbal and Quantitative GRE scores at or better than the 65th percentile.

Personal Statement. The applicant must submit two essays that state professional goals and reasons for wishing to pursue graduate education, and in particular in the IBMS Graduate Program. In addition, descriptions of past research and/or teaching activities should be included (as an undergraduate, master's student, summer intern, or as an employee at a research facility).

Interviews. Top domestic candidates are invited for on-campus interviews. Interviews of applicants are conducted in January/February. Phone and Skype interviews are conducted for top international applicants (also in January/February).

Letters of Recommendation. **Three** letters of recommendation are required. Letters should be from individuals who have information regarding academic, research, and personal accomplishments of the applicant that are predictive of success in graduate school. Letter writers should be chosen so as to enhance, not duplicate, information found in academic transcripts.

TOEFL/IELTS. International students are required to take either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing Systems (IELTS). The minimum required score for the TOEFL is 68 for IBT. The minimum score for the **academic version** of the IELTS test is 6.5. Scores for either test must have been taken within two years of applying for admission. International students who have completed formal training in a U.S. institution may request a waiver for this requirement.

Background Checks. UT Health SA requires that applicants to all graduate programs undergo security and criminal background checks prior to making an official offer of admission.

Commitment to Underrepresented Minorities

The UT Health San Antonio is designated as an Hispanic-Serving Institution by the U.S. Department of Education. Thus, the IBMS Graduate Program has a history of recruiting and retaining underrepresented racial/ethnic minority students into our program.

Application Deadline: January 1 (priority), March 15 (final). Admission decisions are completed on or before April 15.

Start Term: Fall

Degree Requirements

It is the responsibility of each IBMS student to: 1) Successfully complete all coursework required by the IBMS Graduate Program and the specific Plan of Study of the student's IBMS discipline; 2) Maintain a grade point average of 3.0 or greater; 3) Carry out independent and original investigation; and 4) Demonstrate an intellectual command of the subject area of the student's research project. It is also the responsibility of each IBMS student to complete all administrative and academic milestones of the IBMS Graduate Program and adhere to the required timeline for completing those milestones (including the submission of all paperwork required to verify appropriate academic progress in the IBMS Graduate Program).

**Full-time student status** requires enrollment for a minimum of 12.0 semester credit hours per semester. Prior to graduation, every Ph.D. student must have enrolled for a **minimum of 72.0 total semester credit hours**. **Note:** Depending on the extent of classroom contact necessary to adequately prepare students for their research activities, or intrinsic differences in the time required to complete different research projects, **actual total semester credit hours** in the Plans of Study provided by the 7 disciplines may vary, although total semester credit hours typically will exceed the 72 semester credit hours minimum.

Expected Academic Progression of IBMS Students. In any Plan of Study, there are three types of courses: i) Required IBMS courses taken by all graduate students in the IBMS Graduate Program; ii) Required discipline-specific courses taken by students who choose a particular Discipline; and iii) Advanced elective courses that may be selected, with approval of the student's Discipline leadership, from the curricula of any IBMS discipline.

Typical Academic Timeline (see IBMS Handbook of Policies and Procedures for more exact details): Discipline-specific Plans of Study are shown in subsequent sections of this catalog. In general, during the IBMS Graduate Program **Year 1 Fall semester**, all students will complete the common core courses (IBMS 5000 Fundamentals of Biomedical Sciences; TSCI 5070 Responsible Conduct Of Patient-Oriented Clinical Research; and IBMS 5008 Laboratory Rotations). By the end of the Fall semester of Year 1, each student is expected to identify a permanent dissertation research mentor (supervising professor), and in consultation with the research mentor will select a particular IBMS discipline and its Plan of Study. Beginning in the **Year 1 Spring semester**, the typical Plan of Study prescribes required discipline-specific courses combined with certain IBMS common courses such as Experimental Design and Analysis, Seminar, Journal Club/Student Presentations and Research. **Years 2-5** will include a mixture of recurring IBMS courses and
discipline-specific courses, with the Qualifying Examination (IBMS 7001) administered in the Spring semester Year 2, followed by Admission to Candidacy. In **Year 3**, each student will seek approval for the membership of a Dissertation Supervising Committee, and the official proposal that describes the student’s dissertation research project, and will commence meetings with the Dissertation Supervising Committee a minimum of once per semester. Each student must begin enrolling in the two semesters of Dissertation credit (IBMS 7099) required for graduation.

**Objectives/Program Outcomes**

1. The student will be able to conduct independent scientific research.
2. The student will be able to critically evaluate scientific literature.
3. The student will be able to demonstrate effective written communication skills.
4. The student will be able to demonstrate effective oral communication skills.
5. The student will be able to demonstrate professional and ethical behavior.
6. The student will be able to demonstrate mastery of core biomedical science principles.

**Biochemical Mechanisms in Medicine**

**Sample Plan of Study**

<table>
<thead>
<tr>
<th>First Year</th>
<th>Fall</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBMS 5000</td>
<td>Fundamentals Of Biomedical Sciences</td>
<td>8.0</td>
</tr>
<tr>
<td>IBMS 5008</td>
<td>Lab Rotations</td>
<td>3.0</td>
</tr>
<tr>
<td>TSCI 5070</td>
<td>Responsible Conduct of Research</td>
<td>2.0</td>
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<td><strong>Total Credit Hours:</strong></td>
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<table>
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<tr>
<td>BIOC 5085</td>
<td>Biophysical Methods In Biology</td>
<td>2.0</td>
</tr>
<tr>
<td>BIOC 6036</td>
<td>Macromolecular Structure &amp; Mechanism</td>
<td>2.0</td>
</tr>
<tr>
<td>CSAT 5095</td>
<td>Experimental Design And Data Analysis</td>
<td>3.0</td>
</tr>
<tr>
<td>IBMS 6090</td>
<td>Seminar (Class Section 6BMM)</td>
<td>1.5</td>
</tr>
<tr>
<td>IBMS 7010</td>
<td>Student Journal Club &amp; Research Presentation (Class Section 6BMM)</td>
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**Choice of BMM Elective Courses (See below) * 2.0 |

| **Total Credit Hours:** | | **12.5** |

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<td>BIOC 0003</td>
<td>Scientific Writing: Development and Defense of a Research Proposal</td>
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<td>Rigor &amp; Reproducibility</td>
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<td>IBMS 6090</td>
<td>Seminar (Class Section 6BMM)</td>
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<tr>
<td>IBMS 6097</td>
<td>Research (Class Section 6BMM)</td>
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</table>

| **Total Credit Hours:** | | **12.0** |

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<tr>
<th>Third Year</th>
<th>Fall</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
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<td>Research (Class Section 6BMM)</td>
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</tr>
<tr>
<td>IBMS 7010</td>
<td>Student Journal Club &amp; Research Presentation (Class Section 6BMM)</td>
<td>2.0</td>
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**Choice of BMM Elective Courses (See below) * 2.0 |

| **Total Credit Hours:** | | **12.0** |

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<th>Fall</th>
<th>Credit Hours</th>
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<tr>
<td>IBMS 7099</td>
<td>Dissertation (Class Section 6BMM)</td>
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| **Total Credit Hours:** | | **12.0** |
# Biology of Aging

## Sample Plan of Study

### First Year

#### Fall

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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>IBMS 5000</td>
<td>Fundamentals Of Biomedical Sciences</td>
<td>8.0</td>
</tr>
<tr>
<td>IBMS 5008</td>
<td>Lab Rotations</td>
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</tr>
<tr>
<td>TSCI 5070</td>
<td>Responsible Conduct of Research</td>
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Total Credit Hours: 13.0

#### Spring

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<th>Course Name</th>
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<tr>
<td>CSAT 5095</td>
<td>Experimental Design And Data Analysis</td>
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<tr>
<td>CSAT 6048</td>
<td>Biology of Aging</td>
<td>4.0</td>
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<tr>
<td>IBMS 6090</td>
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<tr>
<td>IBMS 6097</td>
<td>Research (Class Section 2BA)</td>
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Total Credit Hours: 12.0

### Second Year

#### Fall

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<tr>
<td>CSAT 5077</td>
<td>Scientific Writing</td>
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<td>CSAT 6005</td>
<td>Rigor &amp; Reproducibility</td>
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Advanced Elective Coursework * variable

Total Credit Hours: 12.0

#### Spring

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Advanced Elective Coursework * variable

Total Credit Hours: 12.0

### Third Year

#### Fall

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<td>Student Journal Club &amp; Research Presentation</td>
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Total Credit Hours: 12.0

### Notes

* BMM Elective Courses (Students are required to take a total of 6 SCH of elective courses, chosen from those offered by BMM below, or other disciplines, pending approval from the Discipline Director in consultation with the Supervising Professor)
  - BIOC 6033 Cell Signaling Mechanisms
  - BIOC 6035 Drug Design And Discovery
  - BIOC 6043 Structure & Function Of Membrane Proteins

# BIOC 6036 and BIOC 5085 and BIOC 6037 are offered in the Spring semester of the first and second year, respectively, for students entering the IBMS program in odd-numbered years (2015, 2017, 2019, etc.); for students entering the IBMS program in even-numbered years (2016, 2018, 2020, etc.), BIOC 6037 and BIOC 6036 and BIOC 5085 are offered in the Spring semester of the first and second year, respectively.

§ IBMS 7010-6BMM will be a continuous requirement beginning the Fall semester of second year until the semester preceding the dissertation defense.

¶ A minimum of 2 semesters of IBMS 7099-6BMM (Dissertation) is required for graduation. A student may begin enrolling in IBMS 7099-6BMM once the Dissertation Research Proposal and the Dissertation Supervising Committee membership are approved by the GSBS Dean. Final hours (3.0 SCH) may be applicable for the final semester.
### Third Year

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<td>Research (Class Section 2BA)</td>
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### Fourth Year

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### Fifth Year

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<tr>
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* Six (6) credit hours of electives must be taken prior to graduation. Since different elective courses vary in credit hours, Research (IBMS 6097-2BA) credit hours for a given semester should be adjusted in order to maintain a total of 12 credit hours for the semester. The menu of electives from which courses are typically selected are shown below. However, students may select, following approval of the student’s supervising professor and discipline executive committee, any accredited course offered by any program in the Graduate School of Biomedical Sciences.

### Suggested Electives

<table>
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<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>BIOC 6033</td>
<td>Cell Signaling Mechanisms</td>
<td>2</td>
</tr>
<tr>
<td>BIOC 6043</td>
<td>Structure &amp; Function Of Membrane Proteins</td>
<td>2</td>
</tr>
<tr>
<td>CSAT 6059</td>
<td>Stem Cells &amp; Regenerative Medicine (Spring semester only)</td>
<td>1</td>
</tr>
<tr>
<td>CSAT 5007</td>
<td>Methods In Cell Biology</td>
<td>1</td>
</tr>
<tr>
<td>CSAT 5083</td>
<td>Practical Optical Microscopy</td>
<td>1</td>
</tr>
<tr>
<td>CSAT 6021</td>
<td>Animal Models</td>
<td>3</td>
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<tr>
<td>INTD 5043</td>
<td>Fundamentals Of Neuroscience 2: Systems Neuroscience</td>
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<td>PATH 5021</td>
<td>Biostatistics</td>
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<td>PHAR 5091</td>
<td>Special Topics: Microelectives (1 Monoaminergic Neurotransmission and Transporters)</td>
<td>0.5-9</td>
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<tr>
<td>PHAR 5091</td>
<td>Special Topics: Microelectives (2 Ion Channelopathies in Neurological Diseases)</td>
<td>0.5-9</td>
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<td>Special Topics: Microelectives (8 Neural Substrates of Regulated Behaviors)</td>
<td>0.5-9</td>
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<tr>
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<td>Cardiovascular, Renal and Respiratory Physiology and Therapeutics</td>
<td>2</td>
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<tr>
<td>PHAR 5019</td>
<td>Metabolism, Hormones, GI Physiology and Therapeutics</td>
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A minimum of 2 semesters of IBMS 7099-2BA (Dissertation) is required for graduation. A student may begin enrolling in IBMS 7099-2BA once the Dissertation Research Proposal and the Dissertation Supervising Committee membership are approved by the GSBS Dean. Final hours (3.0 SCH) may be applicable for the final semester.

## Cancer Biology

### Sample Plan of Study

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<thead>
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<td>Course/Credit Hours</td>
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* If additional laboratory rotations are necessary in the Spring semester, research hours may be adjusted accordingly to maintain a total of 12.0 SCH.

** Cancer Biology requires a minimum 6 SCH of didactic elective course work (not including practica) and 2 SCH of supervised teaching. Since different elective courses vary in credit hours, Research (IBMS 6097-3CB) or Dissertation (IBMS 7099-3CB) credit hours for a given semester should be adjusted in order to maintain a total of 12 credit hours for the semester. The menu of electives from which courses are typically selected is shown below. However, students may select, following approval of the student's supervising professor and discipline executive committee, any accredited course offered by any program in UT Health SA.

** A minimum of 2 semesters of IBMS 7099-3CB (Dissertation) is required for graduation. A student may begin enrolling in IBMS 7099-3CB once the Dissertation Research Proposal and the Dissertation Supervising Committee membership are approval by the GSBS Dean, typically from Spring of Year 3 onward; Final Hours may be applicable for the final semester.

**Suggested Electives**

<table>
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<tr>
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<tbody>
<tr>
<td>CSAT 5024 RNA Biology and Genomics 1</td>
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<tr>
<td>CSAT 5025 Genetics 1</td>
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<tr>
<td>CSAT 5083 Practical Optical Microscopy 1</td>
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<td>CSAT 6021 Animal Models 3</td>
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<td>CSAT 6048 Biology of Aging 4</td>
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<td>CSAT 6064 Genes &amp; Development 4</td>
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<td>CSAT 6070 Cancer Biology Preceptorial 0.5</td>
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<tr>
<td>CSAT 6073 Selective Topics In Oncology: Gynecological Cancers 2</td>
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<tr>
<td>CSAT 6074 Molecular Aspects Of Epigenetics 2</td>
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<tr>
<td>CSAT 6095 Analysis and Visualization of Genomic Data 2</td>
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<td>CSAT 6165 Medical Genetics 3</td>
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<tr>
<td>BIOC 5083 Hydrodynamic Methods 2</td>
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<td>BIOC 5085 Biophysical Methods In Biology 2</td>
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<tr>
<td>BIOC 5087 Molecular Genetics And Biotechnology 1</td>
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<td>BIOC 5091 Special Topics In Biochemistry: Hydrodynamic Methods 1</td>
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<tr>
<td>BIOC 6010 Gene Expression and Omics 2</td>
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<td>BIOC 6015 Metabolic Disorders 2</td>
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<td>BIOC 6033 Cell Signaling Mechanisms 2</td>
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<td>BIOC 6035 Drug Design And Discovery 2</td>
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<td>BIOC 6043 Structure &amp; Function Of Membrane Proteins 2</td>
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<td>MIRC 5027 Immunology 1</td>
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<td>MIRC 5028 Virology 1</td>
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<td>PHAR 5013 Principles Of Pharmacology &amp; Physiology 1 3</td>
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<td>PHAR 6025 Molecular Pharmacology 2</td>
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<td>PHYL 6091 Selected Topics Of Physiology (01 Cardiovascular Physiology) 2</td>
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<tr>
<td>PHYL 6091 Selected Topics Of Physiology (02 Cell Biology in Neural Science) 2</td>
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<tr>
<td>PHYL 6091 Selected Topics Of Physiology (03 Endocrine and Metabolism) 2</td>
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<td>PHYL 6091 Selected Topics Of Physiology (04 Molecular Physiology) 2</td>
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<td>PHYL 6091 Selected Topics Of Physiology (07 Ion Channels in Disease) 2</td>
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<tr>
<td>MMED 6017 Cell Responses To DNA Damage 1</td>
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<td>PATH 5021 Biostatistics 3</td>
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<td>INTD 5040 Fundamentals Of Neuroscience1: Molecular, Cellular, &amp; Developmental Neuroscience 2</td>
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<td>INTD 5043 Fundamentals Of Neuroscience 2: Systems Neuroscience 3</td>
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<tr>
<td>INTD 6007 Advanced Cell Biology 2</td>
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<td>INTD 6009 Advanced Molecular Biology 2</td>
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**First Year**

**Fall**

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<td>IBMS 5008 Lab Rotations 3.0</td>
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<td>TSCI 5070 Responsible Conduct of Research 2.0</td>
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**First Year**

**Spring**

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<tr>
<td>CSAT 5089 Graduate Colloquium 2</td>
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<tr>
<td>CSAT 5095 Experimental Design And Data Analysis 3</td>
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<tr>
<td>IBMS 6090 Seminar (Class Section 4CGM) 1.5</td>
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**Second Year**

**Fall**

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**Second Year**

|        | IBMS 6090  | Seminar (Class Section 4CGM) | 1.5 |
|        | IBMS 6097  | Research (Class Section 4CGM) | 6.5 |
|        | IBMS 7010  | Student Journal Club & Research Presentation (Class Section 4CGM) | 1.0 |
| **Total Credit Hours:** |                        |                   | 12.0 |

**Third Year**

|        | IBMS 6090  | Seminar (Class Section 4CGM) | 1.5 |
|        | IBMS 6097  | Research (Class Section 4CGM) | 9.5 |
|        | IBMS 7010  | Student Journal Club & Research Presentation (Class Section 4CGM) | 1.0 |
| **Total Credit Hours:** |                        |                   | 12.0 |

**Fourth Year**

|        | IBMS 6090  | Seminar (Class Section 4CGM) | 1.5 |
|        | IBMS 6097  | Research (Class Section 4CGM) | 6.5 |
|        | IBMS 7010  | Student Journal Club & Research Presentation (Class Section 4CGM) | 1.0 |
|        | IBMS 7099  | Dissertation (Class Section 4CGM) | 3.0 |
| **Total Credit Hours:** |                        |                   | 12.0 |

**Fifth Year**

|        | IBMS 6090  | Seminar (Class Section 4CGM) | 1.5 |
|        | IBMS 6097  | Research (Class Section 4CGM) | 6.5 |
|        | IBMS 7010  | Student Journal Club & Research Presentation (Class Section 4CGM) | 1.0 |
|        | IBMS 7099  | Dissertation (Class Section 4CGM) | 3.0 |
| **Total Credit Hours:** |                        |                   | 12.0 |

* CGM Advanced Core Courses (4 SCH required)
Students will choose from among these required core courses to total 4 credit hours.

**Note:** Students may opt to take CSAT 6064 Genes & Development or INTD 5007 Advanced Cellular And Molecular Biology or they may opt to mix and match any of the individual modules from either course to total a final of 4 SCH.

**CSAT 6064 Genes & Development (4 SCH) (Spring semester only)**
Comprised of 4 modules:
- CSAT 5025 Genetics (1 SCH) (Kraig, Walter)
- CSAT 5024 RNA Biology and Genomics (1 SCH) (Penalva)
- CSAT 5023 Development (1 SCH) (Wang)
- CSAT 6059 Stem Cells & Regenerative Medicine (1 SCH) (Kokovay)

**INTD 5007 Advanced Cellular And Molecular Biology (4 SCH) (Spring semester only)**
Comprised of 2 modules:
- INTD 6009 Advanced Molecular Biology (2 SCH) (Yew)
- INTD 6007 Advanced Cell Biology (2 SCH) (Sun)

**Replace research hours with IBMS 5008 Lab Rotations if additional laboratory rotations are needed.**

**CGM Advanced Elective Courses (4 SCH required)**
Students must choose a minimum of 4 credit hours of elective courses. They may choose from among the following suggested courses. However, students may choose from among any courses offered at UT Health SA with the approval of the student's supervising professor and the CGM discipline director. The following list of courses may be of special interest to CGM students.

**Additional CGM core courses in any combination**

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**CGM Advanced Elective Courses (4 SCH required)**

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<th>Title</th>
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<td>INTD 5007</td>
<td>Advanced Cellular And Molecular Biology</td>
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<td>CSAT 6064</td>
<td>Genes &amp; Development</td>
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<td>IBMS 7099</td>
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<td>IBMS 6090</td>
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<tr>
<td>IBMS 7099</td>
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**Total Credit Hours:**

|        | CSAT 5077  | Scientific Writing | 2 |
|        | CSAT 6005  | Rigor & Reproducibility | 1.0 |
|        | IBMS 6090  | Seminar (Class Section 4CGM) | 1.5 |
|        | IBMS 6097  | Research (Class Section 4CGM) | 4.5 |
|        | IBMS 7010  | Student Journal Club & Research Presentation (Class Section 4CGM) | 1.0 |
| **Total Credit Hours:** |                        |                   | 12.0 |

**Second Year**

|        | IBMS 6090  | Seminar (Class Section 4CGM) | 1.5 |
|        | IBMS 6097  | Research (Class Section 4CGM) | 6.5 |
|        | IBMS 7010  | Student Journal Club & Research Presentation (Class Section 4CGM) | 1.0 |
| **Total Credit Hours:** |                        |                   | 12.0 |

**Third Year**

|        | IBMS 6090  | Seminar (Class Section 4CGM) | 1.5 |
|        | IBMS 6097  | Research (Class Section 4CGM) | 9.5 |
|        | IBMS 7010  | Student Journal Club & Research Presentation (Class Section 4CGM) | 1.0 |
| **Total Credit Hours:** |                        |                   | 12.0 |

**Fourth Year**

|        | IBMS 6090  | Seminar (Class Section 4CGM) | 1.5 |
|        | IBMS 6097  | Research (Class Section 4CGM) | 6.5 |
|        | IBMS 7010  | Student Journal Club & Research Presentation (Class Section 4CGM) | 1.0 |
|        | IBMS 7099  | Dissertation (Class Section 4CGM) | 3.0 |
| **Total Credit Hours:** |                        |                   | 12.0 |

**Fifth Year**

|        | IBMS 6090  | Seminar (Class Section 4CGM) | 1.5 |
|        | IBMS 6097  | Research (Class Section 4CGM) | 6.5 |
|        | IBMS 7010  | Student Journal Club & Research Presentation (Class Section 4CGM) | 1.0 |
|        | IBMS 7099  | Dissertation (Class Section 4CGM) | 3.0 |
| **Total Credit Hours:** |                        |                   | 12.0 |

* CGM Advanced Core Courses (4 SCH required)
Students will choose from among these required core courses to total 4 credit hours.

**Note:** Students may opt to take CSAT 6064 Genes & Development or INTD 5007 Advanced Cellular And Molecular Biology or they may opt to mix and match any of the individual modules from either course to total a final of 4 SCH.

**CSAT 6064 Genes & Development (4 SCH) (Spring semester only)**
Comprised of 4 modules:
- CSAT 5025 Genetics (1 SCH) (Kraig, Walter)
- CSAT 5024 RNA Biology and Genomics (1 SCH) (Penalva)
- CSAT 5023 Development (1 SCH) (Wang)
- CSAT 6059 Stem Cells & Regenerative Medicine (1 SCH) (Kokovay)

**INTD 5007 Advanced Cellular And Molecular Biology (4 SCH) (Spring semester only)**
Comprised of 2 modules:
- INTD 6009 Advanced Molecular Biology (2 SCH) (Yew)
- INTD 6007 Advanced Cell Biology (2 SCH) (Sun)

**Replace research hours with IBMS 5008 Lab Rotations if additional laboratory rotations are needed.**

**CGM Advanced Elective Courses (4 SCH required)**
Students must choose a minimum of 4 credit hours of elective courses. They may choose from among the following suggested courses. However, students may choose from among any courses offered at UT Health SA with the approval of the student’s supervising professor and the CGM discipline director. The following list of courses may be of special interest to CGM students.

**Additional CGM core courses in any combination**

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<td>Development</td>
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<td>CSAT 6059</td>
<td>Stem Cells &amp; Regenerative Medicine (Spring semester only)</td>
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Other discipline and departmental courses in any combination

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<td>Macromolecular Structure &amp; Mechanism</td>
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<td>Methods In Cell Biology</td>
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<td>CSAT 5083</td>
<td>Practical Optical Microscopy</td>
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<td>CSAT 6021</td>
<td>Animal Models</td>
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<td>Cellular and Molecular Mechanisms of Aging (Spring semester only)</td>
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<td>Aging and Longevity Mechanisms (Spring semester only)</td>
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<td>Cancer Biology Core 1: An Introductory Course (Fall semester only)</td>
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<td>Cancer Biology Core 2; Advanced Cancer Biology (Fall semester only)</td>
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§ Supervised Teaching can be taken as an elective typically during Year 3, but can also be taken in Year 2 or other years. Research credit hours can be adjusted as needed to maintain a total of 12 semester credit hours.

¶ A minimum of 2 semesters of IBMS 7099-4CGM (Dissertation) is required for graduation. A student may begin enrolling in IBMS 7099-4CGM once the Dissertation Research Proposal and the Dissertation Supervising Committee membership are approved by the GSBS Dean. Final hours (3.0 SCH) may be applicable for the final semester.

**Molecular Immunology & Microbiology**

**Sample Plan of Study**

**First Year**

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**Total Credit Hours:** 12.0

**Third Year Fall**

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**Total Credit Hours:** 12.0

**Fourth Year Fall**

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**Total Credit Hours:** 12.0

**Fourth Year Spring**

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**Total Credit Hours:** 12.0

**Fifth Year Fall**

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**Total Credit Hours:** 12.0

**Fifth Year Spring**

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**Total Credit Hours:** 12.0

* A minimum of one advanced elective is required. Since different electives vary in credit hours, research credit hours for a given semester should be adjusted in order to maintain a total of 12 credit hours for the semester. A menu of relevant electives from which courses may be selected is shown below. However, students may select, following approval of the student’s supervising professor and discipline executive committee, any accredited course offered by any program at UT Health SA.

### Relevant Electives

**Primary Suggestions**

- **MICR 5035** Emerging Trends in Immunology and Infection 2
- **MICR 5095** Current Topics in Immunobiology and Host-microbe Interactions 1

**Secondary Suggestions**

- **BIOC 6010** Gene Expression and Omics 2
- **BIOC 6033** Cell Signaling Mechanisms 2
- **BIOC 6036** Macromolecular Structure & Mechanism 2
- **BIOC 6037** Integration Of Metabolic Pathways 2
- **BIOC 6043** Structure & Function Of Membrane Proteins 2

- **CSAT 5007** Methods In Cell Biology 1
- **CSAT 5024** RNA Biology and Genomics (Spring semester only) 1
- **CSAT 5023** Development (Spring semester only) 1
- **CSAT 5025** Genetics (Spring semester only) 1
- **CSAT 5083** Practical Optical Microscopy 1
- **CSAT 6005** Rigor & Reproducibility 1
Neuroscience
Sample Plan of Study

First Year
Fall

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First Year
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Second Year
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Third Year
Fall

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Third Year
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** A minimum of 2 semesters of IBMS 7099-5MIM (Dissertation) is required for graduation. A student may begin enrolling in IBMS 7099-5MIM once the Dissertation Research Proposal and the Dissertation Supervising Committee membership are approval by the GSBS Dean. Final hours (3.0 SCH) may be applicable for the final semester.
Advanced Electives * variable

Total Credit Hours: 12.0

**Recommended Electives**

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<td>Gene Expression and Omics</td>
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<td>Cell Signaling Mechanisms</td>
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<td>0.5-9</td>
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<tr>
<td>PHAR 5091</td>
<td>Special Topics: Microelectives (2 Ion Channelopathies in Neurological Diseases)</td>
<td>0.5-9</td>
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<td>Special Topics: Microelectives (8 Neural Substrates of Regulated Behaviors)</td>
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<tr>
<td>PHAR 6005</td>
<td>Drugs in Society</td>
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<tr>
<td>PHAR 6025</td>
<td>Molecular Pharmacology</td>
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<td>Selected Topics Of Physiology</td>
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<td>Selected Topics Of Physiology (2 Calcium Signaling)</td>
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<td>PHYL 6091</td>
<td>Selected Topics Of Physiology (3 Cell Biology in Neural Science)</td>
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<td>PHYL 6091</td>
<td>Selected Topics Of Physiology (7 Ion Channels in Disease)</td>
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</table>

* Recommended electives are shown below (minimum of 4 credit hours required prior to graduation). However, alternate electives can also be selected from any accredited courses offered at UT Health SA, but must be approved by the student’s discipline director and the student’s supervising professor. Research hours and elective credit hours can be adjusted as needed to maintain a total of 12 credit hours each semester.

§ If additional laboratory rotations are required, research credit hours may be reduced accordingly in order to maintain a total of 12.0 SCH for the semester.
### Physiology & Pharmacology

#### Sample Plan of Study

**First Year**

<table>
<thead>
<tr>
<th>Semester</th>
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<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Fall</td>
<td>IBMS 5000</td>
<td>Fundamentals Of Biomedical Sciences</td>
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<td>IBMS 5008</td>
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<td>TSCI 5070</td>
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**Credit Hours:** 13.0

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<tbody>
<tr>
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<td>Experimental Design And Data Analysis</td>
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<td>Seminar (Class Section 8PP)</td>
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<td>Spring</td>
<td>IBMS 6097</td>
<td>Research (Class Section 8PP)</td>
<td>3.5</td>
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<tr>
<td>Spring</td>
<td>IBMS 7010</td>
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<td>PHAR 5013</td>
<td>Principles Of Pharmacology &amp; Physiology 1</td>
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**Elective Courses:** variable

**Total Credit Hours:** 12.0

**Second Year**

<table>
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<td>Research (Class Section 8PP)</td>
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<td>Fall</td>
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<td>Student Journal Club &amp; Research Presentation (Class Section 8PP)</td>
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<td>PHAR 5020</td>
<td>Basics Of Research Design</td>
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<td>Special Problems In Pharmacology: Research Practicum</td>
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<td>Drug Discovery and Development</td>
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**Elective Courses:** variable

**Total Credit Hours:** 12.0

**Third Year**

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<td>Fall</td>
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<td>Seminar (Class Section 8PP)</td>
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<tr>
<td>Fall</td>
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<td>Research (Class Section 8PP)</td>
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<td>Spring</td>
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**Total Credit Hours:** 12.0

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<td>Seminar (Class Section 8PP)</td>
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<tr>
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<tr>
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<td>IBMS 7010</td>
<td>Student Journal Club &amp; Research Presentation (Class Section 8PP)</td>
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**Total Credit Hours:** 12.0

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<tr>
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<td>Fall</td>
<td>IBMS 6097</td>
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<td>Fall</td>
<td>IBMS 7010</td>
<td>Student Journal Club &amp; Research Presentation (Class Section 8PP)</td>
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**Total Credit Hours:** 12.0

**Fifth Year**

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<td>Fall</td>
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<td>Student Journal Club &amp; Research Presentation (Class Section 8PP)</td>
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<td>Fall</td>
<td>IBMS 6090</td>
<td>Seminar (Class Section 8PP)</td>
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<td>Fall</td>
<td>IBMS 6097</td>
<td>Research (Class Section 8PP)</td>
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<tr>
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<td>Fall</td>
<td>IBMS 6090</td>
<td>Seminar (Class Section 8PP)</td>
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<td>Fall</td>
<td>IBMS 6097</td>
<td>Research (Class Section 8PP)</td>
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<tr>
<td>Fall</td>
<td>IBMS 7009</td>
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The University of Texas Health Science Center at San Antonio

Eighth Year

Spring

IBMS 6090 Seminar (Class Section 8PP) 1.5
IBMS 6097 Research (Class Section 8PP) 6.5
IBMS 7010 Student Journal Club & Research Presentation (Class Section 8PP) 1.0
IBMS 7099 Dissertation (Class Section 8PP) ** 3.0

Total Credit Hours: 12.0

If additional laboratory rotations are required, research credit hours may be reduced accordingly in order to maintain a total of 12.0 SCH for the semester.

* Since different electives vary in credit hours, research credit hours for a given semester should be adjusted in order to maintain a total of 12 credit hours for the semester. Students must enroll in a minimum of 4 credit hours of electives to graduate. The menu of PHYS/PHARM electives from which courses are typically selected is shown below. However, students may select, following approval of the student’s supervising professor and discipline executive committee, any accredited course offered by any program at UT Health SA.

Suggested elective options include:

INTD 5040 Fundamentals Of Neuroscience1: Molecular, Cellular, & Developmental Neuroscience 2
INTD 5043 Fundamentals Of Neuroscience 2: Systems Neuroscience 3
INTD 7074 Topics In Translational Medical Product Development 1
PHAR 5091 Special Topics: Microelectives (Seminar-style specialized courses) 0.5-9
PHAR 5091 Special Topics: Microelectives (1 Monoaminergic Neurotransmission and Transporters) 0.5-9
PHAR 5091 Special Topics: Microelectives (2 Drug Discovery: Nuts & Bolts) 0.5-9
PHAR 5091 Special Topics: Microelectives (3 Historical Perspectives of Receptor Theory) 0.5-9
PHAR 5091 Special Topics: Microelectives (8 Neural Substrates of Regulated Behaviors) 0.5-9
PHAR 5091 Special Topics: Microelectives (11 Fundamentals of Behavioral Pharmacology) 0.5-9
PHAR 6027 Fundamentals Of Neuroethics 1
PHAR 7002 Bridging The Gap From Bench To Bedside: Pharmacology Clinical Practicum 1
PHAR 7003 Electrophysiology In Neuroscience Research 1
PHYL 5030 Biology of Pain 2
PHYL 5041 Excitable Membranes 1
PHYL 6091 Selected Topics Of Physiology 2
PHYL 6091 Selected Topics Of Physiology (2 Calcium Signaling) 2
PHYL 6091 Selected Topics Of Physiology (3 Cell Biology in Neural Science) 2
BIOC 5091 Special Topics In Biochemistry: Hydrodynamic Methods 1
BIOC 6010 Gene Expression and Omics 2
BIOC 6033 Cell Signaling Mechanisms 2
BIOC 6035 Drug Design And Discovery 2
BIOC 6043 Structure & Function Of Membrane Proteins 2
CSAT 6048 Biology of Aging 4
CSAT 6021 Animal Models 3
CSAT 6064 Genes & Development 4

We will offer the following modules as electives for other disciplines:

PHAR 5021 Autonomic Control & Therapeutics 0.5
PHAR 5018 Cardiovascular, Renal and Respiratory Physiology and Therapeutics 2
PHAR 5019 Metabolism, Hormones, GI Physiology and Therapeutics 2

** A minimum of 2 semesters of IBMS 7099-8PP (Dissertation) is required for graduation. A student may begin enrolling in IBMS 7099-8PP once the Dissertation Research Proposal and the Dissertation Supervising Committee membership are approval by the GSBS Dean. Final hours (3.0 SCH) may be applicable for the final semester.

Master of Science in Medical Health Physics

The Master of Science in Medical Health Physics degree program trains students to: (1) administer radiation protection programs; (2) monitor ionizing radiation exposure of workers, providers, patients, and visitors to the facility; (3) establish radiation safety procedures; and (4) evaluate the compliance of a medical facility with state and federal radiation safety regulations. Students also are trained to anticipate, recognize, evaluate and control the potential hazards of non-ionizing radiation including microwaves and laser-emitting equipment. In addition, students are prepared to teach courses in radiation physics and biology and to review research projects involving radiation work of various scientific disciplines.

The curriculum provides an opportunity for students to acquire a core of fundamental knowledge through a synergistic program of formal courses, seminars, teaching opportunities, and hands-on research experience. Each student is encouraged to design, with the assistance of a research advisor, an individual course of study consistent with their professional career goals.
Admissions Requirements
Graduate Record Exam (GRE) general test and a minimum GPA of 3.0/4.0 are required. Three letters of recommendation are required. During the application process, essays stating (1) the reasons for your interest in Medical Health Physics, (2) description of professional goals and (3) an outline of your undergraduate, industrial or summer research, as well as teaching experience and clinical experience are required.

Students accepted into the CAMPEP-accredited (www.campep.org (http://www.campep.org)), M.S. in Medical Health Physics degree program shall have acquired a strong foundation in basic Physics. This should be documented by either an undergraduate degree in physics or a degree in a related engineering or physical science with coursework that is equivalent to a minor in Physics (includes at least three upper level undergraduate physics courses). Applicants also must have undergraduate credit for the following courses: 1) Biology: Two semesters of general biology; 2) Chemistry: Two semesters of general chemistry; 3) Mathematics: Through calculus and ordinary differential equations; 4) Computer Science: Introduction to Computer Science (one semester). The program requires a bachelor’s degree in natural science or engineering. The admission process includes review of academic history as well as experience and goals of applicant. Telephone and on-campus interviews are conducted for qualified applicants selected by the Admissions Committee. International applicants must meet all international applicant requirements (https://www.uthscsa.edu/academics/biomedical-sciences/admissions/international-applicants).

Degree Requirements
A minimum of 30 credit hours and a minimum overall GPA of 3.0 is required for the M.S. degree. In addition, all master's candidates must register for Thesis for at least one semester in order to graduate. The student must successfully defend a thesis and be recommended by their program COGS for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.

Plan of Study
First Year
Fall

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RADI 5001</td>
<td>Basic Radiation Safety</td>
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<tr>
<td>RADI 5005</td>
<td>Fundamentals Of Radiation Dosimetry</td>
<td>3</td>
</tr>
<tr>
<td>RADI 5015</td>
<td>Physics Of Diagnostic Imaging 1</td>
<td>3</td>
</tr>
<tr>
<td>RADI 6030</td>
<td>Physics Of Radiotherapy</td>
<td>3</td>
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<tr>
<td>RADI 6049</td>
<td>Intro To Magnetic Resonance</td>
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First Year
Spring

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<td>Statistics in the Radiological Sciences</td>
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<td>Principles of Health Physics 1</td>
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<td>RADI 5090</td>
<td>Radiological Sciences Seminar</td>
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<td>RADI 6012</td>
<td>Phys Nuclear Medi Imaging</td>
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<td>RADI 6024</td>
<td>Radiological Anatomy &amp; Physiology</td>
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Second Year
Fall

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<th>Course Title</th>
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<tr>
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<td>Molecular Oncology &amp; Radiobiology</td>
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<tr>
<td>RADI 6021</td>
<td>Prin/Health Physics 2</td>
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<tr>
<td>RADI 6097</td>
<td>Research</td>
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<td>TSCI 5070</td>
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<td>Radiological Sciences Seminar</td>
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Second Year
Spring

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<th>Course Title</th>
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<td>Physics Measurements In Imaging Lab</td>
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<td>RADI 6098</td>
<td>Thesis</td>
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</table>

Objectives/Program Outcomes
1. Proficiency in Core Biomedical and Medical Health Physics Principles
2. Capacity to Conduct Biomedical Research
3. Critically Review and Interpret Research Literature
4. Demonstrate Competence in Written Communication
5. Demonstrate Competence in Verbal Communication
6. Conduct Research in an Ethical Manner

Medical Physics
The Doctorate of Medical Physics (D.M.P.) program aims to enhance and standardize clinical training for medical physicists. Whereas the medical physics Ph.D. program offered at the Health Science Center prepares the students for a research career in medical physics, the D.M.P. is a professional degree that prepares the students for a clinical career in either imaging or therapeutic medical physics. This four year degree program is similar in structure to other professional degrees, such as the M.D., D.D.S., D.V.M., in that it combines a didactic and clinical training curriculum throughout the four years of studies. A student is admitted to either the imaging or the therapy track and must remain in that track for the duration of their studies.

This is an interdisciplinary program that is housed in the Graduate School and is administered through the Departments of Radiation Oncology and Radiology, with faculty from both departments contributing to the didactic and clinical training. The program is accredited by the Commission on Accreditation of Medical Physics Education Programs (CAMPEP).

Admissions Requirements
Graduate Record Exam (GRE) general test and a minimum GPA of 3.0/4.0 are required. Three letters of recommendation are required. During the application process, essays stating the reasons for your interest in medical physics, description of professional goals and an outline of your undergraduate, industrial or summer research, teaching experience and clinical experience are required.

A Baccalaureate degree in a natural science or engineering discipline is required. A degree in any other field must include sufficient science and
mathematics courses to give the applicant the equivalent of a degree in natural science or engineering. Applicants must have undergraduate credit for the following courses: 1) Biology: One semester of general biology; 2) Chemistry: One semester of general chemistry; 3) One semester of Human Anatomy OR Physiology; 4) Physics: Include at a minimum Modern Physics, Modern Physics Lab, Electricity & Magnetism, Classical Mechanics, and Quantum Mechanics; 5) Mathematics: Through calculus and ordinary differential equations; 6) Computer Science: Introduction to Computer Science (one semester). Admission process includes review of academic history as well as experience and goals of the applicant. Telephone and on-campus interviews are conducted for qualified applicants that are selected by the Admissions Committee.

**Degree Requirements**

A minimum of 98 credit hours (48 of which are clinical rotations) and a minimum overall GPA of 3.0 are required for the D.M.P. degree. The student is required to demonstrate intellectual command of the subject area and proficiency in all aspects of their chosen clinical specialization. A Core Knowledge Exam (CKE) shall be scheduled for all first year DMP students. The students have two opportunities to take and pass the CKE before the start of the second year. Failure to pass is an automatic dismissal from the program.

**D.M.P. - Therapy Track**

**First Year**

**Fall**

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<th>Course Title</th>
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<td>Physics Of Diagnostic Imaging 1</td>
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<td>Physics Of Radiotherapy</td>
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<td>RADI 5005</td>
<td>Fundamentals Of Radiation Dosimetry</td>
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<td>RADI 6023</td>
<td>Introduction To Clinical Medical Physics Practice</td>
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<td>RADI 6049</td>
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**Spring**

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<td>RADI 5020</td>
<td>Principles of Health Physics 1</td>
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<td>RADI 6012</td>
<td>Phys Nuclear Medi Imaging</td>
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<tr>
<td>RADI 6023</td>
<td>Introduction To Clinical Medical Physics Practice</td>
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<td>Radiological Anatomy &amp; Physiology</td>
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**Second Year**

**Fall**

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<td>RADI 7005</td>
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**Spring**

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**Third Year**

**Fall**

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**Fourth Year**

**Fall**

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**D.M.P. - Imaging Track**

**First Year**

**Fall**

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<td>Physics Of Radiotherapy</td>
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<td>Fundamentals Of Radiation Dosimetry</td>
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<td>RADI 6023</td>
<td>Introduction To Clinical Medical Physics Practice</td>
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<td>RADI 6049</td>
<td>Intro To Magnetic Resonance</td>
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<td>Principles of Health Physics 1</td>
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**Second Year**

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**Fourth Year**

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### Objectives/Program Outcomes

1. Proficiency in core biomedical and radiological science principles
2. Critically review and interpret literature on clinical research in your chosen study discipline
3. Conduct clinical research in an ethical manner
4. Demonstrate competence in written communication
5. Demonstrate competence in verbal communication
6. Demonstrate competence as a clinician in your chosen study discipline

### Microbiology and Immunology

*IMPORTANT Note About the Doctor of Philosophy in Microbiology and Immunology Degree*

This program is no longer accepting students at this time as this field of study is now a discipline within the new Integrated Biomedical Sciences (IBMS) Program. All information in this section of the Catalog is for the current Microbiology and Immunology students only.

The graduate program in Microbiology focuses on microbial infection, host responses to infection, and other aspects of the immune system in health and disease. The track faculty members apply state-of-the-art experimental approaches, including genomics, proteomics and bioinformatics, as well as other genetic, biochemical, cellular and functional assays to study the regulation, host interactions and pathogenesis of viral, bacterial, fungal, and parasitic infections. In addition to mechanisms of host interactions with microorganisms, responses to allergens, tumor, and self-antigens are also investigated at the molecular, cellular and systemic levels. Students will have the opportunity to gain the broad knowledge and skills necessary for future research careers in many different areas of basic and clinical life sciences, including Microbial Genetics, Physiology and Pathogenesis, Infectious Diseases, Immune Regulation, Vaccinology, Tumor Immunology, Autoimmunity and Allergy.

### Doctor of Philosophy (Ph.D.)

*IMPORTANT Note About the Doctor of Philosophy in Microbiology and Immunology Degree*

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### Microbiology and Immunology Degree Requirements

A minimum of 72 credit hours and a minimum overall GPA of 3.0 is required for the Ph.D. degree. In addition, all doctoral candidates must register for the MICR 7099 Dissertation for at least two semesters in
order to graduate. The student is required to demonstrate intellectual command of the subject area of the graduate program and capability to carry out independent and original investigation in the area. The student must successfully defend a dissertation and be recommended by their program COGS for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.

**M&I - Plan of Study (Course Curriculum Timeline)**

**First Year**

<table>
<thead>
<tr>
<th>Fall</th>
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<tbody>
<tr>
<td>IBMS 5000 Fundamentals Of Biomedical Sciences</td>
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<td>IBMS 5008 Lab Rotations</td>
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<tr>
<td>Journal Club (any track)</td>
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<td>Attend weekly research seminars (any track once/week)</td>
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**First Year**

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<tr>
<td>MICR 5003 Core Concepts In Microbiology &amp; Immunology</td>
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<tr>
<td>MICR 5029 Building Scientific Thinking Skills</td>
<td>2</td>
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<td>INTD 6002 Ethics In Research</td>
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<td>IBMS 5008 Lab Rotations</td>
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<td>MICR 6091 Seminars In Microbiology &amp; Immunology</td>
<td>1</td>
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<td>MICR 6097 Research</td>
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**Third Year**

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<tr>
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<td>MICR 5030 Microbiology And Immunology Track Journal Clubs</td>
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<td>MICR 6091 Seminars In Microbiology &amp; Immunology</td>
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**Fourth Year**

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**Microbiology and Immunology Objectives/ Program Outcomes**

1. Students will be able to demonstrate proficiency in core (general) principles of the biomedical sciences and in principles specific to the discipline of microbiology/immunology.
2. The student will be able to conduct biomedical research.
3. Students will be able to demonstrate competence in written and verbal communication.
4. Students will be able to critically read and evaluate the biomedical literature.
5. Students will have a fundamental knowledge of ethics in research.
6. Students will complete dissertation research, and write and successfully defend their dissertation.

**Master of Science (M.S.)**

*Note:* The Microbiology and Immunology Track Graduate Program is sunsetting and therefore no longer admitting new students. See the Graduate School of Biomedical Sciences, **Molecular Immunology & Microbiology** Discipline of the IBMS Graduate Program.

The graduate program in Microbiology focuses on microbial infection, host responses to infection, and other aspects of the immune system in health and disease. The track faculty members apply state-of-the-art experimental approaches, including genomics, proteomics and bioinformatics, as well as other genetic, biochemical, cellular
and functional assays to study the regulation, host interactions and pathogenesis of viral, bacterial, fungal, and parasitic infections. In addition to mechanisms of host interactions with microorganisms, responses to allergens, tumor, and self-antigens are also investigated at the molecular, cellular and systemic levels. Students will have the opportunity to gain the broad knowledge and skills necessary for future research careers in many different areas of basic and clinical life sciences, including Microbial Genetics, Physiology and Pathogenesis, Infectious Diseases, Immune Regulation, Vaccinology, Tumor Immunology, Autoimmunity and Allergy.

Microbiology and Immunology Admissions Requirements

Applicants are required to have a minimum of a Bachelor’s degree from an accredited institution and a minimum GPA of 3.0/4.0. Applicants should have received credit for courses taken in:

- Biology 1 2 yrs. as required for science majors
- Chemistry 1 1 yr. general chemistry and organic chemistry
- Physics 1 yr.
- Mathematics minimum of 1 semester of calculus

1 courses should include laboratory experience

All applicants must take the Graduate Record Examination (GRE). The GRE must be taken within the last 5 years and the TOEFL within the last 2 years. There is no minimum score required for the GRE.

In addition to the GRE, international applicants are also required to take one of two English proficiency tests: Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS; Academic module only). The minimum required scores for the TOEFL are 560 for the paper test and 68 for the internet test. The minimum score on the academic IELTS is 6.5.

At least three letters of recommendation and a personal interview are required. The applicant must submit 3 essays stating the reasons for your interest in the program, a description of your professional goals and an outline of your undergraduate, industrial or summer research.

The admission committee makes its decision based on the candidate’s research experience, grade point average, personal statement, GRE score, interviews, letters of recommendation, and how the candidate matches up against other interested applicants.

Microbiology and Immunology Degree Requirements

A minimum of 30 credit hours and a minimum overall GPA of 3.0 is required for the M.S. degree. In addition, all master’s candidates must register for MICR 6098 Thesis for at least one semester in order to graduate. The student must successfully defend a thesis and be recommended by their program COGS for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.

The following M.S. Plan of Study is basically the same as for the Ph.D. program. The main differences are the length of the program, and the Thesis requirement rather than Dissertation. Another difference, not shown, is that there is no Qualifying Examination requirement for the M.S. degree.

Microbiology and Immunology Plan of Study

**M&I Track - Plan of Study (Course Curriculum Timeline)**

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MICR 6098  Thesis  1-12

Total Credit Hours:  4.5-26.5

Third Year
Spring

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<td>MICR 6098</td>
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Total Credit Hours:  4.5-26.5

Microbiology and Immunology Objectives/ Program Outcomes
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5. Students will have a fundamental knowledge of ethics in research.
6. Students will complete thesis research, and write and successfully defend their thesis.

Nursing Science
The Doctor of Philosophy (Ph.D.) in Nursing prepares students for careers as clinical nurse scientists and faculty. Admission into the program is only offered once a year, with an application deadline of April 1st for students to begin classes in Fall. Admission can occur at the Post-BSN or Post-MSN levels. The Ph.D. program is rooted in foundations of theory and research with the expectation of students to become teachers and disseminators of knowledge in the field of Nursing.

Ph.D. Admissions Requirements
Program Length: 3 – 6 Years

Admissions Requirements:
To be considered for admission to the Doctor of Philosophy in Nursing Program the following factors are required:

- NursingCAS application fee
- Bachelors in Nursing and/or Masters in Nursing from a nationally accredited school of nursing (NLNAC, CCNE)
- Submit official transcript(s) from each post-secondary institution attended, even if no degree awarded, to NursingCAS. International transcripts must be evaluated by an accredited foreign credential service. *For more information regarding international applicant requirements, click here (http://nursing.uthscsa.edu/students/intApplicants.asp).
- Grade Point Average of “B” (3.0 on a 4.0 scale) or higher on the student’s last 60 hours of credit
- Must meet the TOEFL/IELTS requirements of the Graduate School of Biomedical Sciences (https://www.uthscsa.edu/academics/biomedical-sciences/admissions/international-applicants).
- Licensure as a Registered Nurse in Texas or Compact State.
- Current BLS for Healthcare Providers Certification through the American Heart Association.
- Current Required Immunizations (http://shc.uthscsa.edu)
- Proof of Current Health Insurance Coverage (http://students.uthscsa.edu/studentlife/2013/03/health-insurance)
- Clear Criminal Background Check
- Three Professional References (Submit via NursingCAS Application)
- Official results from the GRE exam taken within the last 5 years should indicate strong verbal, quantitative and analytic potential.
- Current resume or curriculum vita
- School of Nursing application fee
- Interview and Admission Essay

Application Deadline: Deadline for fall entrance is April 1 (Ph.D. applications are accepted only once each year)

Start Term: Fall

Contact:
Office of Admissions
School of Nursing
UT Health Science Center at San Antonio
7703 Floyd Curl Drive, MSC 7945
San Antonio, Texas 78229-3900
Phone: 210-567-0341
Toll Free: 877-235-0341
FAX 210-567-6189
http://nursing.uthscsa.edu/

Ph.D. Degree Requirements and Graduation
Students may enter the Ph.D. program post baccalaureate degree in nursing or post master’s degree in nursing.

Full-time and part-time study options are available. Part-time study for doctoral students is defined as six semester credit hours or two courses in the Fall and Spring semesters and one course in the Summer semester. Full-time study for doctoral students is defined as nine semester credit hours or three courses in the Fall and Spring semesters and two courses in the Summer semester.

Students complete a minimum of 81 semester credit hours (which includes previous graduate course work) in three to six years.

All policies of the Graduate School of Biomedical Sciences http://gsbs.uthscsa.edu are applicable to this program of study.

Ph.D. Nursing Science Plan of Study
Post-BSN to Ph.D. Full-Time
<table>
<thead>
<tr>
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### Third Year

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### Fourth Year

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### Fifth Year

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* Part time plan of study varies for the BSN to Ph.D., please contact department

§ 9 hours of Cognate courses must be completed prior to or during the same term as Qualifying Exams

### Post-MSN to Ph.D. Full-Time

#### First Year

#### Fall Semester

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### First Year

#### Spring Semester

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<td>0.0</td>
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</tbody>
</table>

§ 6 hours of Cognate courses must be completed prior to or during the same term as Qualifying Exams

**Ph.D. Program Outcomes**

At the completion of the doctoral program the student will:

1. Advance the discipline of nursing through the generation of new knowledge and theory.
2. Demonstrate excellence as a clinical researcher in the health sciences in a focal area of nursing.
3. Synthesize theories from natural and/or behavioral sciences for application to a specific area of nursing.
5. Assume nurse scientist roles within academic health centers and other interdisciplinary health sciences and educational institutions.
6. Evaluate the value and knowledge components of philosophical and ethical dimensions of issues confronting healthcare and nursing.

The Ph.D. in Nursing program is offered by UT Health San Antonio School of Nursing (SON). The Ph.D. degree is awarded by UT Health San Antonio Graduate School of Biomedical Sciences.

**Ph.D. Program Policies**

**General Information**

Information about academic progression, policies, or procedures, as well as curriculum information, may be obtained from the Office for Academic Affairs.

**Current Licensure as a Registered Nurse**

Each graduate nursing student is required to maintain current licensure in good standing as a registered nurse in Texas, or a Compact State with multistate privileges, throughout the graduate program. Students must provide a copy of the license verification to the Office for Academic Affairs. Failure to maintain a current license in good standing or to
produce proof of current licensure in good standing is grounds for dismissal from the program.

**Advisement**
Each student enrolled in the graduate program is assigned an advisor in the Office for Academic Affairs.

**Dissertation**
The Graduate School Instructions for Preparation and Submission of Thesis, Dissertations, and Dissertation Abstracts and forms for advisor approval are available from the GSBS website. Doctoral students should obtain a copy of the Guidelines that provide information about the dissertation process.

**Teaching Assistants**
Opportunities are available for graduate nursing students enrolled part-time to work as teaching assistants in the School of Nursing. Interested applicants should contact the Office for Academic Affairs in the School of Nursing for additional information.

**Transfer of Credit**
Academic work for the Ph.D. in Nursing are usually completed within the Health Science Center. However, students may, with the approval of the Committee on Graduate Studies (COGS), transfer from another accredited institution a maximum of six semester credit hours (9 quarter hours) of graduate credit applicable to their course of study leading toward the Ph.D. in Nursing degree.

Approval of transfer credit requires that the student be enrolled in the graduate program. The student must complete a Request for Transfer of Credit form and submit it to the Office for Academic Affairs with an official transcript from the college or university attended, is in her/his file or request that a transcript be sent as soon as the course is completed. All courses must have been completed not more than five years before the degree is awarded. Courses in which a grade of C or less has been earned will not be accepted for transfer. The student may obtain additional information about materials that must be submitted with the petition from the Office for Academic Affairs.

**Honors**
A graduate nursing student whose grade point average is 4.0 is awarded her/his degree with High Honors.

**Grades and Grade Point Average**
The standing of students in their work is expressed by five grades: A (above average graduate work), B (average graduate work), C (below average graduate work), D (failing graduate work), and F (failing graduate work). D and F grades are not acceptable for graduate credit. Students may also register in certain courses on a pass/fail basis, in which case the grade is recorded as either Pass (P) or Fail (F) and no letter grade is assigned.

Other symbols used in reporting the standing of students in their classes are: W=withdraw; I=incomplete; IP=in progress (for selected courses); S=satisfactory; U=unsatisfactory; P=pass; NP=no pass; AU records an audited course. U and NP are equivalent to a grade of F.

Courses in which a student receives a D, F, U, or NP will not be counted toward the total number of courses and/or hours required for a graduate degree in the School of Nursing or the Graduate School of Biomedical Sciences. However, all grades (A to F) are included in the computation of the grade point average. In computing the grade point average, the following scale of points per semester credit hour is used:

- A = 4 points (90-100)
- B = 3 points (80-89)
- C = 2 points (75-79)
- D = 1 point (66-74)
- F = 0 points (65 or below)

Note: Final numeric grades are calculated to two decimal places and rounded mathematically as follows:

- Less than 0.50 – Round down to next whole number – (i.e. “89.49” would be rounded to “89”)
- 0.50 or greater – Round up to next whole number – (i.e. “90.50” would be rounded to “91”)

**Progression in the Graduate Program**
To continue in the PhD program, a student must:

- absolve any contingencies related to admission to the program within the time period stated in the letter of admission, or within the first semester if not stated;
- maintain satisfactory progress (B average in first 9 hours) if conditionally admitted;
- receive no more than one C in any course;
- maintain a minimum cumulative grade point average of B (3.0) for all courses taken while enrolled in the graduate program.

Should a student fail to meet the criteria for continuance in the program, her/his progress will be reviewed by the Committee on Graduate Studies (COGS) which may:

- impose conditions as requirements for continuation in the program, or
- terminate the student's enrollment in the program, with the consent of the Dean of the School of Nursing or the Dean of the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu).

**Scholastic Probation**
A student whose cumulative grade point average falls below 3.0 will be placed on probation and warned that continuation in the graduate program is in jeopardy.

The progress of students on scholastic probation will be reviewed by the Committee on Graduate Studies (COGS) each semester. A student on scholastic probation will not be admitted to candidacy nor awarded a degree. Satisfactory progress toward the degree is required throughout the student's enrollment. The Committee on Graduate Studies (COGS) may terminate a student's enrollment at any time if the student does not meet the criteria for continuance in the program.

**Probation Policy and Procedure**
1. Definition: Probation is the status of the student whose progress in the program may be delayed, interrupted or conditional due to the criteria listed below.
2. Criteria for Probation in the Nursing Program includes any one of the following:
3. Probation Procedure

a. Initial Review of Recommendation for Probation
   i. A student whom receives a final grade of C in a course will be notified of his/her probation status by the Office for Academic Affairs
   ii. The student may present his/her case to the Associate Dean for Graduate Studies, if requested in writing, within 3 business days of notification of the probation recommendation. If the student wishes to bring a person outside of the School of Nursing to the meeting, he/she must indicate this in the request to the Associate Dean for Graduate Studies. If the person attending the meeting with the student is an attorney, the meeting will be held with the University attorney present.

b. If a student is in validation of the criteria for probation one or more of the following actions will occur:
   i. Earning a grade of C or a grade that drops the GPA below 3.0
      1. A written "Probation Letter of Expectation" that determines the length and conditions of the probation period which may include, but are not limited, any one of the following:
         • Referral of the student to resources and support services for academic success
         • Referral of the student to the faculty to devise a written plan for academic success
         • Referral of the student to the Associate Dean for Admissions and Student Services for non-academic support
   ii. Failure to meet School of Nursing Policies or failure to meet the terms of professional integrity standards defined in the current University Catalog, the Texas State Board of Nursing Nurse Practice Act (http://www.bon.texas.gov/laws_and_rules_nursing_practice_act.asp), the Texas State Board of Nursing Rules and Regulations (http://www.bon.texas.gov/laws_and_rules_rules_and_regulations.asp) and the American Nurses Association Code of Ethics (http://www.nursingworld.org/MainMenuCategories/EthicsStandards/CodeofEthicsforNurses).

3. Dismissal Policy and Procedure

1. Definition: Dismissal is the removal of a student from the School of Nursing Graduate Program. A student who is dismissed from the graduate program may not continue in the graduate nursing program and is not eligible for readmission.

2. Criteria for Dismissal from the Graduate Nursing Program includes any one of the following:
   a. Earning a grade of D, F, NP, U, or Fail in any required graduate course
   b. Earning a grade of C in 6 or more credit hours of required graduate coursework regardless of cumulative GPA or in two graduate courses regardless of the number of credit hours and cumulative GPA
   c. Failure to meet the conditions of the School of Nursing "Probation Letter of Expectation"
   d. Failure to meet the terms of professional integrity and ethical standards defined in the current University Catalog, the Texas State Board of Nursing Nurse Practice Act (http://www.bon.texas.gov/laws_and_rules_nursing_practice_act.asp), the Texas State Board of Nursing Rules and Regulations (http://www.bon.texas.gov/laws_and_rules_rules_and_regulations.asp) and the American Nurses Association Code of Ethics (http://www.nursingworld.org/MainMenuCategories/EthicsStandards/CodeofEthicsforNurses). When indicated, the incident will be reported to the local law enforcement agency and/or other appropriate agencies, institutions, and/or regulatory bodies.
   e. Failure to notify the school of non-matriculation for two consecutive semesters (excluding summers)

3. Dismissal Procedure

a. A student whom receives a grade of D, F, NP, U, or Fail in a course will be notified of his/her dismissal status by the Office for Academic Affairs.

b. When a student meets criteria in provision 2 above, he or she will be dismissed from his or her program. The student will receive notification of dismissal via a certified letter from the Dean of the Graduate School of Biomedical Sciences. A copy of the letter will be sent to the Dean and the Associate Dean of Graduate Studies of the School of Nursing, placed in the student's file in the Office for Academic Affairs and sent to the Registrar for the student’s permanent record. The Associate Dean for Graduate Studies has full authority to proceed autonomously according to policy, but may choose to seek input from the Committee on Graduate Studies (COGS).

c. A student who is dismissed from his or her program is not eligible to register for additional courses. If the student has already registered for subsequent courses, the student will be required to unenroll.

4. Student Appeal of Dismissal

a. In the event of extenuating circumstances, a student may choose to appeal dismissal from his or her program. All appeals are presented to and reviewed by the Committee on Graduate Studies (COGS).
i. A request for appeal of dismissal and presentation to COGS must be sent by the student in writing to the Associate Dean for Graduate Studies within 3 business days of receiving the certified letter of dismissal. The student must indicate in the request if he or she wishes to bring a person outside of the School of Nursing to the meeting. If the person attending the meeting with the student is an attorney, the meeting will be held with the University attorney present. The student may also request to bring other appropriate faculty to the meeting with COGS. The Committee on Graduate Studies may request University employees or supervising clinical agency personnel attend the appeal or meet with them prior to deliberating. A review of the student’s records may also be conducted.

ii. The Associate Dean for Graduate Studies will notify the student, in writing via email, that his or her case will be presented to the Committee on Graduate Studies. The written communication will include the date and time of the presentation. Student presentations are limited to a maximum of 15 minutes.

b. After the student presentation is concluded, and any additional information deemed appropriate to the situation is obtained, the Committee on Graduate Studies will review all information related to the criteria set forth in provision 2 for adherence to process and outcome actions. The faculty voting members of the Committee on Graduate Studies, in closed deliberation with the Associate Dean for Graduate Studies can recommend one or more of the following actions:

i. Uphold the decision to dismiss the student from the School of Nursing Graduate Program.

ii. Amend the dismissal decision to probation in the Graduate Nursing Program per explicit terms and expectations deemed appropriate by COGS and the Associate Dean for Graduate Studies.

iii. Reconsideration of dismissal due to adherence concerns with process; including next steps.

c. A written recommendation from the Chairperson of the Committee on Graduate Studies will be made to the Dean of the Graduate School of Biomedical Sciences. A copy of the recommendation will be sent to the Dean of the School of Nursing.

d. The final decision will be made by the Dean of the Graduate School of Biomedical Sciences and will be delivered to the student in writing by certified letter to the student’s address of record. A student who receives probation in the Graduate Nursing Program is not eligible to re-enroll in courses the semester immediately following the semester in which the student originally met criteria for dismissal. A student who is dismissed from the School of Nursing may not continue in the Graduate Nursing Program and is not eligible for readmission.

Petitions for reconsideration of the decision of COGS are reviewed by the Dean of the Graduate School of Biomedical Sciences. The Dean’s decisions are final.

Repetition of a Course
Students cannot retake nursing courses for a grade in which they have already received a passing grade. Credit for courses in which a D or F is received may not be repeated and is grounds for dismissal as indicated in the dismissal policy.

The Semester Credit Hour
The unit of measure for credit purposes is the semester credit hour. One semester credit hour is given for each one clock hour of class or one clock hour of seminar for didactic courses. Four clock hours per one semester credit hour of laboratory/practicum/computer lab experience per week, per semester is given in the Nurse Practitioner majors, Nursing Education major, Administrative Management and Clinical Nurse Leader majors and all tracks in the DNP Program. For selected sessions and summer sessions during which the class, seminar, and practicum hours are concentrated, equivalent clock hours are provided.

Dissertation Course Report
The dissertation course may be reported as In Progress (IP) until the work is completed. The dissertation course is not counted in the grade point average.

Examinations
Examinations must be taken on the date and time scheduled. If extenuating circumstances prevent the student from taking an examination, prior approval must be granted by the course instructor to postpone the examination. If a student misses an examination without prior approval by the instructor, a grade of F will be recorded for the examination.

Readmission
Individuals who have previously been enrolled in graduate nursing courses should complete an Application for Readmission. Transcripts from any colleges or universities attended since the time of the previous enrollment in the graduate programs must be submitted. Applicants may be requested to provide recent professional references. Proof of current licensure as a registered nurse in Texas is also required.

Individuals who have not registered in three consecutive terms, including summers, must apply for readmission unless they were previously granted official permission for leave of absence. Students who do not return from a leave of absence within the three consecutive terms limit will be withdrawn from the nursing program and will have to apply for admission as a new student.

Those seeking readmission are subject to all requirements, procedures, and acceptance considerations outlined in this Catalog.

Personalized Molecular Medicine
The Master’s program in Personalized Molecular Medicine (PMM) will uniquely position new graduates to join the work force with the skills necessary to participate fully in the next generation of “patient-powered” research and treatment. The PMM program will train students in current personalized medicine approaches as well as teach students the knowledge and skills required to explore molecular medicine pathways that will be targeted in the future to expand and refine personalized treatment strategies. Personalized or Precision Medicine
will be the norm for medicine in the future and the PMM program will ensure that graduates fully engage as active participants in the evolution of this approach to medicine. Students will gain foundational training in biological systems, molecular mechanisms, and cutting edge translational technologies. Training will include next generation molecular technology to devise and implement personalized strategies to prevent and treat human diseases based on individual susceptibilities through the study of complex and integrated biological systems. Students will receive first-hand experience in the use of the latest technologies in next generation sequencing, single cell analysis, computational biology, epigenomics, proteomics, drug design, animal models of human diseases, systems approaches, as well as instruction in “mining” the multitude of human disease databases such as The Cancer Genome Atlas (TCGA). Programmatic faculty members participate actively in systems biology research focused on understanding a range of human disorders including cancer, developmental defects, hormone dysregulation, and metabolic disorders. Students will participate in didactic classroom instruction, team based learning, and hands-on laboratory training with a choice between a Thesis/Research or Course-Based plan of study.

**Application Admissions Deadlines**

Priority Deadline: April 1  
Final Deadline: May 31 (extensions considered on a case-by-case basis)

**Admissions Requirements**

The admission requirements for the Personalized Molecular Medicine (PMM) degree program align with the general requirements of the UTHSCSA Graduate School of Biomedical Sciences. All of the required application information, including Official Transcripts from all institutions attended, must be submitted in order for an applicant to be considered by the PMM program Admissions Committee. In general, students should have a sufficient educational background in the biological or biochemical sciences prior to admission to the program. The following minimal requirements will be applied:

1. A baccalaureate degree from an accredited institution in the United States or proof of an equivalent degree and training at a foreign institution.
2. Required prior coursework: 2 years of biological science for science majors with labs; Organic and inorganic chemistry with labs; 1 semester calculus (exceptions will be considered on a case-by-case basis). Highly recommended: 1 year physics; Analytical chemistry with lab; biochemistry; molecular biology or genetics.
3. Minimal grade point average (GPA): No lower than B (e.g., 3.0 in a 4.0 system).
4. GRE or MCAT: the GRE or MCAT is required, but there is no minimum score. Scores on GRE or MCAT tests taken more than five years prior to the date of application are not acceptable.
5. Minimal TOEFL scores: For applicants from countries where English is not the native language, a minimum score on the Test of English as a Foreign Language (TOEFL) is 560 (paper test), 220 (computer test), or 68 (internet test) is expected.
6. Letters of recommendation (three) attesting to the applicant’s readiness for graduate level studies. These letters should be submitted with the online application to the GSBS.
7. Research experience is not required, but will be considered.

**Degree Requirements**

A minimum of 36 SCH and a minimum overall GPA of 3.0 is required for the M.S. degree. In addition, students must successfully complete all the course requirements. Students choosing the Course Based Plan must pass the final oral examination. Students choosing the Thesis/Research Plan must register for MMED 6098, Thesis, for at least one semester prior to graduation and successfully defend a thesis. All students must be recommended by their program Committee on Graduate Studies (COGS) for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.

**First Year**

First-year students shall take the required PMM courses (Core Curriculum) and choose a degree plan (Course-Based or Thesis/Research Plan). All students will register for Seminars in Molecular Medicine (MMED 6091). Students must enroll for 9 semester credit hours per semester.

- **Course-Based Plan:** Students will complete required courses, research practicum, and practicum reports.
- **Thesis/Research Plan:** In addition to completing the required courses, students will complete two laboratory rotations, and must select a research area of interest and a Thesis/Research Advisor.

**Second Year**

- **Course-Based Plan:** Students will complete additional course requirements as well as the Research Practicum and Practicum Reports. Students may complete additional elective courses as needed to meet final credit hours required for graduation. Students will complete their final oral examination based on course and practicum material.
- **Thesis/Research Plan:** Student will choose a Thesis/Research Committee and gain approval of their research proposal to advance to candidacy. Student will complete their research, write their thesis, and defend their thesis in a final presentation and oral examination.

**Master of Science in Personalized Molecular Medicine - Thesis/Research Plan**

**First Year**

<table>
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<tr>
<th>Fall</th>
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<tr>
<td>MMED 6016 Advanced Molecular, Cellular, and Synthetic Biology</td>
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<td>MMED 5019 Graduate Colloquium In Molecular Medicine</td>
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<td>MMED 6091 Seminars in Molecular Medicine</td>
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<tr>
<td>TSCI 5070 Responsible Conduct of Research</td>
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<tr>
<td>Two Laboratory Rotations</td>
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<tr>
<td>Identification of Research Mentor</td>
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**Total Credit Hours:** 9.0

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<tr>
<td>CSAT 5095 Experimental Design And Data Analysis</td>
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</table>
MMED 5001  Advances in Personalized Medicine  2
MMED 6018  Journal Club and Research Presentation in Molecular Medicine  1
MMED 6097  Research  1.5
Approval of Research Mentor
Start Thesis Work

Total Credit Hours:  9.0

Second Year
Fall
MMED 6091  Seminars in Molecular Medicine  1.5
MMED 5015  Modern Methods in Molecular Analysis  2
MMED 6018  Journal Club and Research Presentation in Molecular Medicine  1
MMED 6097  Research  4.5
Form Thesis Committee
Approval of Research Proposal
Advancement to Candidacy

Total Credit Hours:  9.0

Second Year
Spring
MMED 6091  Seminars in Molecular Medicine  1.5
CSAT 6095  Analysis and Visualization of Genomic Data  2
MMED 6018  Journal Club and Research Presentation in Molecular Medicine  1
MMED 6097  Research  3.5
MMED 6098  Thesis  1
Complete Research
Meet with Committee
Write and Defend Thesis

Total Credit Hours:  9.0

For all semesters, students must enroll for a minimum of 9 semester credit hours (SCH).

Master of Science in Personalized Molecular Medicine - Course Based Plan

First Year
Fall
MMED 6016  Advanced Molecular, Cellular, and Synthetic Biology  4
MMED 5019  Graduate Colloquium In Molecular Medicine  1.5
MMED 6091  Seminars in Molecular Medicine  1.5
TSCI 5070  Responsible Conduct of Research  2

Total Credit Hours:  9.0

First Year
Spring
MMED 6091  Seminars in Molecular Medicine  1.5
CSAT 5095  Experimental Design And Data Analysis  3
MMED 5001  Advances in Personalized Medicine  2
MMED 6018  Journal Club and Research Presentation in Molecular Medicine  1
MMED 5020  Research Practicum  1.5

Total Credit Hours:  9.0

Second Year
Fall
MMED 6091  Seminars in Molecular Medicine  1.5
MMED 5015  Modern Methods in Molecular Analysis  2
MMED 6018  Journal Club and Research Presentation in Molecular Medicine  1
MMED 5020  Research Practicum  4.5
Practicum Report

Total Credit Hours:  9.0

Second Year
Spring
MMED 6091  Seminars in Molecular Medicine  1.5
CSAT 6095  Analysis and Visualization of Genomic Data  2
MMED 6018  Journal Club and Research Presentation in Molecular Medicine  1
MMED 5020  Research Practicum  4.5
Practicum Report
Final Oral Examination

Total Credit Hours:  9.0

For all semesters, students must enroll for a minimum of 9 semester credit hours (SCH).

Students in the Masters program in Personalized Molecular Medicine (PMM) will:

• Show proficiency in fundamental biological principles in personalized molecular medicine.
• Show proficiency in reviewing and interpreting the scientific literature.
• Communicate effectively through scientific writing and verbal presentations.
• Show proficiency in the techniques performed in personalized molecular medicine.
• Show proficiency in conducting independent research (Thesis/ Research Plan).

Pharmacology

*IMPORTANT Note About the Doctor of Philosophy in Pharmacology Degree*

This program is no longer accepting students at this time as this field of study is now a discipline within the new Integrated Biomedical Sciences (IBMS) (http://gsbs.uthscsa.edu/graduate_programs/integrated-
biomedical-sciences) Program. All information in this section of the Catalog is for the current Pharmacology students only.

The discipline of pharmacology explores the mechanisms by which drugs cause biological effects. In the broadest sense, pharmacology is the study of how chemical agents, both natural and synthetic (i.e., drugs) affect biological systems. Research of the member of the Pharmacology track (currently 40 investigators) focuses in the areas of Neuropharmacology, Aging and Neurodegeneration, Autonomic and Endocrine Homeostasis, Pain Disorders, and Cancer Biology. All these areas are explored with an orientation towards drug development.

A wide array of state-of-the-art methodologies including molecular, electrophysiological, neurochemical, genetics, imaging and behavioral techniques are employed. Pharmacology is often described as a bridge science because it incorporates knowledge and skills from a number of basic science disciplines, including physiology, biochemistry and cell and molecular biology. The interdisciplinary nature of the field offers pharmacologists a variety of research opportunities not found in other fields of scientific inquiry. It is this flexibility as well as the potential for the practical application of research ("translational research") that attracts people into becoming pharmacologists.

Graduate studies in Pharmacology are currently administered through the Physiology and Pharmacology Discipline of the Integrated Biomedical Sciences Program of the Graduate School of Biomedical Sciences. The Physiology and Pharmacology Discipline is jointly administered by the Pharmacology department and the Cellular & Integrative Physiology department.

### Pharmacology Degree Requirements

A minimum of 72 credit hours and a minimum overall GPA of 3.0 is required for the Ph.D. degree. In addition, all doctoral candidates must register for the IBMS 7099 Dissertation for at least two semesters in order to graduate; only one of the terms may be a summer session. The student is required to demonstrate intellectual command of the subject area of the graduate program and capability to carry out independent and original investigation in the area. The student must successfully defend a dissertation and be recommended by their program COGS for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.

### Sample 5-year plan of study for Ph.D. (Neuroscience Track)

#### First Year

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<thead>
<tr>
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<tr>
<td>IBMS 5000 Fundamentals Of Biomedical Sciences</td>
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<tr>
<td>IBMS 5008 Lab Rotations</td>
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<tr>
<td>TSCI 5070 Responsible Conduct of Research</td>
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<tr>
<td>PHYL 5041 Cellular, &amp; Developmental Neuroscience</td>
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<tr>
<td>IBMS 6090 Seminar</td>
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<td>CSAT 5095 Experimental Design And Data Analysis</td>
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<td>IBMS 7010 Student Journal Club &amp; Research Presentation</td>
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<td>IBMS 6097 Research</td>
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#### Second Year

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<tr>
<td>INTD 5043 Fundamentals Of Neuroscience 2: Systems Neuroscience</td>
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<td>IBMS 6090 Seminar</td>
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<td>IBMS 7010 Student Journal Club &amp; Research Presentation</td>
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<tr>
<td>PHAR 5020 Basics Of Research Design</td>
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<td>PHAR 5092 Special Problems In Pharmacology: Research Practicum</td>
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<td>IBMS 6097 Research</td>
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**Total Credit Hours:** 10.0-21.5

**Third Year**

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**Total Credit Hours:** 3.0-15.5

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**Total Credit Hours:** 3.0-15.5

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**Total Credit Hours:** 2.0-13.5

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1. The student's last two semesters they should register for PHAR 7099 Dissertation in place of PHAR 6097 Research

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**Sample 5-year plan of study for Ph.D. (Pharmacology Track)**

**First Year**

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**Total Credit Hours:** 11.0

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**Second Year**

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**Qualifying Exam**

**Total Credit Hours:** 4.0-15.5

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**Third Year**

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**Total Credit Hours:** 2.0-13.5

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**Total Credit Hours:** 2.0-13.5

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**Total Credit Hours:** 3.0-15.5

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**Total Credit Hours:** 2.0-13.5

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The student's last two semesters they should register for PHAR 7099 Dissertation in place of PHAR 6097 Research
Pharmacology Sample Plans of Study
M.S. in Neuroscience

First Year
Fall
IBMS 5000 Fundamentals Of Biomedical Sciences 8
IBMS 5008 Lab Rotations 2
Total Credit Hours: 10.0

Spring
INTD 5040 or PHYL 5041 Fundamentals Of Neuroscience1 : Molecular, Cellular, & Developmental Neuroscience 1-2
IBMS 5008 Lab Rotations 2
Second Track course elective (Principles of Pharmacology, Cell Signaling, Aging, Genetics, etc.) 3
IBMS 6090 Seminar 1.5
TSCI 5070 Responsible Conduct of Research 2
Total Credit Hours: 9.5-10.5

Second Year
Fall
PHAR 5020 Basics Of Research Design 2
PHAR 5092 Special Problems In Pharmacology: Research Practicum 1-9
INTD 5043 Fundamentals Of Neuroscience 2: Systems Neuroscience 3
INTD 5047 Neuroanatomy 2
CSAT 5095 Experimental Design And Data Analysis 3
IBMS 6090 Seminar 1.5
IBMS 6097 Research 0.5-12
Total Credit Hours: 13.0-32.5

Spring
Electives- see department 5
IBMS 6097 Research 0.5-12
IBMS 6090 Seminar 1.5
Total Credit Hours: 7.0-18.5

1 The student’s last two semesters they should register for IBMS 7099 Dissertation in place of IBMS 6097 Research
2 A total of 4 credit hours of Electives/Micro-electives are required. These credits should be obtained by the end of the second year. Please see department.

Pharmacology Objectives/Program Outcomes
• The student will demonstrate proficiency in core coursework.
• The student will be able to conduct independent research.
• The student will be able to critically evaluate current scientific literature.
• The student will be able to communicate effectively in writing.
• The student will be able to communicate effectively in an oral format.

Master of Science (M.S.)
The master’s degree is offered only under special circumstances and upon recommendation by the program COGS and approval by the Graduate Dean.

Pharmacology Degree Requirements
A minimum of 30 credit hours and a minimum overall GPA of 3.0 is required for the M.S. degree. In addition, all master’s candidates must register for IBMS 6098 Thesis for at least one semester in order to graduate. The student must successfully defend a thesis and be recommended by their program COGS for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.
### Third Year

**Fall**

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### Fifth Year

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### First Year

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Total Credit Hours: 11.0

### Second Year

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Qualifying Exam

Total Credit Hours: 8.0-27.5

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Total Credit Hours: 4.0-15.5

### Third Year

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Total Credit Hours: 2.5-10.5

### Fourth Year

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### Fifth Year

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### MS in Pharmacology

**First Year**

**Fall**

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Total Credit Hours: 10.0

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1 A minimum of 30 semester hours is required to grant a MS degree, and further requirements are outlined in the Neuroscience handbook.
Physiology

Fourth Year
Spring

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<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>IBMS 6098 Thesis</td>
<td>1-9</td>
</tr>
<tr>
<td>IBMS 6090 Seminar</td>
<td>1.5</td>
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</table>

Total Credit Hours: 2.5-10.5

Fifth Year
Fall

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>IBMS 6090 Seminar</td>
<td>1.5</td>
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</tbody>
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Total Credit Hours: 2.5-10.5

Fifth Year
Spring

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<td>1-9</td>
</tr>
<tr>
<td>IBMS 6090 Seminar</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Total Credit Hours: 2.5-10.5

A minimum of 30 semester hours is required to grant an MS degree, and further requirements are outlined in the Pharmacology handbook.

Pharmacology Objectives/Program Outcomes

- The student will be able to conduct independent research.
- The student will demonstrate proficiency in core coursework.
- The student will be able to critically evaluate current scientific literature.
- The student will be able to communicate effectively in writing.
- The student will be able to communicate effectively in an oral format.

Physiology

*IMPORTANT Note About the Doctor of Philosophy in Physiology Degree*

This program is no longer accepting students at this time as this field of study is now a discipline within the new Integrated Biomedical Sciences (IBMS) Program. All information in this section of the Catalog is for the current Physiology students only.

Physiology is the study of the structure, and function, and integration of the human body. In the pioneering days, research efforts were primarily directed at tissues and organs. This research continues to this day and has resulted in a comprehensive picture of the function of the human body. As molecular and genetic methods have come of age, physiologists have implemented these techniques to elucidate the molecular mechanisms that underlie physiological function. It is now clear that in order to develop a complete understanding of the normal and dysfunctional human body, we must ask questions at all levels, from the molecular to the cellular, to the organ, to the whole organism.

Graduate studies leading to a Doctor of Philosophy degree in the basic biomedical sciences are offered.

Physiology Degree Requirements

A minimum of 72 credit hours and a minimum overall GPA of 3.0 is required for the Ph.D. degree. In addition, all doctoral candidates must register for PHYL 7099 Dissertation for at least two semesters in order to graduate. The student is required to demonstrate intellectual command of the subject area of the graduate program and capability to carry out independent and original investigation in the area. The student must successfully defend a dissertation and be recommended by their program COGS for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.

Physiology Track

First Year
Fall

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>IBMS 5000 Fundamentals Of Biomedical Sciences</td>
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<tr>
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Total Credit Hours: 10.0

First Year
Spring

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<thead>
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<tr>
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</tr>
<tr>
<td>PHYL 5041 Excitable Membranes</td>
<td>1</td>
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<tr>
<td>PHYL 5042 Cardiovascular Physiology</td>
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<tr>
<td>PHYL 5043 Respiratory &amp; Renal Physiology</td>
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<tr>
<td>PHYL 5044 Metabolism/Hormones/GI System</td>
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Total Credit Hours: 6.0

Second Year
Fall

<table>
<thead>
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<tbody>
<tr>
<td>PHYL 6091 Selected Topics Of Physiology</td>
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<tr>
<td>PHYL 6097 Research</td>
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<td>PATH 5021 or CSAT 5095</td>
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</table>

Total Credit Hours: 4.0-15.0

Doctor of Philosophy (Ph.D.)

*IMPORTANT Note About the Doctor of Philosophy in Physiology Degree*
Second Year
Spring

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<td>Seminar</td>
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Qualifying Exam (QE) proposal due prior to May 1st.

Total Credit Hours: 4.5-15.5

Third Year
Fall

<table>
<thead>
<tr>
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Total Credit Hours: 2.0-13.0

Fourth Year
Fall

<table>
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<th>Course Title</th>
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Total Credit Hours: 2.0-13.0

Fourth Year
Spring

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
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<tr>
<td>PHYL 7099</td>
<td>Dissertation</td>
<td>1-12</td>
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Total Credit Hours: 2.0-13.0

Fifth Year
Fall

<table>
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<tr>
<th>Course Code</th>
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<tr>
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<tr>
<td>PHYL 7099</td>
<td>Dissertation</td>
<td>1-12</td>
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Total Credit Hours: 2.0-13.0

Fifth Year
Spring

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
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<tr>
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<tr>
<td>PHYL 7099</td>
<td>Dissertation</td>
<td>1-12</td>
</tr>
</tbody>
</table>

Total Credit Hours: 2.0-13.0

\[1\] Students may take the full course but are only required to take three out of the four modules (PHYL 5041 Excitable Membranes, PHYL 5042 Cardiovascular Physiology, PHYL 5043 Respiratory & Renal Physiology, PHYL 5044 Metabolism/Hormones/GI System).

Other courses – Selected Topics in Physiology or coursework as desired by mentor.

All students are required to submit a dissertation research proposal the Spring semester following passing the Qualifying Exam. Dissertation research proposal is to be presented during the PHYL 6090 Seminar Spring Student Seminar course.

Students are required to attend Monday Physiology Department Seminars/Special Seminars followed by student roundtable luncheon.

Note: MD/PhD students must meet the same requirements as all other students in the Physiology Track, with the exception of Fall I courses.

**PHYL 6091 Selected Topics in Physiology**

At least two courses selected from among the offerings in:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>PHYL 6091-01: Cardiovascular</td>
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</tr>
<tr>
<td>PHYL 6091-03: Cell Biology in Neural Science</td>
<td></td>
</tr>
<tr>
<td>PHYL 6091-04: Endocrine and Metabolism</td>
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<tr>
<td>PHYL 6091-05: Molecular Physiology</td>
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</tr>
<tr>
<td>PHYL 6091-07: Ion Channels in Disease</td>
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</table>

Courses that may be substituted for one of these selections:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>INTD 5040</td>
<td>Fundamentals Of Neuroscience 1: Molecular, Cellular, &amp; Developmental Neuroscience</td>
</tr>
<tr>
<td>INTD 5043</td>
<td>Fundamentals Of Neuroscience 2: Systems Neuroscience</td>
</tr>
<tr>
<td>INTD 5081</td>
<td>Topics In Cardiovascular Research</td>
</tr>
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<td>INTD 7002</td>
<td>Neurobiology Of Learning And Memory</td>
</tr>
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<td>CSAT 6058</td>
<td>Neurobiology Of Aging</td>
</tr>
<tr>
<td>CSAT 5023</td>
<td>Development</td>
</tr>
<tr>
<td>CSAT 5024</td>
<td>RNA Biology and Genomics</td>
</tr>
<tr>
<td>CSAT 5026</td>
<td>Stem Cell Biology</td>
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</table>

\[1\] Not all selected topics are offered each semester, please discuss with Track Leader/Academic Coordinator for more details. Substituted courses will require approval from Track Leader/COGS.

**Physiology Objectives/Program Outcomes**

1. The student will be able to critically review and interpret research literature.
2. The student will be able to demonstrate proficient understanding of core physiological principles.
3. The student will be able to communicate effectively in verbal presentations.
4. The student will be able to demonstrate the ability to conduct independent research.
5. The student will be able to effectively communicate in writing.
Master of Science (M.S.)

The master’s degree is offered only under special circumstances and upon recommendation by the program COGS and approval by the Graduate Dean.

IMPORTANT Note About the Doctor of Philosophy in Physiology Degree*
This program is no longer accepting students at this time as this field of study is now the Physiology and Pharmacology discipline within the new Integrated Biomedical Sciences (IBMS) (http://gsbs.uthscsa.edu/graduate_programs/integrated-biomedical-sciences) Program. All information in this section of the Catalog is for the current Physiology students only.

Physiology is the study of the structure, and function, and integration of the human body. In the pioneering days, research efforts were primarily directed at tissues and organs. This research continues to this day and has resulted in a comprehensive picture of the function of the human body. As molecular and genetic methods have come of age, physiologists have implemented these techniques to elucidate the molecular mechanisms that underlie physiological function. It is now clear that in order to develop a complete understanding of the normal and dysfunctional human body, we must ask questions at all levels, from the molecular to the cellular, to the organ, to the whole organism.

Physiology Degree Requirements
A minimum of 30 credit hours and a minimum overall GPA of 3.0 is required for the M.S. degree. In addition, all master’s candidates must register for PHYL 6098 Thesis for at least one semester in order to graduate. The student must successfully defend a thesis and be recommended by their program COGS for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.

Physiology Plan of Study

<table>
<thead>
<tr>
<th>First Year Fall</th>
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<tr>
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<tr>
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<table>
<thead>
<tr>
<th>First Year Spring</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>IBMS 5008</td>
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<tr>
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<table>
<thead>
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<tbody>
<tr>
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<tr>
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<tr>
<td>PHYL 6090</td>
<td>1</td>
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<td>PHYL 6097</td>
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<table>
<thead>
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<tbody>
<tr>
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<tr>
<td>PHYL 6091</td>
<td>2</td>
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<tr>
<td>PHYL 6090</td>
<td>1</td>
</tr>
<tr>
<td>PHYL 6097</td>
<td>1-12</td>
</tr>
<tr>
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<td>PHYL 6090</td>
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<tr>
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</table>
1 Students may take the full course but are only required to take three out of the four modules (PHYL 5041 Excitable Membranes, PHYL 5042 Cardiovascular Physiology, PHYL 5043 Respiratory & Renal Physiology, and PHYL 5044 Metabolism/Hormones/GI System).

Other courses – Selected Topics in Physiology or coursework as desired by mentor.

All students are required to submit a thesis research proposal the Spring semester following passing the Qualifying Exam. The thesis research proposal is presented during the spring PHYL 6090 Seminar.

Students are required to attend Monday Physiology Department Seminars/Special Seminars followed by student roundtable luncheon.

**Physiology Objectives/Program Outcomes**

1. The student will be able to critically review and interpret research literature.
2. The student will be able to demonstrate proficient understanding of core physiological principles.
3. The student will be able to communicate effectively in verbal presentations.
4. The student will be able to demonstrate the ability to conduct independent research.
5. The student will be able to effectively communicate in writing.

**Radiological Sciences**

The graduate program in Radiological Sciences trains students in: (1) the sciences and technologies that are used to produce radiant energy forms, (2) the scientific knowledge gained by using radiant energy forms to understand and modify biological processes, and (3) the application of radiant energy forms for the diagnosis and treatment of human diseases. The degree offered is a Ph.D. degree in Radiological Sciences. Students have the opportunity to specialize in the following specific tracks within the Ph.D. in Radiological Sciences: (1) Medical Physics, (2) Radiation Biology, (3) Neuroscience Imaging and (4) Human Imaging.

The curriculum provides an opportunity for students to acquire a core of fundamental knowledge through a synergistic program of formal courses, seminars, teaching opportunities, and hands-on research experience. Each student is encouraged to design with the assistance of a research advisor, an individual course of study consistent with his/her career goals.

**Admissions Requirements**

Graduate Record Exam (GRE) general test and a minimum GPA of 3.0/4.0 are required. Three letters of recommendation are required. During the application process, essays stating (1) the reasons for your interest in Radiological Sciences, (2) description of professional goals and (3) an outline of your undergraduate, industrial or summer research, as well as teaching and clinical experience are required.

For all Radiological Sciences tracks a Baccalaureate degree in a natural science or engineering discipline is required. A degree in any other field must have provided sufficient science and mathematics courses to give the applicant the equivalent of a degree in natural science or engineering. Applicants must have undergraduate credit for the following courses: (1) Biology: Two semesters of general biology; (2) Chemistry: Two semesters of general chemistry; (3) Physics: at least two semesters of general physics; (4) Mathematics: Through calculus and ordinary differential equations; (5) Computer Science: Introduction to Computer Science (one semester).

Students accepted into the CAMPEP-accredited (www.campep.org) Ph.D. Medical Physics track shall have acquired a strong foundation in basic Physics. This should be documented by either an undergraduate degree in physics or a degree in a related engineering or physical science with coursework that is equivalent to a minor in Physics (includes at least three upper level undergraduate physics courses).

Students accepted into the Human Imaging track are required to have a medical degree (M.D., D.O., etc.) and typically are pursuing their Ph.D. while simultaneously completing a medical residency program.

The admission process includes review of academic history as well as experience and goals of applicant. On-line and/or on-campus interviews are conducted for qualified applicants by the Admissions Committee.

**Degree Requirements**

A minimum of 72 credit hours and a minimum overall GPA of 3.0 is required for the Ph.D. degree. In addition, all doctoral candidates must register for RADI 7099 Dissertation for at least two semesters in order to graduate. The student is required to demonstrate intellectual command of the subject area of the graduate program and capability to carry out independent and original investigation in the area. The student must successfully defend a dissertation and be recommended by their program COGS for approval of their degree to the Dean of the Graduate School of Biomedical Sciences.

**Radiological Sciences - Human Imaging Track**

**First Year**

<table>
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<tbody>
<tr>
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<tr>
<td>RADI 5090 Radiological Sciences Seminar</td>
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<tr>
<td>RADI 5001 Basic Radiation Safety</td>
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<table>
<thead>
<tr>
<th>Spring</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>RADI 6097 Research</td>
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<td>RADI 6071 Supervised Teaching</td>
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**Second Year**

<table>
<thead>
<tr>
<th>Fall</th>
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<tbody>
<tr>
<td>TSCI 5070 Responsible Conduct of Research</td>
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<tr>
<td>RADI 6097 Research</td>
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<td><strong>Total Credit Hours:</strong></td>
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### Radiological Sciences - Medical Physics

#### First Year

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<td>RADI 5005</td>
<td>Fundamentals Of Radiation Dosimetry</td>
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<td>RADI 5015</td>
<td>Physics Of Diagnostic Imaging 1</td>
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</tr>
<tr>
<td>RADI 6030</td>
<td>Physics Of Radiotherapy</td>
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<td>RADI 6049</td>
<td>Intro To Magnetic Resonance</td>
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<td>TSCI 5070</td>
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**Total Credit Hours:** 12.0

#### Second Year

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<td>Molecular Oncology &amp; Radiobiology</td>
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<tr>
<td>RADI 5090</td>
<td>Radiological Sciences Seminar</td>
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<tr>
<td>RADI 6024</td>
<td>Radiological Anatomy &amp; Physiology</td>
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<tr>
<td>Medical</td>
<td>Physics Elective</td>
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**Total Credit Hours:** 12.0

#### Third Year

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<td>RADI 6049</td>
<td>Intro To Magnetic Resonance</td>
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<tr>
<td>RADI 5015</td>
<td>Physics Of Diagnostic Imaging 1</td>
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**Total Credit Hours:** 12.0

#### Fourth Year

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<tr>
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**Total Credit Hours:** 12.0

### Human Imaging Electives

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<td>RADI 6051</td>
<td>Statistical Parametric Mapping</td>
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<tr>
<td>RADI 6017</td>
<td>Neuroimaging Methods</td>
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<td>RADI 6091</td>
<td>Special Topics</td>
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<tr>
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<td>Integrated Molecular Biology With Patient-Oriented Clinical Research</td>
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**Total Credit Hours:** 12.0
### Third Year

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### Fourth Year

#### Fall

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### Medical Physics Electives

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<td>RADI 6042 Non-Ionizing Radiation Biology</td>
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<tr>
<td>RADI 6031 Physics Measurements In Radiotherapy I</td>
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<td>RADI 7010 Motor Learning And Brain Imaging</td>
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### Radiological Sciences - Radiation Biology Track

#### First Year

##### Fall

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<tr>
<td>RADI 5001 Basic Radiation Safety</td>
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#### Second Year

##### Fall

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#### Third Year

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<tr>
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##### Spring

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Total Credit Hours: 12.0

#### Fourth Year

##### Fall

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Total Credit Hours: 12.0

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**IBMS 5000 Fundamentals Of Biomedical Sciences** 8

**Total Credit Hours:** 12.0
### Third Year

**Spring**

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**Radiation Biology Electives**

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**Neuroscience Imaging Elective**

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**Total Credit Hours:** 12.0

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### Fourth Year

**Fall**

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<tbody>
<tr>
<td>RADI 7099</td>
<td>12</td>
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**Total Credit Hours:** 12.0

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### Objectives/Program Outcomes

1. Proficiency in Core Biomedical and Radiological Science Principles
2. Capacity to Conduct Biomedical Research
3. Critically Review and Interpret Research Literature
4. Demonstrate Competence in Written Communication
5. Demonstrate Competence in Verbal Communication
6. Conduct Research in an Ethical Manner

---

**Certificate in Translational Science**

The Graduate Certificate in Translational Science (CTS) is designed to provide graduate students, postdoctoral fellows, faculty, and other
health care professionals with a formal introduction to the essential components involved in the advancement of scientific discoveries in basic biomedical research into clinical applications and improvements in human health.

The CTS Program is an alternative for health professionals who do not have the time to complete the requirements of an advanced Master or Doctoral degree and to graduate students, fellows, and others who desire additional training in the evolving discipline of translational science to supplement their clinical or science training.

Admissions Requirements
The CTS Program has an open application policy and will accept on-line applications for admission at any time.

However, GSBS deadlines (for submission of on-line application and required documentation) for matriculation in a specific academic semester are listed below.

- Fall Semester: April 1
- Spring Semester: October 1

All applicants should have a sufficient educational background in the biological or biomedical sciences prior to admission to the program.

All transcripts from foreign institutions (including GPA) must be evaluated and submitted by an approved foreign credentialing evaluation agency (http://www.naces.org/members.html). The CTS Program will only accept course by course transcript translations (including GPA) from the Educational Credential Evaluators, Inc. (ECE) or the World Education Services, Inc. (WES).

A grade point average (GPA) no lower than B (3.0 in a 4.0 system) in the last 60 hours of coursework for a BS/BA degree or a GPA of at least 3.0 for applicants with a MS degree.

A minimum score of 300 for the combined verbal and quantitative portions of the Graduate Record Examination (GRE) is required. Scores on the GRE tests taken more than five (5) years prior to the date of application will not be accepted.

Applicants who have completed a graduate degree in a health-related discipline (M.D., D.D.S., RN, DVM, M.S., or Ph.D.) will be exempted from the requirement to complete the GRE.

A minimum score of 560 on the paper version or 68 on the internet version of the Test of English as a Foreign Language (TOEFL) or 6.5 on the academic version of the International English Language Testing System (IELTS) for applicants from countries where English is not the native language.

Scores on TOEFL or IELTS tests taken more than two years prior to the date of matriculation will not be accepted.

Letters of recommendation (three) attesting to the applicant’s readiness for graduate level studies in translational science.

If a matriculated graduate student has a Supervising Professor, one letter must be provided by this individual.

A Personal Statement (1-2 pages) that includes a brief description of the applicant’s background, long term research and/or career goals, and an indication of the basis for application into the CTS Program including how this program fits into the applicant’s career objectives.

A current curriculum vitae is required.

Certificate Requirements
Twelve semester credit hours of didactic coursework are required to obtain the CTS. Satisfactory completion of required and elective coursework is also needed in order to be recommended for awarding of the certificate.

Plan of Study
First Year
Fall

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<tr>
<th>Course Code</th>
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<td>TSCI 5071</td>
<td>Patient-Oriented Clinical Research Methods-1</td>
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<tr>
<td>TSCI 5072</td>
<td>Patient-Oriented Clinical Research Biostatistics-1</td>
<td>2</td>
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<tr>
<td>TSCI 6001</td>
<td>Introduction To Translational Science</td>
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Spring

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Total Credit Hours: 12.0

CTS Elective Courses (may be taken in any semester when offered)

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<td>TSCI 5073</td>
<td>Integrated Molecular Biology With Patient-Oriented Clinical Research</td>
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<td>TSCI 5074</td>
<td>Data Management, Quality Control And Regulatory Issues</td>
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<td>TSCI 5075</td>
<td>Scientific Communication</td>
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<td>Translational Science Training (TST) Practicum</td>
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<td>TSCI 5079</td>
<td>Practicum in Intellectual Property, Technology Transfer and Commercialization</td>
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<td>TSCI 5080</td>
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<td>TSCI 6060</td>
<td>Patient-Oriented Clinical Research Methods-2</td>
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<td>Patient-Oriented Clinical Research Biostatistics-2</td>
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<td>TSCI 6064</td>
<td>Grantsmanship and Peer Review</td>
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<td>TSCI 6065</td>
<td>Health Services Research</td>
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<tr>
<td>TSCI 6066</td>
<td>Instrument Development And Validation</td>
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<td>TSCI 6067</td>
<td>Genomic Healthcare</td>
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<td>TSCI 6068</td>
<td>Cross-Cultural Adaptation Of Research Instruments</td>
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</table>
Joint Degree Institutions: of Texas System universities partnering in this effort are: collaborative research, the doctoral program in Translational Science is in line with a field of science that emphasizes multi-disciplinary, Ph.D. in Translational Science operate using a Windows based Operating System. Laptops with an Apple based Operating System must be able to also operate over a wireless network.

Software Required:

- Microsoft Office Suite  (A personal copy of the latest version can be purchased at the Health Science Center bookstore at student pricing with a student ID).

Laptops with an Apple based Operating System must be able to also operate using a Windows based Operating System.

Ph.D. in Translational Science

In line with a field of science that emphasizes multi-disciplinary, collaborative research, the doctoral program in Translational Science is offered as a multi-institutional joint degree program. The four University of Texas System universities partnering in this effort are:

Joint Degree Institutions:

- The University of Texas Health Science Center at San Antonio
- The University of Texas at San Antonio
- The University of Texas at Austin

Collaborating Institution:

- The University of Texas Health Science Center at Houston School of Public Health

This collaboration of four universities to offer a single joint doctoral degree is unique in the UT System. The program is designed to use the existing resources and expertise in specific key areas of each university to offer a strong, diverse, and competitive doctoral program. The TS Ph.D. will prepare the next generation of scientists to lead the multi-disciplinary biomedical research teams of the future in increasingly complex research environments. These scientists will advance knowledge toward the goal of translating scientific discoveries into strategies that will improve healthcare delivery, patient outcomes, and community health.

Translational Science Admission Requirements

Application Due Date

The TS Ph.D. program accepts applications once a year for fall enrollment. Applications are due between September 1 and November 1 for program entry in the subsequent fall semester.

Advanced Degree

The TS Ph.D. program is an advanced scientific research doctoral program. Eligible applicants must demonstrate at least one of the following advanced degrees: a) completion of an advanced Professional Degree (e.g., M.D., D.O., D.D.S., M.S.N., Pharm.D.); b) completion of a Master’s or Doctoral Degree in a health-related, science, public health or social science discipline; c) enrollment in a clinical professional doctoral, academic doctoral, or master’s degree program with intent to graduate prior to the semester for which application is being made; or d) enrollment as a M.D./Ph.D. student with successful completion of the two-year preclinical curriculum. Eligible enrollment and/or advanced degree(s) must be from an accredited college or university in the United States or proof of U.S. equivalent training/degree at a foreign institution.

University Faculty and Staff as Students

Residents or fellows in an approved residency or fellowship program may apply to the TS Ph.D. program as full-time or part-time students, as determined by the residency or fellowship program. Any faculty member (tenured or non-tenured) may pursue an advanced degree in an institution of The University of Texas System other than the university that employs the faculty member. Non-tenured university faculty may pursue an advanced degree at their university of employment with the written recommendation of his/her department chair and approval of the appropriate Dean and the President. Faculty interested in applying to the TS Ph.D. program are advised to review the guidelines provided in their employment institution’s Handbook of Operating Procedures (HOP) and talk to their Departmental Chair prior to application. Approved faculty and staff are encouraged to work with their College Dean, Department Chair, and/or Supervisor to determine availability and approval of release time for the completion of the educational and research activities required by the TS Ph.D. program. Any approved release time should be in accordance with university policy.

Twelve (12) semester credit hours (SCH) are required to obtain the Certificate in Translational Science (CTS). Students must be admitted to the CTS program to be eligible for certification.

Objectives/Program Outcomes

The goal of this program is to provide graduate students, postdoctoral fellows, faculty, and other health care professionals with formal education in the essential components of translational science. That is, the advancement of scientific discoveries made in basic biomedical research towards clinical applications and improvements in human health. This training will prepare professionals to integrate within interdisciplinary investigative teams for the conduct of clinical and translational research in culturally diverse settings.

Specific aims are to support the intellectual environment at UT Heath San Antonio for clinical and translational science, and to provide fundamental curricular activities in translational science to UT Heath San Antonio students, postdoctoral trainees, clinical residents and fellows, and faculty from the Schools of Medicine, Nursing, Dentistry, Health Professions, and the Graduate School of Biomedical Sciences as well as from local organizations that are partnered with UT Heath San Antonio. The aims will be achieved via participation and successful completion of required didactic coursework.

Program-Specific Policies for Laptop Computers

Students are required to have laptop computer that can connect to and operate over a wireless network.

Software Required:

- Microsoft Office Suite  (A personal copy of the latest version can be purchased at the Health Science Center bookstore at student pricing with a student ID).

TSCI 6069  Statistical Issues, Planning, And Analysis Of Contemporary Clinical Trials  2
TSCI 6070  Biostatistics Methods For Longitudinal Studies  2.5
TSCI 6100  Practicum In IACUC Procedures  1
TSCI 6102  Practicum In IRB Procedures  1
TSCI 6103  Selected Topics In Advanced Research Ethics  1-3
TSCI 6105  Topics in Cancer Prevention  1
TSCI 6106  Practicum in Cancer Prevention Science  0.5-1

• The University of Texas Health Science Center at San Antonio
• The University of Texas at San Antonio
• The University of Texas at Austin

Collaborating Institution:

• The University of Texas Health Science Center at Houston School of Public Health

Certificate in Translational Science (CTS). Students must be admitted to the CTS program to be eligible for certification.

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In line with a field of science that emphasizes multi-disciplinary, collaborative research, the doctoral program in Translational Science is offered as a multi-institutional joint degree program. The four University of Texas System universities partnering in this effort are:

Joint Degree Institutions:
How to Apply
The Translational Science Ph.D. program utilizes a single online application source through the University of Texas Health Science Center at San Antonio. Required documentation for all applications includes:

- Online application
- College/university transcripts
- GRE scores (if entering with a Master’s degree as the highest degree)
- Letters of recommendation (3)
- Personal Statement
- Curriculum Vitae
- Medical license/certificate (if a licensed health care professional)

In addition, Foreign Nationals are required to submit:

- TOEFL/IELTS scores
- Visa

Documentation of Academic Record - Transcripts
For the purpose of evaluating the application, unofficial transcripts are acceptable for inclusion with the application. If selected for admission, official transcripts will be required from all colleges and universities attended and should be sent to the Office of the Registrar at the University of Texas Health Science Center or the student’s Home institution. Transcripts from foreign colleges/universities must be officially translated into English, if needed, and must also be evaluated, including GPA and U.S. equivalent degree, by Educational Credential Evaluators, Inc. (ECE) or World Education Services, Inc. (WES), which are members of the National Association of Credential Evaluation Services (NACES - http://www.naces.org/).

Demonstration of Ability to Participate in an Advanced Academic Program - Graduate Record Examination
Official documentation of a satisfactory score for the combined verbal and quantitative portions of the Graduate Record Examination (GRE), or an equivalent, is required. The GRE score will be considered along with the other admission criteria. Scores on GRE tests taken more than five years prior to the date of application are not acceptable. Applicants are exempt from the GRE requirement if they provide evidence that they have earned a doctoral degree (i.e., M.D., D.O., J.D., D.V.M., Pharm.D., D.D.S., Ph.D., etc.) from an accredited U.S. institution or the equivalent from a foreign institution, as evaluated by either Educational Credential Evaluators, Inc. (ECE) or World Education Services, Inc. (WES), which are currently certified by the Educational Commission for Foreign Medical Graduates (ECFMG), in the United States. The plans of study and specific courses taken by students will vary, depending on student background/discipline, research interest, and program goals. Courses may be selected from offerings at the four participating UT institutions.

Demonstration of Proficiency in English – Foreign Nationals Only
Official documentation of a satisfactory score on either the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) is required for applicants from a country where English is not the native language. A minimum TOEFL score of 600 (paper test), 225 (computer test), or 86 (Internet-based Test), or a score of 7.0 on the IELTS is required. Scores on tests taken more than two years prior to the date of application are not acceptable. TOEFL or IELTS may be waived for applicants whose post-secondary education was conducted in a country where English is the native language. ECFMG certified physicians will also be granted a waiver. Consideration for a waiver outside of these guidelines will be made on a case-by-case basis.

Personal Statement
Applicants must submit a personal statement (1-3 pages) that describes the applicant’s past training and experience, future career goals and objectives, scientific research interest, and how the TS Ph.D. program will prepare them to achieve the stated research interest and career goals. The Personal Statement should include but is not limited to:

- A statement of the applicant’s background and purpose for applying to the TS Ph.D. program
- Applicant’s interest in and commitment to a translational science career
- Applicant’s potential to develop into a successful scientist, as evidenced by research training/experience, prior publications, etc.
- Research interest and its applicability to the TS Ph.D. program
- Identification of a potential Supervising Professor
- Career goals and how the TS Ph.D. program will contribute to their attainment

Letters of Recommendation
Applicants must provide a recommendation form and a letter of recommendation from at least three (3) faculty or other individuals who are familiar with and can provide information about the applicant’s academic, research, and/or professional abilities and performance. Personal references are not recommended. In addition, letters of recommendation should provide an assessment of the applicant’s potential to succeed in a doctoral program and develop into an independent research investigator. These letters should be submitted/uploaded by the recommenders with the recommendation form in the online application.

Translational Science Degree Requirements
A minimum of 72 hours of graduate coursework is required for the translational science doctoral degree. Students must maintain a cumulative, university-specific, and combined TS Ph.D. program minimum of 3.0 (“B”) grade point average (GPA) for all courses for which letter grades are given for program continuation and completion. The TS Ph.D. program track structure is summarized in the following figure:

The plans of study and specific courses taken by students will vary, depending on student background/discipline, research interest, and program goals. Courses may be selected from offerings at the four participating UT institutions.

All translational science doctoral students are required to take a minimum of:

1. 24 hours of Core Curriculum: Core courses will provide essential knowledge, skills, and training in the competencies necessary to conduct translational science research.
2. 18 hours of Electives: A Directed Elective, Topics in Translational Science, is required for two of the total elective hours and may be used to fulfill either the track or free elective requirement. Students must register for Topics in TS in two semesters to meet the Directed Elective requirement, and they may register up to three additional times for elective credit.
a. 12 hours of Prescribed Track Electives: Prescribed track electives will provide additional depth and breadth specific to each student's track or research.

b. 6 hours of free electives: Additional elective courses are offered to meet the educational needs of individual students to successfully conduct their dissertation research and progress in their career development.

3. 30 hours of research/dissertation: The TS Ph.D. is a research intensive program of study. For this reason, students are encouraged to initiate their research and begin taking supervised Research credit hours in the first semester of enrollment, with guidance from an Advisor, Supervising Professor, or the TS Ph.D. Program Director. Enrollment in dissertation hours will begin after the student has met all requirements and approvals to enter candidacy. A minimum of 30 hours of combined research and dissertation hours are required for completion of the TS Ph.D. degree, along with other requirements.

Translational Science Plan of Study

Academic Year

The TS Ph.D. program is a joint degree program, and the semester structure of the Health Science Center is different from the academic institutions. The Health Science Center Graduate School of Biomedical Sciences operates under a "super semester" system, with two six-month semesters. There is no summer semester at the Health Science Center; however, students may/will enroll in summer courses at one of the other three participating academic institutions. As a result, the summer semester is included in the academic year for the TS Ph.D. program and in the example Plan of Study. Students should refer to the Graduate Catalog of their Home institution to determine credit hour requirements for full- and part-time students. At the Health Science Center, full-time graduate students are required to complete a minimum of 24 semester credit hours each academic year; part-time students are required to complete a minimum of 12 semester credit hours per academic year.

Curriculum Sequence

Students may attend the TS Ph.D. program as full- or part-time students. There is no prescribed sequence of courses for the TS Ph.D. program, and courses may be taken at any of the four universities participating in the joint TS Ph.D. program. Some courses are offered only one time per year and some courses require prerequisites, so students and their academic/graduate advisors or supervising professors are encouraged to develop an individualized degree plan to maintain an established schedule to graduation. Although a full-time student can complete the TS Ph.D. program in 3 years, many students will require more time (4-5 years) to accommodate the real world challenges of conducting translational research. Because the program design provides for numerous course choices based on research and career goals, only the TS educational domains are identified in this full-time student example.

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Cultural Proficiency (Core) 3
Track and/or Free Electives 3
Research 3

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Cultural Proficiency (Core) 3
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Research 3

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Cultural Proficiency (Core) 3
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Cultural Proficiency (Core) 3
Track and/or Free Electives 3
Research 3
Translational Science Objectives/Program Outcomes

The goal of the Translational Science Ph.D. Program is to provide an in-depth, rigorous, and individualized multi-disciplinary and multi-institutional research education and training program in translational science that will prepare research scientists to integrate information from multiple domains and conduct independent and team-oriented research to improve human and global health. Eight educational domains form the foundation for the TS Ph.D. educational objectives:

- **Translational Science:** Students will articulate what constitutes T1 and T2 translational science and the inter-relationships between the two broad tracks.

- **Responsible Conduct:** Students will be knowledgeable about and be able to apply research ethics and work effectively with regulatory groups within their organization(s).

- **Research Design and Analysis:** Students will formulate research questions and appropriately design experiments and studies to test hypotheses. They will develop specific analytic strategies based on the study design and assure that their studies are adequately powered to test the hypotheses.

- **Team Science and Leadership:** Students will work effectively in and be able to lead interdisciplinary research teams to (a) identify health related problems and (b) design and conduct research to address the problems.

- **Multi-level Cultural Proficiency:** Students will be able to identify the different cultures that exist within and among (a) organizations and (b) communities (locally and globally). In recognizing these differences, students will learn to use cultural competence and work effectively to conduct research investigations in different settings.

- **Scientific Communication:** Students will demonstrate oral and written competency in their ability to communicate research clearly to other translational scientists via journal articles and scientific presentations. They will be able to effectively write abstracts and manuscripts, give oral presentations, and communicate the relevance of their scientific expertise.

- **Business of Translational Science:** Students will become functionally informed about intellectual property licensing and the processes of developing products, drugs, or devices for human use. They will also learn to function within different legal, regulatory, and economic environments.

- **Evidence Based Implementation and Policy:** Students will be able to independently read and interpret the scientific literature in their content area. They will be able to systematically review a body of scientific literature to apply to policy implementation. They will be able to make data based decisions and inform policy and guideline development.

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**Translational Science Program Policies**

**Home Institution Designation**

Each student in the TS Ph.D. program must declare a Home institution. The Home institution will be the institution of record for admission, dissertation research, and graduation, and it will be the primary institution for fees, financial aid, student health services, and other student services. Change of a student’s Home institution designation will be approved only for exceptional or necessary circumstances. Please refer to the Student Handbook for additional information.

**Concurrent Registration**

Each semester, students may register and take courses concurrently at more than one of the universities participating in the joint TS Ph.D. degree program. Approval of the student’s advisor or supervising professor for course registration is assumed. Registration for courses offered by the UT School of Public Health will require the student to apply and be accepted as a non-degree-seeking (NDS) student.

International students must follow policy related to pre-approval and limitations in concurrent enrollment in a single semester. The student is responsible for informing the enrollment institutions and providing required documentation of the concurrent enrollment. International students should review the Student Handbook and check with the International Offices of the enrollment institutions to ensure that all requirements are met.

**Registration When No Class Is Being Taken**

Student status will be maintained each semester at each joint-degree institution. This will be accomplished on each campus according to the procedures of the individual Registrar’s Offices.

**Good Standing**

A student must be in “good standing” at all institutions. Good standing may include GPA of 3.0 or better, having no unpaid tuition or other institutional debts, having no institutional holds, or any other restriction that would not allow registration. With the exception of specified requirements for all students, good standing is defined by each university. The TS Ph.D. program is a joint degree program. As a result, if a student is identified as not being in good standing at one university, based on the criteria listed above or as defined in the University and/or Graduate Catalog, that status will apply at all the institutions participating in the joint TS Ph.D. program.

**Academic Year**

The academic year for the TS Ph.D. program includes the fall, spring, and summer semesters. For the Health Science Center students, the academic year is the fall and spring super semesters (July to December and January to June), plus a trailing summer semester if summer courses are taken at another institution. **Full-time students at the Health Science Center are required to complete at least 24 semester-credit-hours each academic year, in total from all universities, and part-time students are required to complete at least 12 semester-credit-hours each academic year, in total from all universities. Students with another Home institution should refer to the Graduate Catalog of that institution for information about full- and part-time credit-hour requirements.**

**Academic Calendars**

Students will comply with the calendar(s) of the institutions in which they are enrolled for the purposes of registration, course schedules,
Residency

Each TS Ph.D. student must establish domicile residency status for the purpose of assessing tuition and fees. This status will be determined by the Home institution. Once residency has been established by the Home institution, the residency designation will be the same for the enrollment in any of the universities that are part of the TS Ph.D. program.

Tuition and Fees - Rates and Payments

TS Ph.D. students will enroll each semester at each university offering the course(s) selected by the student, in advisement of the student’s Advisor or Supervising Professor. Rates for in-state and out-of-state student tuition and fees are established by each institution, and payment of tuition and fees will be made to each university based on the number of semester credit hours selected. Some non-coursework-specific fees paid to the Home institution may be waived by the other universities, but the final assessment of fees is dependent on the individual university policies. Tuition and fees are subject to adjustment. Students receiving any form of financial aid that is not automatically or fully distributed by the Home institution to cover the payment of tuition and fees at the other universities are responsible for the payment of those additional tuition and fees.

Grading, Grade Point Average, and Academic Standing

Existing grading systems will be utilized by each institution. Students will be given letter grades (A, B, C, D, or F), Pass/Fail, Credit/No Credit, +/−, or Satisfactory/Unsatisfactory, as per the policy of the institution’s Graduate School and/or the program or department that offers the course. Students must maintain a cumulative, university-specific, and combined TS Ph.D. program 3.0 (“B”) grade point average (GPA) for all classes for which letter grades are given. University/Graduate School policy at each institution must be followed for the courses taken at that institution and course/grade related consequences will be assessed according to the policy of the institution in which classes are taken. The TS Ph.D. program is a joint degree program, and academic standing at one university applies to all the institutions participating in the program. A student who faces academic dismissal from one of the participating universities will face dismissal from the program. Please refer to the Student Handbook for additional guidelines related to grades, GPA, and academic standing.

Qualifying Examination

The qualifying exam will be administered before the start of dissertation research, and admission to candidacy will be contingent on its successful completion. The qualifying examination should be completed near the end or following the completion of core coursework. It is recommended that the student, at the time of the Written Exam on Course Content, should have completed the bulk (at least 75%) of core course work, including at least one course in each domain. Students must have a cumulative, university-specific, and combined TS Ph.D. program 3.0 (“B”) grade point average (GPA) for all classes for which letter grades are given to take the Qualifying Exam.

The qualifying exam is composed of two parts: (1) the Written Exam on Course Content and (2) the Dissertation Proposal (written and oral). The timing of the QE will be determined jointly by the candidate and the Supervising Professor, in collaboration with the Dissertation Committee and the instructors/graders for the Written Exam on Course Content. Please refer to the Student Handbook for requirements, procedures, grading, and other information related to the Qualifying Exam.

Supervising Professor

If not already established at the time of admission into the TS Ph.D. program, students are advised to identify and select a Supervising Professor for the dissertation research as soon as possible. At a minimum, the student must select a Supervising Professor prior to the initiation of the Qualifying Exam. The Supervising Professor will chair all steps of the Qualifying Exam.

Dissertation Committee

The Dissertation Committee will have at least four members, but may have additional members if required by the Graduate School of the student’s Home institution. All program-required Dissertation Committee members must be approved as Graduate Faculty for the TS Ph.D. program with the exception of the member from an outside institution. Additionally, if the student’s Home institution requires additional representation, Graduate Faculty membership will be dependent on the requirements of the Home institution. Dissertation committee membership will include (at a minimum):

1. Supervising Professor (may be from any of the four participating UT institutions in this joint program and must have a faculty appointment at the student’s Home institution)
2. Graduate Faculty from the TS Ph.D. program from the student’s home department and/or institution
3. Graduate Faculty from the TS Ph.D. program from a second UT component institution participating in the joint degree program (in the case of joint or cross appointments, the faculty member’s primary appointment must be at the institution that is not the student’s Home institution)
4. A member from an outside institution who is an expert in the student’s dissertation field and does not have a faculty appointment, either full-time or part-time, at any of the four institutions participating in the joint degree program

These are minimum requirements - the student and Supervising Professor must ensure that the Dissertation Committee requirements for both the TS Ph.D. program and the student’s Home institution are met. The proposed composition of the Dissertation Committee must be evaluated and approved by the TS COGS. Additional criteria may be set by the student’s Home institution regarding committee structure and approval mechanisms. Students should verify the requirements of the TS Ph.D. program (Student Handbook) and the Home institution’s Graduate School (Graduate Catalog of the Home institution).

Doctoral Dissertation

Each doctoral candidate must complete an approved body of research and submit and orally defend a dissertation as one of the requirements for graduation. The dissertation must be an original scholarly contribution based on the independent research conducted by the candidate, under the supervision and guidance of the Supervising
Professor. A Dissertation Committee will provide additional advisement and assessment. The format of the dissertation will be in compliance with the rules of the student’s Home institution.

**Requirement for Semi-Annual Student Evaluation/Progress Report**

TS Ph.D. students are required to submit a Progress Report two times each year. This report will be submitted in a prescribed format and include a written report of progress on the student’s research work, activities related to the research, self-assessment, and proposed direction of future work. Please refer to the Student Handbook for procedures and other information related to the Semi-Annual Student Evaluation.

**Graduation**

The degree of Doctor of Philosophy is awarded upon satisfactory completion of a minimum of 72 semester credit hours, submission of a dissertation, satisfactory completion of a final oral examination (defense of dissertation), continuous enrollment requirements, and/or any other requirements of the TS Ph.D. program and the student’s Home institution. Students will apply and be approved for their degree and graduation by their Home institution. The degree awarded is a joint degree with the other degree-granting institutions, and it is awarded on the official graduation date indicated to the University of Texas System and published by the Home institution. Students will attend the graduation ceremony of the Home institution. Please refer to the Student Handbook and Graduate Catalog of the Home institution for graduation requirements.

**Other Program Policies and Requirements**

**Release of Information**

Because the TS Ph.D. is a joint degree program, it will be essential that the participating universities are able to share and access relevant and academically pertinent data; therefore, all institutions participating in the TS Ph.D. program are recognized as having a legitimate educational interest in the relevant educational records of the students who participate in the TS Ph.D. program. All participating institutions will maintain confidentiality of the educational records in accordance with the provisions of the Family Educational Rights and Privacy Act (FERPA). Accordingly, the sharing of relevant educational records among the participating institutions will not require a student release nor violate a student’s FERPA rights.

**Student IDs**

Students will obtain a Student ID number from each institution prior to first semester enrollment. Thereafter, each institution will activate and/or issue Student IDs according to individual institutional policy.

**Student Email**

TS Ph.D. students will have an email account on each campus. Some institutions designate the email address, and others allow the student to make a choice. Students are encouraged to provide the TS Ph.D. administrative office with a list of their official email addresses on each campus. Students will be responsible for checking all student-related email addresses on a regular basis.

**Conduct and Discipline**

The TS Ph.D. program expects all students to exhibit the highest standards of conduct, honesty, and professionalism. Academic misconduct includes activities that undermine the academic integrity of.
THE JOE R. AND TERESA LOZANO LONG SCHOOL OF MEDICINE

Brief History
In April 1959 Texas Governor Price Daniel signed House Bill 9 to establish the South Texas Medical School, the first component of the institution that would soon become the Health Science Center. In July 1968 the medical school, now known as the Joe R. and Teresa Lozano Long School of Medicine (Long SOM), and the Bexar County Teaching Hospital, now known as University Hospital, were dedicated. Thirty-three medical students graduated with the Doctor of Medicine degree in the first medical school commencement in June 1970. Today there are nearly 900 medical students receiving their education at the Long SOM. In 1998 the Texas State Legislature authorized the creation of the Regional Academic Health Center (RAHC) in the Lower Rio Grande Valley, to be administered by the Long SOM, and in June 2002 the RAHC opened its doors to train third- and fourth-year medical students and residents. The Long SOM continued to operate the RAHC until 2013 when the Texas State Legislature approved the expansion of the RAHC into a separate medical school, the University of Texas Rio Grande Valley SOM, which enrolled its first class of 50 first-year medical students in 2016.

Mission Statement
The mission of the Long School of Medicine is to provide responsive and comprehensive education, research and service of the highest quality in order to meet the health-related needs of the citizens of Texas. In all aspects of fulfilling this mission, the Long School of Medicine is committed to fostering the broadest diversity and inclusion that ensures successful achievement of the institutional priorities to:

- Cultivate a pervasive, adaptive and respectful environment promoting diversity, inclusion, equity, professionalism, humanism and opportunity
- Provide exemplary medical education and training to a diverse body of health career professionals at all levels while fostering a commitment to scholarship, leadership and life-long learning across the educational continuum
- Build and sustain recognized leadership, and advance scholarship excellence across the biomedical and health-related research spectrum
- Deliver exemplary and compassionate health care to enhance every patient’s quality of life
- Serve as a responsive resource to address community health needs whether local or global
- Attain health equity for the diverse patient population of South Texas

Accreditation
The Doctor of Medicine (M.D.) program is accredited by the Liaison Committee on Medical Education (LCME), the body recognized by the U.S. Department of Education for accreditation of programs of medical education leading to the M.D. degree in the United States.

Confidentiality
The Long SOM and Health Science Center will, to the extent possible, maintain the confidentiality of information in accordance with institutional, state, and federal regulations and requirements.

Inclusion and Diversity Policy
Inclusive Excellence in Academic Medicine
The Joe R. and Teresa Lozano Long School of Medicine (LSOM) is an academic health-related institution that is firmly rooted in its tripartite mission of research, education and patient-care. UT Health at San Antonio is committed to discovery and innovation, community engagement, and inclusive excellence by all of its members.

Inclusion and Diversity Policy Statement
The LSOM and UT Health San Antonio in partnership with the Office of Inclusion and Diversity will engage in on-going, systematic and focused recruitment and retention activities to achieve mission-appropriate diversity outcomes among its students, faculty, and senior administrative staff.

We view diversity as a core value which embodies inclusiveness, mutual respect, and multiple perspectives and serves as a catalyst for change resulting in health equity. In this context, we are mindful of all aspects of human differences, both at the individual-level (e.g., life experiences, learning and working styles, personality types) and group-level or those that are instantaneously recognizable and used to categorize individuals into discrete social categories, such as socioeconomic status, race, ethnicity, language, nationality, cis-gender identity, sexual orientation, religion, geography, disability, age, and more.

The LSOM embraces a mission-appropriate diversity policy aligned with the medical profession’s obligation—meeting the health needs of all populations in an ever-increasing heterogeneous society. Diversity in medical education enhances the quality of education for all learners (for example, exposure to diverse perspectives may improve complex thinking skills), and translates into more effective and culturally competent physicians who are familiar with the connection between sociocultural factors and health beliefs and behaviors and thus are better prepared to serve a growing culturally and linguistically diverse patient population.

At the LSOM we are particularly focused on those we believe add particular value to our learning environment and have the potential to address health disparities in our community. Health disparities—gaps in health and healthcare that mirror differences in geographic location, socioeconomic status, race, ethnicity, education—remain persistent and pervasive. The LSOM will ensure exposure to health disparities pedagogy to all learners by providing skill-building and practical advocacy skills, in both the preclinical and clerkship settings. Programs and initiatives are aimed to meet the needs of our learners and institutional culture yet building on effective practices to support the success of students/faculty/staff traditionally underrepresented in academic medicine (based on race/ethnicity, cis-gender identity, socioeconomic, and first-generation college student status). These groups are defined and periodically reviewed by the Office of Inclusion and Diversity and included in the appendix to this document and in our implementation plan.

The LSOM will develop programs and partnerships aimed at broadening diversity among qualified applicants for medical school admission. We will continue to enhance the current holistic review process and include educational training in the area of implicit bias and microaggressions.
The Office of Inclusion and Diversity will monitor these efforts employing outcome metrics.

The LSOM will provide institutional resources including scholarship funds and academic preparation to enhance retention of matriculates. These efforts will undergo periodic review and evaluation to the Office of Inclusion and Diversity to determine effectiveness.

The LSOM will develop faculty and administrative staff recruitment and practices that broaden the search for diverse applicants. We will develop an educational program to heighten the awareness of bias in the recruitment, hiring and promotions process and we will perform periodic assessment of these efforts and their impact. Additionally we will collaborate with the Office for Faculty to enhance mentorship and promote advancement and retention.

The LSOM’s Office of Inclusion and Diversity under the direction of the Vice Dean for Inclusion and Diversity and Chief Diversity Officer will be primarily responsible for the development, implementation and evaluation of each of these programs and for recommending new methods, based on evaluation data for continuous process improvement.

Appendix to Inclusion and Diversity Policy
Definitions for the diversity categories identified in LSOM medical school policies that guide recruitment and retention activities for our medical students are the following:

- **African American or Black** – A person having origins in any of the Black racial groups of Africa.
- **Hispanic or Latino** – A person particularly of Cuban, Mexican or Puerto Rican origin and of any race.
- **Women** – Individuals who self-identify as female.
- **Socio-economically Disadvantaged** – based on information collected by the Texas Medical and Dental Schools Application Service (TMDSAS) regarding the socioeconomic status of medical student applicants.

For our faculty and senior administrative staff, we apply the following definitions:

- **African American or Black** – A person having origins in any of the Black racial groups of Africa.
- **Hispanic or Latino** – A person particularly of Cuban, Mexican or Puerto Rican origin and of any race.
- **Women** – Individuals who self-identify as female.

Doctor of Medicine (M.D.)
Overview
This catalog is a general information publication only. It is not intended to nor does it contain all policies and procedures relevant to students enrolled in the Joe R. and Teresa Lozano Long School of Medicine (Long SOM). Current Long SOM students are to refer to the M.D. Degree Handbook posted in their CANVAS class cohort site (http://www.uthscsa.edu/university/canvas) for full program policies and detailed procedures.

This publication is for informational purposes and does not constitute a contract, either expressed or implied. The Long SOM reserves the right to change any provision or requirement at any time without notice in order to ensure compliance with accreditation standards.

Policy revisions made after publication of the official UT Health San Antonio Catalog will be disseminated to students by email and posted to CANVAS class cohort sites. Students are accountable to policies herein, those in the M.D. Degree Handbook, updates posted in CANVAS, and revisions sent by email.

Notice of Nondiscriminatory Policy
The Long SOM, in compliance with applicable federal laws and regulations, and the Health Science Center Handbook of Operating Procedures, Policy 4.2.1 (http://uthscsa.edu/hop2000/4.2.1.pdf), does not discriminate on the basis of race, color, religion, sex, national origin, age, disability, citizenship, genetic information, sexual orientation or veteran status in any of its policies, practices or procedures.

Admissions Requirements
Admission requirements are detailed online at the Long SOM, Admissions & Outreach website (http://som.uthscsa.edu/Admissions). Applicants must have at least 90 semester hour credits from a United States or Canadian college or university with no grade lower than a C in required course work. While not required at this time, a bachelor’s degree is preferred. Web-based applications are available through the Texas Medical and Dental Schools Application Service (http://www.tmdsas.com/mcdonaldhomepage.html) (TMDSAS) in Austin.

Applicants must take the Medical College Admission Test (MCAT) and submit other required documents to the TMDSAS, such as letters of recommendation and transcripts, in order to have a complete application. Refer to the TMDSAS to obtain specific information about application instructions, and important dates and deadlines.

Acceptance & Education Requirements
The Long SOM Admissions Committee uses a holistic review process to assess each and every application. Balanced consideration is given to experiences, attributes, and academic metrics, and consideration is given to how the individual might contribute value as a medical student and physician. The Long SOM Admissions Committee evaluates each candidate’s application to assess these elements of the holistic review and values evidence of academic strength, broad and varied experiences in healthcare, leadership and community service, and the development of an applicant’s personal attributes. Demonstration of integrity, maturity, motivation, judgment, resilience and resourcefulness is also of value. The personal interview is a required component of the application process, invitations for which are issued by the Long SOM Admissions Committee.

Only applicants who are American citizens or possess official status as Permanent Residents of the U.S. can be considered for interview and acceptance at this time.

Applicants are encouraged to review the Factors Considered for Applicant Interview and Acceptance (http://som.uthscsa.edu/Admissions/factors.asp). All candidates must meet the required Technical Standards for Completion of the Medical Curriculum (http://som.uthscsa.edu/Admissions/essentialAbilities.asp). The Long SOM is committed to nondiscrimination policies for all populations including qualified individuals with disabilities. Please refer to Health Science Center Handbook of Operating Procedures Policy 4.2.1. Nondiscrimination Policy and Complaint Procedure (http://uthscsa.edu/hop2000/4.2.1.pdf).

The Long SOM may offer early acceptances during the TMDSAS pre-match period from October through December. Other candidates may be accepted through the TMDSAS Match process, results of which are available on the TMDSAS website on February 1. Acceptances may also be offered after the TMDSAS Match, from February through mid July.

An applicant receiving an offer of acceptance will be requested to show acknowledgement of the offer of acceptance, usually within two weeks.
of receipt of acceptance, through the Long SOM admissions software portal. The interview selection process allows for review and re-review throughout the admissions cycle until the TMDSAS Match; applicants who did not receive an interview will be notified of their status in January prior to the Match.

Matriculation is contingent upon satisfactory completion of all requirements, as outlined on the TMDSAS website, on the admissions website, and in the Pre-matriculation Checklist (http://som.uthscsa.edu/Admissions/now-what.asp) for newly accepted students, which includes a background check review (see Medical Student Background Check Policy), submission of final transcripts, completion of the proposed degree plan, satisfactory completion of all prerequisite coursework, and presence at required matriculation events such as White Coat Ceremony and Orientation.

Medical Student Background Check Policy
Applicants who have received an offer of acceptance must satisfactorily complete a background check as a condition for matriculation to the Long SOM. An offer of acceptance will not be final until a review of the background check is performed and satisfactory results are recorded. Admission may be denied or rescinded based on the review of the background check.

Additionally, students who are currently enrolled may have to satisfactorily complete a background check as a condition for enrolling or participating in educational experiences at affiliated clinical sites as required. Students who return from a year of deferred acceptance or leave of absence may also be required to complete a background check, with subsequent review. Students who decline to complete the background check or do not pass the background check review may be dismissed from the medical education program.

Falsification of information, including omission of relevant information, may result in denial of admission or dismissal from the educational program. Refer to the full background check policy (https://oume.uthscsa.edu/wp-content/uploads/sites/56/2019/06/OUME_Background-Check-Req_190617_ONLINE.pdf) for more detail.

Transfer or Advance Standing Applications
The Long SOM does not accept transfer students into the Doctor of Medicine (M.D.) degree program.

Individuals whose graduate work has been in the field of dentistry may apply for advanced standing through the MD/Oral-Maxillofacial Surgery Certificate Program (http://catalog.uthscsa.edu/schoolofmedicine/dualdegreemdoms).

Scholarships
Scholarship assistance may be available within the Long SOM. Scholarships are awarded based on need, merit, or a combination of both. The Long SOM determines the selection of scholarships based on criteria established by the donor. Scholarships may be renewable depending upon academic performance and/or stated scholarship conditions.

Students can apply for scholarships online through the student portal administered by the Office of Financial Aid and Veterans Affairs. Students must first file the Free Application for Federal Student Aid (FAFSA) in order to be considered for scholarships. The Long SOM Scholarship Committee makes recommendations for selection of candidates for scholarships; these recommendations are forwarded to the Office of Financial Aid and Veterans Affairs for processing to student accounts. If the student receives a scholarship, after he/she has been fully awarded, the Office of Financial Aid and Veterans Affairs may need to reduce other aid on the account in order to prevent an over-award of federal funds. Learn more on the Office of Financial Aid and Veterans Affairs Scholarship website. (https://students.uthscsa.edu/financialaid/2013/04/scholarships)

Degree Requirements
The degree of Doctor of Medicine (M.D.) is awarded by the Board of Regents upon a student’s successful completion of the degree requirements, recommendation by the Student Progression & Promotion Committee to the Dean of the Long SOM, and certification by the Dean of the Long SOM to the President of the UT Health Science Center at San Antonio.

Candidates must:
1. be at least 18 years of age at the time the degree is awarded;
2. present evidence of good moral character;
3. offer evidence of having satisfactorily fulfilled all academic requirements of the four year medical education program;
4. comply with all necessary legal and financial requirements.

CIRCLE Curriculum
The acronym CIRCLE (Curricular Integration, Researchers, Clinicians, Leaders, Educators) represents the integrated four-year medical school education program which is described briefly below.

Preclinical Curriculum
The foundational 19-month curriculum is taught in ten learning modules and three longitudinal modules. Within each module there is progression of knowledge in a systematic fashion as follows: normal structure and function, pathogenesis and pathophysiology of the condition or disorder, clinical manifestations of the condition or disorder, pharmacotherapeutic interventions for the condition or disorder, clinical and translational research and evidence-based medicine approach for the condition or disorder, epidemiology or prevention of the condition or disorder, and interpretation of diagnostic tests. Each module has a weekly thematic content which is synthesized via a small group interactive patient case.

Learning Modules:
1. Molecules to Medicine
2. Attack and Defense
3. Hematology
4. Respiratory Health
5. Circulation
6. Renal & Male Reproductive
7. Mind, Brain, and Behavior
8. Endocrine/Female Reproductive
9. Digestive Health and Nutrition
10. Form and Function: Skin, Muscles, and Bones
Clinical Curriculum
Following successful completion of the entire preclinical curriculum students enter the clinical curriculum. This is comprised of 48 weeks of clerkships, 20 weeks of electives, 8 weeks of selectives, and 4 weeks of didactics.

Clerkships
Students must complete 48 weeks of clerkships in eight specialties. Students will complete four-week clerkships for Emergency Medicine and Neurology; six-week clerkships for Family Medicine, Obstetrics & Gynecology, Pediatrics, and Psychiatry; and eight-week clerkships for Medicine and Surgery. Each student will assume increasing patient care responsibility commensurate with achievement of specific milestones and competencies defined by the Curriculum Committee. A longitudinal educational experience will be provided throughout the clerkships to cover topics that are relevant to all disciplines.

Electives/Selectives
Electives and selectives expose students to additional medical specializations and/or allow the student to return to a core specialty with advanced duties and responsibilities. Students may begin electives following the completion of the preclinical curriculum. Selectives can be taken after the completion of the clerkships, and consist of a four-week inpatient selective and a four-week ambulatory selective. Third-year elective experiences allow students to explore other specialties and subspecialties or engage in research before fourth year while still consolidating core knowledge and skills.

MD Degrees with Distinction
The Long SOM offers additional distinction programs that a student can pursue while maintaining satisfactory achievement in the medical education program. Learn more about each by visiting the program’s website.

- M.D. with Distinction in Research (http://som.uthscsa.edu/Research/MDDistinctionResearch.asp)
- M.D with Distinction in Medical Humanities (https://www.texashumanities.org/humanities-distinction)

Scholastic Honors
Alpha Omega Alpha Honor Medical Society
Alpha Omega Alpha (AOA) Honor Medical Society is a national professional organization whose aims are the “promotion of scholarship and research in medical schools, the encouragement of a high standard of character and professionalism among medical students and graduates, and the recognition of high attainment and service in medical science, patient care, and related fields”.

Election is based on academic excellence, and on activities and achievements that promote the values of AOA. The top 25 percent of the graduating medical school class is eligible for nomination to the society. From this top quartile of students, up to one-sixth of the class may be elected to the society based on academic achievement, leadership, character, community service, and professionalism. Students may be chosen in the third or fourth year.

Gold Humanism Honor Society
The Gold Humanism Honor Society, sponsored by the Arnold P. Gold Foundation, recognizes students who best exemplify and manifest humanism in their interactions with patients, peers, faculty, and community. Additionally, elected students demonstrate excellence in clinical care, leadership, compassion and dedication to service. Society membership participates in a community service project that is formulated by the group.

Sample Plans of Study:
The tables below represent courses the students will take in their preclinical and clinical years.

Preclinical Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIRC 5001</td>
<td>Medicine, Behavior and Society</td>
<td>6</td>
</tr>
<tr>
<td>CIRC 5003</td>
<td>Language of Medicine Longitudinal Module</td>
<td>5.4</td>
</tr>
<tr>
<td>CIRC 5005</td>
<td>Clinical Skills Longitudinal Module</td>
<td>14.75</td>
</tr>
<tr>
<td>CIRC 5007</td>
<td>Fundamentals: Molecules to Medicine</td>
<td>9</td>
</tr>
<tr>
<td>CIRC 5009</td>
<td>Attack and Defense</td>
<td>9</td>
</tr>
<tr>
<td>CIRC 5111</td>
<td>Circulation</td>
<td>5</td>
</tr>
<tr>
<td>CIRC 5013</td>
<td>Respiratory Health</td>
<td>4</td>
</tr>
<tr>
<td>CIRC 5015</td>
<td>Renal and Male Reproductive</td>
<td>5</td>
</tr>
<tr>
<td>CIRC 5017</td>
<td>Hematology</td>
<td>3</td>
</tr>
<tr>
<td>CIRC 6007</td>
<td>Mind, Brain and Behavior</td>
<td>9</td>
</tr>
<tr>
<td>CIRC 6009</td>
<td>Endocrine and Female Reproductive</td>
<td>7</td>
</tr>
<tr>
<td>CIRC 6011</td>
<td>Digestive Health and Nutrition</td>
<td>7</td>
</tr>
<tr>
<td>CIRC 6013</td>
<td>Form and Function: Skin, Muscles &amp; Bones</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Total Credit Hours 91.65

Clinical Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTD 3030</td>
<td>Clinical Foundations</td>
<td>3</td>
</tr>
<tr>
<td>MEDI 3105</td>
<td>Medicine Clerkship</td>
<td>8</td>
</tr>
<tr>
<td>SURG 3005</td>
<td>Surgery Clerkship</td>
<td>8</td>
</tr>
<tr>
<td>FMED 3005</td>
<td>Family Medicine Clerkship</td>
<td>6</td>
</tr>
<tr>
<td>OBGY 3005</td>
<td>Obstetrics/Gynecology Clerkship</td>
<td>6</td>
</tr>
<tr>
<td>PEDI 3005</td>
<td>Pediatrics Clerkship</td>
<td>6</td>
</tr>
<tr>
<td>PSYC 3005</td>
<td>Psychiatry Clerkship</td>
<td>6</td>
</tr>
<tr>
<td>EMED 3005</td>
<td>Emergency Medicine Clerkship</td>
<td>4</td>
</tr>
<tr>
<td>NEUR 3005</td>
<td>Neurology Clerkship</td>
<td>4</td>
</tr>
<tr>
<td>1 Four-Week Selective (In)</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>1 Four-Week Selective (Ambulatory Care)</td>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>

20 Weeks of Electives
Objectives & Competencies for the Doctor of Medicine (M.D.) Degree

The objectives and competencies for the educational program for the Doctor of Medicine (M.D.) degree program were initially developed and approved by the Curriculum Committee in 2008 and reaffirmed in 2018 with minor revisions. The objectives and competencies are used to guide the curriculum and ensure that students who graduate have achieved competency in three (3) areas basic to being a physician: Altruism, Knowledge, and Skills.

1. Altruism: Medical students must be compassionate and empathetic in caring for patients, and must be trustworthy and truthful in their professional dealings. They must act with integrity, honesty, and respect for patients’ privacy and dignity.

2. Knowledge: Medical students must understand the scientific basis of medicine and be able to apply that understanding to the safe and effective practice of medicine. They must utilize self-assessment and self-knowledge to optimize their learning.

3. Skills: Medical students must acquire wide-ranging skills that will enable them to care for patients as a professional.

Under each area of competency there are numerous specific objectives that a medical student will be able to do by the time of graduation. View the full list of objectives and related appendices (https://oume.uthscsa.edu/wp-content/uploads/sites/56/2018/07/Objectives_Competencies_MD_revised2018.pdf) to learn more.

1. Altruism:
   1.1 List and define the basic principles guiding ethical decision-making.
   1.2 Apply ethical concepts to medical ethical dilemmas.
   1.3 Demonstrate respect for human dignity.
   1.4 Provide compassionate patient care.
   1.5 Demonstrate honesty and integrity in educational and professional interactions.
   1.6 Demonstrate appropriate patient advocacy.
   1.7 Understand the non-medical factors that impact health.
   1.8 Understand the issues of access to health care.
   1.9 Appropriately address conflicts of interest inherent to the field of medicine.

2. Knowledge:
   2.1 Demonstrate knowledge of normal structure and function of the human body.
   2.2 Demonstrate knowledge of the pathogenesis and pathophysiology of disease and disorders.
   2.3 Demonstrate knowledge of the clinical manifestations of common conditions and disorders.
   2.4 Demonstrate knowledge of the pharmacotherapeutic modalities for common conditions and disorders.
   2.5 Demonstrate knowledge of the basic principles of clinical and translational research.
   2.6 Demonstrate knowledge of the epidemiology of common conditions and disorders.
   2.7 Demonstrate knowledge of systems of healthcare delivery.

3. Skills:
   3.1 Obtain an accurate and complete medical history.
   3.2 Perform all components of a complete physical examination.
   3.3 Prepare for and perform basic clinical procedures.
   3.4 Perform basic interpretation of commonly used diagnostic tests.
   3.5 Recognize the typical physical exam manifestations of common medical conditions and disorders.
   3.6 Demonstrate the skills of clinical reasoning and clinical problem solving for common conditions and disorders.
   3.7 Create appropriate management strategies for common conditions and disorders.
   3.8 Apply the principles of relieving total pain (physical, psychological, spiritual, social).
   3.9 Demonstrate effective and appropriate communication of medical information, both in writing and verbally.
   3.10 Demonstrate the ability and commitment to continuously improve medical knowledge and skills.

Program Policies

Learning Environment

The Long SOM is committed to creating an environment that promotes academic and professional success in learners and teachers at all levels. The institution strives to create an environment free of behaviors that can adversely affect the Teacher-Learner relationship. An environment where students, residents, fellows, faculty and staff work together, train together and promote the highest level of patient care.

All members of the Long SOM medical education community have a shared responsibility to protect the integrity of the learning environment, a right to work and learn free of unlawful discrimination, harassment and mistreatment, and to report any incident in which that positive learning environment has been compromised.

Standards of Conduct for the Teacher-Learner Relationship

- Responsibilities of teachers
  Treat all learners with respect, fairness, and equality regardless of age, gender, race, ethnicity, national origin, religion, disability, or sexual orientation

- Responsibilities of learners
  Treat all fellow learners and teachers with respect, fairness, and equality regardless of age, gender, race, ethnicity, national origin, religion, disability, or sexual orientation

Behaviors Inappropriate to the Teacher-Learner Relationship

Behaviors that demonstrate disrespect for others or lack of professionalism in interpersonal conduct are inappropriate and will not be tolerated by the institution. These include, but are not limited to, the following:

- unwanted physical contact (e.g. hitting, slapping, kicking, pushing) or threat of the same;
- unwanted verbal contact including loss of personal civility such as shouting, personal attacks, insults, or displays of temper (such as throwing objects);
• sexual harassment (including romantic relationships between teachers and learners in which the teacher has authority over the learner's academic progress) or harassment based on age, gender, race, ethnicity, national origin, religion, disability or sexual orientation;
• discrimination of any form including in teaching and assessment based upon age, gender, race, ethnicity, national origin, religion, disability, or sexual orientation;
• requests for others to perform inappropriate personal errands unrelated to the didactic, investigational, or clinical situation at hand;
• grading/evaluation on factors unrelated to performance, effort, or level of achievement.
• providing health and/or psychiatric or psychological services to any student for which a teacher is involved in the academic assessment or in decisions about the promotion of that student, except in an emergency situation.

Reporting Inappropriate Conduct
General reporting processes and procedures for learners and teachers are outlined in the Standards of Conduct for Teacher-Learner Relationship and the Learning Environment policy (https://uthealthsa.sharepoint.com/LSOM/Documents/UME/POLICY_LIBRARY/OUME_Policy_Standards_Conduct_Teacher_Learner_Relationship.pdf) (*UTHSA password required to view). The underlying concern is for the comfort of the individual raising the concern. The Long SOM will not tolerate any form of retaliatory conduct by or toward teachers or learners who report inappropriate conduct in good faith. Individuals who believe that retaliatory action has been taken against them as a result of reporting or raising a concern regarding inappropriate conduct, may report such action through the procedures set forth in the aforementioned policy.

Non-Involvement of Healthcare Providers in Student Assessment
The Non-Involvement of Healthcare Providers in Student Assessment policy (https://uthealthsa.sharepoint.com/LSOM/Documents/UME/POLICY_LIBRARY/OUME_Policy_Non-Involvement_Healthcare_Providers_Student_Assessment.pdf) (*UTHSA password required to view) is established to ensure that students are evaluated based on common agreed upon performance measures that are independent of confidential or protected health information. This is essential to ensure that student academic performance is evaluated properly and to ensure that students are not discouraged from seeking medical and/or psychological/psychiatric care that is held in the strictest standards of patient privacy and confidentiality, without concern for consequent adverse actions or repercussions.

Students and health care providers should follow these procedures to make certain that the appropriate care is sought and provided.

Health care professionals who provide medical and/or psychological/psychiatric care to medical students must:
• have no role in the formal academic or professionalism evaluation of medical students at the present or future time.
• have no role in advancement/progression/graduation of medical students at the present or future time.
• recuse himself/herself from the formal academic or professionalism evaluation of medical students and from academic or professionalism decisions of advancement/progression/graduation of medical students, if a dual relationship with medical students is anticipated or is discovered, and, when appropriate and without breaching confidentiality, alert the a dean for student affairs immediately.

Students should:
• seek medical care through the Student Health & Wellness Center (SHWC). This medical care is usually provided by registered nurses or advanced nurse practitioners under the supervision of the SHWC medical director. The health care providers in the SHWC may refer medical students to other academic or community health care providers for further/follow-up care.
• seek psychological/psychiatric care through the Student Counseling Center (SCC). A multidisciplinary staff, who is not involved in academic or professionalism evaluation and/or decisions of advancement/progression through the curriculum, provides evaluation and short-term treatment including counseling, psychotherapy, and medication management when necessary to medical students with mental health, situational, social, or academic concerns. The health care providers in the SCC may refer medical students to other academic or community health care providers for further/follow-up care.

Inform staff in the SHWC and SCC that they are students at the Long SOM.

Student Mistreatment
Mistreatment of students will not be tolerated. Mistreatment, intentional or unintentional, occurs when behavior shows disrespect for the dignity of others and interferes with the learning process. Student mistreatment may take many forms all of which impact student performance. Sexual harassment and assault, which are defined by policy (http://uthscsa.edu/hop2000/4.2.2.pdf) through UT Health San Antonio's Equal Employment Opportunity/Affirmative Action Office, are included in this section as forms of student mistreatment**. Student access to personnel and processes for resolution without retaliation are detailed in the Student Mistreatment Policy (https://uthealthsa.sharepoint.com/LSOM/Documents/UME/POLICY_LIBRARY/OUME_Student_Mistreatment_Policy.pdf) (*UTHSA password required to view). Per policy, a student who has a grievance concerning perceived violation of her/his student rights; discrimination based on age, color, disability*, family status, gender, national origin, race, religion, veteran status, sexual orientation; or sexual harassment/sexual assault** may seek resolution through an informal or formal process. Examples of behavior that are unacceptable to the Long SOM and UT Health San Antonio include:

• Physical or sexual harassment/assault
• Discrimination or harassment based on race, gender, age, ethnicity, religious beliefs, sexual orientation, or disability
• Disparaging or demeaning comments about an individual or group
• Loss of personal civility including shouting, displays of temper, public or private abuse, belittling, or humiliation
• Use of grading or other forms of evaluation in a punitive or retaliatory manner Sending students on inappropriate errands
Medical students who feel they have been mistreated may report such perceptions to any of the following:

- Associate Dean for Student Affairs
- Student Ombudsman
- Chief Student Affairs Officer/Title IX Director
- Student Counseling Center
- Office of Student Life
- Course/Clerkship Director

These school representatives are empowered to informally discuss a student’s perceptions related to mistreatment, providing guidance. These school representatives should refer the student immediately to the associate dean for student affairs for further instructions.

*see additional related Health Science Center policies/procedures: "Nondiscrimination Policy and Complaint Procedure" at www.uthscsa.edu/eeo/non-discrimination.asp.

**see additional related Health Science Center policies/procedures: "Sexual Harassment and Sexual Misconduct Policy" at www.uthscsa.edu/eeo/harassment.asp.

**Code of Professional Conduct**

Medical students are expected to maintain the highest standards of professional and ethical conduct. Medical students are expected to conduct themselves in a professional manner in interaction not only with patients, but also with peers, faculty, and staff of the Health Science Center and the broader community. The Long SOM, Health Science Center and UT System have written expectations of professional conduct. The Code of Professional Conduct (https://oume.uthscsa.edu/wp-content/uploads/sites/56/2018/07/Code-of-Professional-Conduct_2018.pdf) in the Long SOM governs the expected behavior of medical students. Each module, clerkship or course director may also develop additional written expectations of professional conduct.

A report of professional misconduct is investigated in accordance with applicable Long SOM, Health Science Center and the UT System policy. Any potential violation of professional conduct is reported to the associate dean for student affairs for investigation. The associate dean for student affairs will be responsible for ensuring that no retaliation is made against the complainant. The associate dean for student affairs will interview both the complainant and the accused student, allowing the accused student the opportunity to respond to the charges and to review the available evidence supporting the charges. The associate dean for student affairs will interview others as indicated. All Health Science Center personnel and students must cooperate with the investigation. At the conclusion of the investigation, the associate dean for student affairs will prepare a written report detailing the charges, the investigative process and the results of the investigation. The associate dean for student affairs will present the written report to the Student Progression and Promotion Committee (SPPC) for recommendations. Any disciplinary action/sanction(s) recommended by the SPPC shall be in accordance with the Long SOM Administration of Code of Professional Conduct for Students policy (https://uthealthsa.sharepoint.com/LSOM/Documents/UME/POLICY_LIBRARY/SPPC_Admin_Professional_Code.pdf) (*UTHSA password required to view) and applicable Health Science Center policies. The decision of the SPPC is final, pending further appeal to the dean of the Long SOM as outlined in the Appeal Process for an Academic Grievance policy (https://uthealthsa.sharepoint.com/LSOM/Documents/UME/POLICY_LIBRARY/OUME_Academic_Grievance_Process.pdf) (*UTHSA password required to view).

**Grades**

The Curriculum Committee (CC) is the faculty body that provides central oversight and makes recommendations to the dean and dean delegates for the overall design, management and evaluation of a coherent and coordinated curriculum. The Student Progression and Promotions Committee (SPPC) is the faculty body charged with review of the academic progress and professional development of each student during all components of the medical education program. The SPPC has primary responsibility for recommending for graduation only those candidates who have satisfactorily completed all graduation requirements and demonstrated the professional conduct appropriate for a physician.

The preclinical phase includes modules taught from the beginning of the first academic year through mid-spring of the second academic year. The clinical phase includes all clerkships and selective/elective courses. The module director determines the academic standards for successful completion of a preclinical module, adhering to a grading rubric approved by the CC. In the clinical years, academic standards for successful completion of a clerkship or selective/elective are determined by the clerkship or course director, remaining within the bounds of applicable CC standardization and approval.

The preclinical and clinical education leaders in accordance with the CC policy and Office for Undergraduate Medical Education (OUME) standards set the grade composition for preclinical modules and clerkships. Per the (https://uthealthsa.sharepoint.com/LSOM/Documents/UME/POLICY_LIBRARY/CC_Policy_Timely_Reporting_Final_Grades.pdf) (Timely Reporting of Grades to Students policy (*UTHSA password required to view)), final grades in the preclinical curriculum must be made available to students within 4 weeks of the last day of the module/course. Final clerkship grades must be made available to students within 6 weeks of the last day of the clerkship. Final grades in the curriculum are submitted to the OUME and ratified by the SPPC.

**Grades for Preclinical Modules (Class of 2020, and 2021)**

For classes of 2020 and 2021, all preclinical module grades are based on an A, B, C, F-system. Grades of A, B, and C are considered passing. A=outstanding performance, B=very good performance, C=satisfactory performance and F=indicates failing performance. No grade of D will be issued. The grade of Incomplete (I) is reserved for circumstances in which academic work is not completed due to illness, family emergency, or other non-academic extenuating circumstances. A grade of I is disallowed for substandard academic performance.

For purposes of class rank, each letter grade is assigned a point value as follows:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Grade Point Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4 points</td>
</tr>
<tr>
<td>B</td>
<td>3 points</td>
</tr>
<tr>
<td>C</td>
<td>2 points</td>
</tr>
<tr>
<td>F</td>
<td>0 points</td>
</tr>
</tbody>
</table>

Remediation grades (as described below) will be classified as “Pass” or “Fail”. For purposes of class rank, a course that is remediated to a “Pass” will be given the same grade point value as a “C.”
Class rank will be calculated twice during the four-year medical education program as follows: 1) at the conclusion of the preclinical curriculum 2) at the date that the clerkships must be completed during the clinical years.

**Grades for Preclinical Modules (Class of 2022 and beyond)**

Beginning in Academic Year 2018-2019, applicable to the graduating class of 2022 and beyond, all preclinical module grades will be based on an Honors, High Pass, Pass, or Fail system.

**Assignment of Final Module Grade:** All activities that contribute to the final module grade will be entered into a grade calculator maintained and managed by the Office of UME, and the point total will convert to a grade as follows:

- **Honors** = 90.00-100 and all Components meet "Honors" benchmarks
- **High Pass** = 85.00-89.99 and all Components meet "High Pass" benchmarks
- **Pass** = 70.00-84.99 OR >84.99 points but did not meet all benchmarks for "High Pass"
- **Fail** = 0-69.99 or failure of one or more individual components

**Grades for Electives and Selectives**

Grades for electives and selectives are based on a pass/fail system. Clinical course student assessment is based on competency and professionalism as per the individual elective or selective grading rubric.

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**Academic Progression**

**General Academic Progression and Professionalism Requirements**

Per the General Academic Progression and Professionalism Requirements for the the Doctor of Medicine (M.D.) Degree Program policy (https://uthhealthsa.sharepoint.com/LSOM/Documents/UME/POLICY_LIBRARY/SPPC_Policy_General_Progression_Professionalism_Reqs.pdf) (*UTHSA password required to view), students who fail to meet minimum passing standards at the conclusion of any Long SOM course are subject to review of their performance in previous coursework. Failure to meet minimum passing standards in more than one course between the time of matriculation and graduation may result in the student being required to repeat a portion of the curriculum or may result in dismissal. Students who fail to complete all degree requirements within six years from matriculation may meet criteria for dismissal. Students who exhibit unprofessional behavior may be subject to dismissal.

The Student Progress and Promotion Committee (SPPC) monitors student progression, promotion, and professional development leading to successful completion of the M.D. degree program. The SPPC ensures uniformity in promotion and graduation by executing established policies related to student advancement and professionalism expectations that are universally applied to all medical students. In this role the SPPC has the authority to:

- mandate a leave of absence (LOA) for a student,
- mandate that a student meet with the associate dean for student affairs and/or the associate dean for curriculum,
- restrict the extracurricular activities of a student, including removal from an office or leadership position the student may hold, and/or
- dismiss a student from the program.

**Policy on Academic Progression - by individual year**

All students are subject to the Impact of Course Failure on Academic Progression policy (https://uthhealthsa.sharepoint.com/LSOM/Documents/UME/POLICY_LIBRARY/CC_Policy_Course_Failure_Impact.pdf) (*UTHSA password required to view). Students should be aware that they are subject to dismissal if they fail to meet satisfactory academic progression requirements. Students should reference the above policy for details regarding the impact of course failures.

**Student Progress Based on NBME Comprehensive Basic Science Exam Performance**

The National Board of Medical Examiners (NBME) offers the Comprehensive Basic Science Exam (CBSE), an achievement test covering material typically learned during basic science education. The CBSE is designed to reflect the content of USMLE Step 1 exam, and is typically used to gauge readiness for USMLE Step 1 and to identify areas of individual strength and weakness in basic science material. Scores on CBSE can be correlated to scores on USMLE Step 1. The Long SOM has established policies pertaining to successful performance on the CBSE prior to taking the USMLE Step 1 in order to ensure that graduates meet at least minimal licensing requirements and to optimize career outcomes for our students.

All students must take the CBSE at the conclusion of the preclinical phase of the curriculum at a date and time established by the Office for Undergraduate Medical Education (OUME). Students are required to meet score benchmarks established by the OUME in order to progress to the clinical/elective phase of the curriculum, including clerkships. Inability to test on the established testing date may delay planned coursework. Students who miss testing will be placed in a USMLE Step I readiness pathway and will be scheduled to take the CBSE at the next offered opportunity. See Student Progress Based on NBME Comprehensive Basic Science Exam Performance policy (https://uthhealthsa.sharepoint.com/LSOM/Documents/UME/POLICY_LIBRARY/SPPC_CBSE_Requirements.pdf) (*UTHSA password required to view).

**United States Medical Licensing Examination**

The United States Medical Licensing Examination (USMLE) is jointly sponsored by the NBME and the Federation of State Medical Boards. A passing score on each portion of the USMLE is accepted by medical boards in every state as evidence of core competency to practice medicine. The current required exams are USMLE Step 1, USMLE Step 2 CK (Clinical Knowledge), USMLE Step 2 CS (Clinical Skills), and Step 3. The Step 3 exam is taken after medical school graduation.

It is essential that medical students meet required benchmarks that lead to medical licensure. Although designed for the purpose of licensing physicians, scores on USMLE Step 1 and Step 2 CK are often used by graduate medical education programs in decisions to interview and rank medical students for residency positions. It is therefore incumbent upon the SOM to establish policies pertaining to the timing and passage of the USMLE in order to optimize career outcomes for students and to ensure that graduates meet at least minimal licensing requirements.
Appeal Process for an Academic Grievance

An academic grievance is a complaint regarding an academic decision or action that may affect the student’s academic record and or concerns adversely influencing the student’s academic status. Examples include, but are not limited to, examination score, module, course or clerkship grades, clinical course narrative comments, remediation, repetition, suspension, probation, professionalism sanctions, and dismissal. A medical student may choose to resolve an academic grievance in the preclinical and clinical phases of the curriculum through either an informal or formal appeal process. An informal appeal process allows a student to pursue resolution of a grievance directly within the administrative structure of a course (i.e. through the associate dean for curriculum in the preclinical curriculum or the clerkship director/course director in the clinical curriculum), while a formal appeal process allows a student to pursue resolution of a grievance through the medical school’s Student Progression and Promotions Committee (SPPC). The Appeal Process for an Academic Grievance policy (https://uthealthsa.sharepoint.com/LSOM/Documents/UME/POLICY_LIBRARY/OUME_Academic_Grievance_Process.pdf) (UTSA password required to view) defines the procedure and timeline for each option.

Dual Degree M.D./M.B.A. Program

Overview

Pending Approval Spring 2020

The M.D./M.B.A. program is a dual degree program where graduate students have the opportunity to concurrently earn both a Master’s of Business Administration (M.B.A.) from The University of Texas at San Antonio (UTSA) and a Doctor of Medicine (M.D.) degree from The University of Texas Health Science Center at San Antonio (UT Health) over the course of five years. Students complete both the M.B.A. and M.D. curriculum in full, though shared credits may be available for specified courses.

Admission Requirements

Students must meet all entrance requirements for admission to UTSA Masters of Business Administration program per the UTSA annual Information Bulletin, which is available online via the UTSA website. The Long School of Medicine retains the right to 1) set eligibility requirements for application based on performance within the MD curriculum and 2) set limits on numbers of students that can apply each academic year. Students may substitute their scores from the MCAT in lieu of the GMAT. Students are responsible for informing the Long School of Medicine of their application to the M.B.A. program. The Long School of Medicine will send a letter of support for their applicants to UTSA.

Degree Requirements

Students will be held to the degree requirements set by both institutions, to include:

- Students admitted to the M.B.A. program or the M.D. program will be expected to meet the degree requirements as published in the UTSA Graduate Catalog or the UT Health Long School of Medicine Catalog, respectively. Once those requirements are met in the respective programs, the students will be eligible to receive the M.B.A. and/or the M.D. degree.
- Progress and academic standing in one program does not affect progress in the other program, although shared credit is only granted for courses satisfactorily completed. However, if a student in the program does not complete the requirements of the M.D. program, the student may complete the M.B.A. program by fulfilling all the requirements of the M.B.A. program.

Program Policies

The UT Health Long School of Medicine M.D. curriculum is guided by best educational practices. The four-year curriculum integrates basic and clinical sciences, vertically and horizontally, incorporates active learning principles and pedagogies, fosters the development of self-directed learning skills and appraisal, and inculcates the concept of lifelong learning, incorporating the use of interactive technologies.

The M.D./M.B.A. Program expects students who are pursuing the dual degree to maintain standards of academic excellence, to progress in a timely fashion toward both the M.D. and M.B.A. degrees, and to maintain professionalism. Students will be subject to the academic guidelines of both the Long School of Medicine and UTSA.

Students who are enrolled in the dual degree program should be aware of the registration, tuition and fees and financial aid procedures for each institution.

Additional policies include:

- Each student shall be responsible for payment of tuition at each institution at which the student is enrolled. The students may be assessed any special fees relevant to enrollment in courses at each institution. Such fees may include building use fees, laboratory use fees, professional liability insurance and health insurance, along with any other fees routinely charged to students enrolled in such course. Students are required to provide proof of immunizations to each institution.
- Both institutions agree to determine the appropriateness of enrollment and continued financial support for students accepted to the Program, including coordination of financial aid awards for students completing both degree in five years.
- Students must be registered at UTSA during the semesters in which they are 1) utilizing any of the UTSA resources, including faculty time and effort, 2) submitting a research proposal to the Research Services Office (if applicable), 3) carrying out the culminating experience/thesis work, and 4) completing the degree requirements at UTSA for the M.B.A.

The policies and procedures of the dual degree program may be amended from time to time, including but not limited to those relating to registration, tuition and fees, and degree requirements. Policies and
Dual Degree M.D./M.P.H. Program

The M.D./M.P.H. Program prepares physicians to treat individuals and populations through training in medicine, biostatistics, epidemiology, behavioral science, public policy, environmental science, and global health. This program allows students to concurrently earn an M.D. through the Long School of Medicine (Long SOM), and a Master in Public Health (M.P.H.), through the University of Texas Health Science Center at Houston (UTHealth) School of Public Health in San Antonio. Classes are available online, in person, or through an interactive video link (ITV) to other UTHealth School of Public Health campuses. A student must be accepted to both the Long SOM and the UTHealth School of Public Health in San Antonio to be a part of the M.D./M.P.H. dual degree program.

The M.P.H. requires completion of 45 credit hours, 12 of which are shared credit hours for completion of the M.D. curriculum in the Long SOM. The program allows both M.D. and M.P.H. degree completion within four or five years.

For more information about the program, or to contact program coordinators or faculty at either school, please email MDMPH@uthscsa.edu

Admissions Requirements

Applicants to the M.D./M.P.H. Dual Degree Program will be admitted independently by UTHSC-SA to the M.D. program and by UTHSC-H SPH to the M.P.H. program according to the admission schedule of each Party. Applicants will be required to meet all standards stipulated by the respective institutions as detailed in their admissions policies.

If accepted into the dual degree program, students traditionally begin coursework for the M.P.H., online or in-person, the summer before starting medical school.

Degree Requirements

This program allows students to accomplish the M.D. and the M.P.H. in four years; however, students may decide to take five years to complete both degrees. The M.P.H. requires completion of 45 credit hours, 12 of which are shared credit hours for completion of the M.D. curriculum in the Long SOM.

Program Policies

The M.D./M.P.H. Program prepares physicians to treat individuals and populations via training in biostatistics, epidemiology, behavioral science, public policy, and environmental health. This program allows students to attain the M.D. and the M.P.H. concurrently; however, students may decide to take five years to complete both degrees. Candidates must first be accepted to the Long SOM and then apply to the UTHealth School of Public Health in San Antonio. If accepted into the dual degree program, students will traditionally begin coursework for the M.P.H. (online or in person) the summer before starting medical school. The M.P.H. requires completion of 45 credit hours, 12 of which are shared with the M.D. curriculum in the Long SOM.

The UTHealth School of Public Health in San Antonio is the local campus with full-time faculty. The campus is located less than one mile from the Long SOM, with convenient parking. Classes are offered online and in person with instructors from San Antonio and via ITV with instructors from other UTHealth School of Public Health campuses. See the San Antonio campus website at: https://sph.uth.edu/campuses/san-antonio/

The M.D./M.P.H. Program expects students who are pursuing the dual degree to maintain standards of academic excellence, to progress in a timely fashion toward both the M.D. and M.P.H. degrees, and to maintain professionalism. Students will be subject to the academic guidelines of both the Long SOM and the UTHealth School of Public Health in San Antonio. Failure to meet or achieve the established standards will result in denial of advancement and dismissal from the M.D./M.P.H. Program. A student’s academic standing and ability to progress with respect to either the Long SOM or the UTHealth School of Public Health in San Antonio are administered through the appropriate dean’s office or their designees. M.D./M.P.H. students shall have the right to appeal a decision of dismissal from the program. Dual degree students maintain their right to formally appeal decisions regarding academic and non-academic concerns within the policies of the respective institutions.

Dual Degree M.D./OMS Certificate Program

The Oral and Maxillofacial Surgery (OMS) certificate program is a six-year course of study, leading sequentially to an M.D. degree and then an OMS Certificate. All of the training occurs on the campus of the Health Science Center or on rotations with clinical partners affiliated with the Health Science Center. There are currently no off-site rotations.

Admissions Requirements

Applications to the M.D./OMS Certificate Program are submitted through the American Dental Education Association Postdoctoral Application Support Service (ADEA PASS) and acceptances are offered through the Postdoctoral Dental Matching Program at National Matching Services, Inc. The applicants must have a dental degree granted by a Commission on Dental Accreditation (CODA)-recognized school in the United States or Canada, must be a U.S. citizen or legal resident, and must demonstrate outstanding academic ability, clinical skills, and professionalism.

The Long SOM Admissions Committee has full and final authority for all students admitted to the M.D. program. The M.D./OMS subcommittee of the Long SOM Admissions Committee will assist the combined certificate program with reviews, interviews, assessments, and selections of potential applicants. The members of the M.D./OMS subcommittee present at deliberations will approve the rank list on behalf of the entire Long SOM Admissions Committee. The M.D./OMS Certificate Program will accept a maximum of 3 students per entering class.

Only applicants who are American citizens or possess official status as Permanent Residents of the U.S. can be considered for interview and acceptance at this time.

Degree Requirements

Students in the M.D./OMS Certificate Program are given predetermined advanced standing in the medical school because much of their foundational curriculum was completed during dental school. The Long SOM will allow for a maximum bulk transfer of 44 credit hours for the successful completion of foundational coursework in a CODA-recognized D.D.S. or D.M.D. program. (The foundational coursework can include Biochemistry, Embryology, Introduction to Professional Ethics, Introduction to History Taking and Physical Exam Skills, Foundations of Professional Development, Gross Anatomy, Histology, Microbiology, Pharmacology, and Physiology).
Plan of Study

Preclinical Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTD 3030</td>
<td>Clinical Foundations</td>
<td>3</td>
</tr>
<tr>
<td>CIRC 6007</td>
<td>Mind, Brain and Behavior</td>
<td>9</td>
</tr>
<tr>
<td>CIRC 6009</td>
<td>Endocrine and Female Reproductive</td>
<td>7</td>
</tr>
<tr>
<td>CIRC 6011</td>
<td>Digestive Health and Nutrition</td>
<td>7</td>
</tr>
<tr>
<td>CIRC 5005</td>
<td>Clinical Skills Longitudinal Module</td>
<td>8.25</td>
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Students are on OMS rotation in mid December after formal semester ends

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>CIRC 5017</td>
<td>Hematology</td>
<td>3</td>
</tr>
<tr>
<td>CIRC 5013</td>
<td>Respiratory Health</td>
<td>4</td>
</tr>
<tr>
<td>CIRC 5011</td>
<td>Circulation</td>
<td>5</td>
</tr>
<tr>
<td>CIRC 5015</td>
<td>Renal and Male Reproductive</td>
<td>5</td>
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</table>

Students are on OMS rotation in mid June after formal semester ends

Clinical Curriculum

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>OBGY 3005</td>
<td>Obstetrics/Gynecology Clerkship</td>
<td>6</td>
</tr>
<tr>
<td>PSYC 3005</td>
<td>Psychiatry Clerkship</td>
<td>6</td>
</tr>
<tr>
<td>PEDI 3005</td>
<td>Pediatrics Clerkship</td>
<td>6</td>
</tr>
<tr>
<td>FMED 3005</td>
<td>Family Medicine Clerkship</td>
<td>6</td>
</tr>
<tr>
<td>MEDI 3105</td>
<td>Medicine Clerkship</td>
<td>8</td>
</tr>
<tr>
<td>SURG 3005</td>
<td>Surgery Clerkship</td>
<td>8</td>
</tr>
<tr>
<td>NEUR 3005</td>
<td>Neurology Clerkship</td>
<td>4</td>
</tr>
<tr>
<td>EMED 3005</td>
<td>Emergency Medicine Clerkship</td>
<td>4</td>
</tr>
</tbody>
</table>

Advanced Clinical Rotations

The advanced clinical rotations are designed to prepare students for their one-year graduate surgical training prior to the two-year advanced OMS specialty rotations.

Inpatient sub-internship selective 4 weeks:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>ANES 4002</td>
<td>Critical Care</td>
<td>4</td>
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</table>

Ambulatory care selective 4 weeks and an elective 20 weeks:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURG 4012</td>
<td>Oral Maxillofacial Surgery</td>
<td>4</td>
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</tbody>
</table>

Didactics 4 weeks:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>EMSP 4100</td>
<td>Advanced Cardiac Life Support</td>
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<tr>
<td>INTD 4105</td>
<td>Medical Jurisprudence</td>
<td>0.5</td>
</tr>
<tr>
<td>MEDI 4115</td>
<td>Palliative Care</td>
<td>0.5</td>
</tr>
<tr>
<td>PATH 4290</td>
<td>Clinically Applied Laboratory</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Three didactic electives chosen by the student (0.5 hours/elective)

Students are on OMS rotation for additional 20 weeks

Students must also pass USMLE Step 1 and USMLE Step 2 CK/CS within three attempts as a requirement for medical school graduation.

Of note, during all three years of the M.D. component of the OMS Certificate Program, students may have additional didactic or clinical training requirements that are outside the typical Long School of Medicine Academic Calendar. These additional requirements are not mandatory requirements for the M.D. degree, but are necessary requirements for the OMS Certificate.

ANES 4002. Critical Care. 4 Credit Hours.

Students are required to participate in the adult surgical intensive care unit at Audie Murphy VA Hospital. Emphasis will be placed on the diagnosis and treatment of all aspects of acute respiratory failure, especially that occurring in the postoperative state, including post-cardiac surgery. The principles of pulmonary, renal, cardiac, and nutritional support will be discussed. The ethics of life support are also discussed.

CIRC 5005. Clinical Skills Longitudinal Module. 14.75 Credit Hours.

The Clinical Skills Longitudinal module threads throughout the entire first and second year curriculum. Using standardized and real patients, students learn medical history taking and physical examination techniques. In addition, through didactic sessions, simulations, small group sessions and labs, students master the knowledge, communication skills, professional, and interpersonal skills necessary for fostering positive doctor-patient relationships.

CIRC 5011. Circulation. 5 Credit Hours.

The Circulation module provides an integrated approach to the basic and clinical science concepts related to the cardiovascular and hematopoietic systems. Students acquire a broad understanding of normal structure and function of the cardiovascular and hematopoietic systems including the cardiac cycle, cardiovascular pressures and flows, nutrients and oxygen delivery, hematopoiesis, and the hemostasis system through active, collaborative learning activities which may include, but are not limited to, laboratory, small group, and clinical case sessions. A comprehensive, multidisciplinary overview of the pathophysiology, epidemiology, biostatistics, interpretation of diagnostic tests, and pharmacotherapeutic and other therapeutic principles related to cardiovascular and hematopoietic disorders is included.

CIRC 5013. Respiratory Health. 4 Credit Hours.

The Respiratory Health module integrates basic science and clinical concepts related to respiratory health disease. A comprehensive study is conducted of the normal structure and function, pathophysiology/pathology, clinical manifestations, and interpretation of diagnostic tests for respiratory diseases. The student is immersed in a multidisciplinary study of pharmacotherapeutic approaches to treatment, interventional therapies, the use of evidence-based medicine and research, epidemiology, and prevention in the field of respiratory health. Students acquire a broad understanding of normal and abnormal respiratory system function through active, collaborative learning activities which may include, but are not limited to, laboratory, small group, and clinical case sessions.

CIRC 5015. Renal and Male Reproductive. 5 Credit Hours.

The Renal and Male Reproductive module is a comprehensive overview of the structural and urologic components of the renal and the male reproductive system. Students gain a deeper understanding of glomerular and tubular function and pathology, as well as acute and chronic kidney injury and also benefit from a multidisciplinary approach represented by adult and pediatrics, and biochemistry. A broad understanding of normal and abnormal renal and male reproductive system function is achieved through active, collaborative learning activities which may include, but are not limited to, laboratory, small group, and clinical case sessions.

CIRC 5017. Hematology. 3 Credit Hours.

The goal of this course is to expose students to the pathogenesis and pathophysiology of disease and disorders as they pertain to the specialty of hematology. During the module, the first year medical students will come to appreciate the basic science foundation for the clinical practice of Hematology. Students will gain an understanding of the medical non-medical factors that effect the hematology system.
CIRC 6007. Mind, Brain and Behavior. 9 Credit Hours.
Mind, Brain, and Behavior module provides a comprehensive introduction to the normal anatomy, development, physiology and radiological features of the human nervous system and its pathologic disorders. Through active learning methods, students will practice clinical assessment of the nervous system while learning the major features of common neurological, neurosurgical, psychiatric and psychological disorders and pharmacological approach for the nature of the experience of the brain. The student will gain an appreciation for the nature of the experience of having an illness affecting the brain and mind, and a deepened compassion for patients with these illnesses.

CIRC 6009. Endocrine and Female Reproductive. 7 Credit Hours.
The Endocrine- Reproductive module provides an integrated, comprehensive study of the normal structure and function of the endocrine and reproductive systems as well as the clinical manifestations of endocrine and reproductive disorders. Innovative, active learning methods which may include, but are not limited to laboratory, small group, and clinical case sessions allow students to develop critical thinking skills and gain a deeper understanding of the role of the endocrine system in regulation of metabolic activity, water and electrolyte balance, the endocrinology of the menstrual cycle, pregnancy, as well as human reproduction. The students benefit from a multidisciplinary approach incorporating the study of pharmacotherapeutic modalities, evidence based medicine, as well as current clinical/translational research applications into the endocrinology/reproductive medicine curriculum.

CIRC 6011. Digestive Health and Nutrition. 7 Credit Hours.
The Digestive Health and Nutrition module provides an integrated overview of the basic science and clinical concepts related to digestive health and nutrition. Through innovative learning methods that may include, but are not limited to laboratory, small group, and clinical case sessions, students gain a deeper understanding of the normal structure and function of the digestive system, as well as pathophysiology/ pathology, clinical manifestations and interpretation of diagnostic tests as they relate to digestive health and nutrition. This comprehensive, multidisciplinary study includes pharmacotherapeutic approaches to treatment, interventional therapies, psychosocial aspects of digestive disease, the use of evidence-based medicine and research, epidemiology, and prevention in the field of digestive health and nutrition.

EMED 3005. Emergency Medicine Clerkship. 4 Credit Hours.
This four week core clerkship introduces the 3rd year medical students to the specialty of emergency medicine and reviews principles of emergency care that will benefit a graduate entering any specialty.

EMSP 4100. Advanced Cardiac Life Support. 1 Credit Hour.
The focus of this course is the initial management of the cardiopulmonary arrest patient including advanced airway management techniques, cardiovascular pharmacology, defibrillation, and arrhythmia analysis. The student must review the current AHA ACLS text prior to class. Successful completion results in an ACLS Provider Course Completion Card. Instruction presented satisfies guidelines published by the American Heart Association's ECC for their ACLS core curriculum.

FMED 3005. Family Medicine Clerkship. 6 Credit Hours.
The family medicine clerkship introduces students to the principles, philosophy, and practice of family medicine, including fundamental concepts of comprehensive, continuous, cost-effective, family-oriented medical care. Students participate in the care of patients in various outpatient and inpatient settings. Students will have the opportunity to practice clinical problem solving in the undifferentiated patient and to improve their basic clinical skills. Students are expected to gain basic knowledge in the diagnosis and management of common family medicine problems, health promotion/disease prevention, and geriatrics. Prerequisites: Successful completion of all required preclinical courses is prerequisite to enrollment in any of the clinical clerkships.

INTD 3030. Clinical Foundations. 3 Credit Hours.
The purposes of this completely on-line course are to: 1. Prepare early clinical students to increase knowledge in clinical settings including: a. Exposure to healthcare team members, b. Exposure to roles on clerkship (H&Ps, orders, SOAP notes, prescriptions, etc.), c. Interpretation of EKGs and radiographs, d. Interpretation of normal/abnormal lab values, e. Recognition of fatigue/strategies to combat fatigue in clinical settings, f. Basic understanding of ventilator management/ICU care, g. Patient insurance issues/patient health care financial resources, h. Avoidance of medical legal problems, i. Better success on exams, j. Performance of evidence-based searches in medical literature, k. Understanding fundamentals of translational research; 2. Assist students in developing new skills expected of early clinical students including: a. Intravenous catheter placement, nasogastric catheter placement, urinary catheter placement, and O2 management, b. Sterile gloving and sterile technique, c. Basic suturing/staple placement and removal; and 3. Prepare early clinical students for their roles in clinical settings including: a. Patient care under supervision, b. Patient privacy-HIPAA, c. Professionalism and responsibility to team and patients, d. Patient safety, e. Proper use of social media in patient care, f. Strategies to be best student on the first clerkship, g. OSHA and hand hygiene, h. Proper professional attire, i. Completion of evaluations on residents and faculty. The students will complete credentials for major clinical sites.

INTD 4105. Medical Jurisprudence. 0.5 Credit Hours.
The course will center on the Texas Medical Practice Act and applicable federal laws.
MEDI 3105. Medicine Clerkship. 8 Credit Hours.
The objectives of this clinical experience are to provide opportunities for students to develop patient evaluation skills, productive self-learning techniques, a sound pathophysiological approach to medical disease, a concern and awareness for the patient's needs, and personal professional behavior. The student spends eight weeks, divided into two 4-week blocks, assigned to the inpatient General Medicine Service. An additional four weeks are spent in outpatient services. Bedside clinical teaching is emphasized by asking the student to perform patient evaluations, to contribute to the care of selected patients, and to participate in the clinical rounds of the services. During this clerkship the student receives intensive instruction from the Internal Medicine house staff and faculty. In addition, the student is expected to undertake independent patient-oriented reading and to systematically review pertinent information introduced during the preclinical years. Finally, students attend a series of clinical conferences including medical grand rounds, morbidity and mortality conferences, clinical subspecialty conferences, and organized courses in electrocardiography and nutrition. Successful completion of all required preclinical courses is prerequisite to enrollment in any of the clinical clerkships. The student spends eight weeks, divided into two 4-week blocks, assigned to the inpatient General Medicine Service. An additional four weeks are spent in outpatient services. Bedside clinical teaching is emphasized by asking the student to perform patient evaluations, to contribute to the care of selected patients, and to participate in the clinical rounds of the services. During this clerkship the student receives intensive instruction from the Internal Medicine house staff and faculty. In addition, the student is expected to undertake independent patient-oriented reading and to systematically review pertinent information introduced during the preclinical years. Finally, students attend a series of clinical conferences including medical grand rounds, morbidity and mortality conferences, clinical subspecialty conferences, and organized courses in electrocardiography and nutrition.

MEDI 4115. Palliative Care. 0.5 Credit Hours.
This MS4 didactic elective will focus on the main beliefs of palliative care, which include symptom control and end-of-life care in general and in specific populations, fulfilling the following educational principles, applicable to many other areas in medicine. * Communication skills instruction for medical students * Exposure to interdisciplinary teams (IDT) * Instruction in the multicultural practice of medicine.

NEUR 3005. Neurology Clerkship. 4 Credit Hours.
This core clerkship is designed to give the student experience in evaluation of patients with neurologic disorders an opportunity to master the neurological exam in inpatient ward and consultation settings, as well as outpatient settings. The student will be expected to participate in the complete care of assigned General Neurology Ward patients and patients on the Stroke Specialty Wards. Students will also participate in Neurology consult rounds and have an opportunity to see consult patients. They will be assigned to either the University Hospital or VA Neurology wards/consult services for two weeks of the rotation. They will spend one week of the rotation of the Stroke wards service and participate in stroke specialty clinics during that week. One week of the rotation will be devoted to participating in a variety of general neurology and specialty clinics. Students are required to perform appropriately focused history and physical exams, prepare written and verbal presentations, interpret laboratory data and develop a differential diagnosis and management plan on all assigned patients. Students will also attend neurology morning report, the MS3 Neurology Lecture Series, selected Neurology Residency Lecture Series topics and Neurology grand Rounds. Students will receive a clinical performance evaluation by the supervising attending and residents using the SOM 3rd year medical student evaluation form.

OBGY 3005. Obstetrics/Gynecology Clerkship. 6 Credit Hours.
A clerkship consisting of gynecology and obstetrics is provided for medical students who have successfully completed the course in reproductive physiology and pathophysiology. The goal of the clerkship is to provide students with opportunities to prepare to function as a house officer capable of providing preventive care and treatment or competent to identify the patient's need for direction into an appropriate care environment. Supervised direct patient experience occurs in the obstetrical wards, operating room, labor and delivery suite, emergency room, and the obstetrical, gynecologic, family planning, and cancer detection clinics. A guide identifying instructional goals and the mechanisms to reach them is provided. Twenty-five seminars provide the opportunity for integration of clinical experience and didactic learning. In order to enroll, students must have successfully completed all required preclinical courses.

PATH 4290. Clinically Applied Laboratory Medicine (CALM). 0.5 Credit Hours.
This course is an eleven-contact-hour mandatory course in laboratory medicine for MSIV students. Offered during the spring semester, the course is taught by members of the Pathology Department using patient case scenarios to illustrate laboratory medicine aspects of patient care management. An introductory one-hour lecture is presented to the entire class as a whole to provide course format information and small-group assignments. Groups of twenty-five to thirty students are formed based upon medical/surgical specialties; a student is assigned to a group according to chosen specialty. Patient cases are selected to emphasize important laboratory medicine points pertinent to a particular specialty.

PEDI 3005. Pediatrics Clerkship. 6 Credit Hours.
This third-year pediatric clerkship addresses issues unique to childhood and adolescence by focusing on human developmental biology, and by emphasizing the impact of family, community, and society on child health and well-being. Additionally, the clerkship focuses on the impact of disease and its treatment on the developing human, and emphasizes growth and development, principles of health supervision, and recognition of common health problems. The role of the pediatrician in prevention of disease and injury and the importance of collaboration between the pediatrician and other health professionals in stressed. During this clerkship, students spend time working in outpatient and inpatient settings.

PSYC 3005. Psychiatry Clerkship. 6 Credit Hours.
The psychiatric clinical clerkship is designed to familiarize the student with the personality traits, illnesses, and emotional disturbances that affect health and productivity. It is an opportunity for the student to develop and strengthen clinical skills in interviewing patients, formulating treatment plans, and carrying out treatment with patients who have psychiatric illness. The clerkship is arranged so the student may select the assignment area on the basis of particular interest, i.e., an inpatient/outpatient setting. The student's role in the clerkship is arranged to allow for considerable experience in the working relationship between patient and "physician" in the treatment process. Seminars have been developed to allow the student an in-depth appreciation of the various psychiatric states and emotional problems that affect the general practice of medicine. The student-staff ratio allows for small groups of students to meet with faculty, thereby enhancing learning. The clerkship is an opportunity for the students to look at their personal feelings and values and understand how they influence patient care, to learn how to deal with psychiatric disease, and to become more comfortable in dealing with the personalities of patients with organic disease. Prerequisites: Successful completion of all required preclinical courses is prerequisite to enrollment in any of the clinical clerkships.
The goals of the MSTP are:

1. Preparation of the medical student for patient care/clinical skills, including a. performance of a focused history and physical examination on a surgical patient, b. interpretation of diagnostic tests and procedures for the surgical patient, c. performance of basic technical skills, d. demonstration of clinical reasoning and problem-solving skills for the surgical patient, e. formulation of a diagnostic and therapeutic plan for a surgical patient; 2. Increase fund of medical knowledge for a surgical patient, 3. Self-directed learning, 4. Application of best evidence-based practices to improve patient care and to prepare for daily activities, and 5. Development of interpersonal and communication skills, including: a. oral presentations to the surgical team, b. written notes in the medical record, c. relationship with patients and their families, d. relationship with the healthcare team, e. practice of professionalism in all settings.

In order to achieve these goals, the student should have a sound knowledge of surgical anatomy and the pathophysiology of surgical illness. The student should have strong understanding of the patient’s surgical disease process. The student should master simple basic technical skills by the end of the clerkship. The student should master a focused history and physical examination on a surgical patient. The student should propose and interpret diagnostic tests and procedures that are appropriate for the surgical disease. The student should develop a differential diagnosis and demonstrate clinical reasoning and problem-solving skills that integrate clinical data. The student should develop a logical diagnostic and therapeutic plan for surgical problems. The student should develop strong interpersonal relationships and communication skills with patients, their families and the healthcare team. The student should be well read and well prepared for operations and rounds, and begin to develop good habits for self-directed, lifelong learning. The student should demonstrate an understanding of best practices that improve the health of surgical patients. The student should provide competent, compassionate care for patients in all surgical settings.

SURG 3005. Surgery Clerkship. 8 Credit Hours.
The eight-week core surgery clerkship is divided into a four-week general surgery rotation and a four-week surgery specialty rotation. The goals of the third-year surgical curriculum are divided into 5 broad categories: 1. Preparation of the medical student for patient care/clinical skills, including a. performance of a focused history and physical examination on a surgical patient, b. interpretation of diagnostic tests and procedures for the surgical patient, c. performance of basic technical skills, d. demonstration of clinical reasoning and problem-solving skills for the surgical patient, e. formulation of a diagnostic and therapeutic plan for a surgical patient; 2. Increase fund of medical knowledge for a surgical patient, 3. Self-directed learning, 4. Application of best evidence-based practices to improve patient care and to prepare for daily activities, and 5. Development of interpersonal and communication skills, including: a. oral presentations to the surgical team, b. written notes in the medical record, c. relationship with patients and their families, d. relationship with the healthcare team, e. practice of professionalism in all settings.

In order to achieve these goals, the student should have a sound knowledge of surgical anatomy and the pathophysiology of surgical illness. The student should have strong understanding of the patient’s surgical disease process. The student should master simple basic technical skills by the end of the clerkship. The student should master a focused history and physical examination on a surgical patient. The student should propose and interpret diagnostic tests and procedures that are appropriate for the surgical disease. The student should develop a differential diagnosis and demonstrate clinical reasoning and problem-solving skills that integrate clinical data. The student should develop a logical diagnostic and therapeutic plan for surgical problems. The student should develop strong interpersonal relationships and communication skills with patients, their families and the healthcare team. The student should be well read and well prepared for operations and rounds, and begin to develop good habits for self-directed, lifelong learning. The student should demonstrate an understanding of best practices that improve the health of surgical patients. The student should provide competent, compassionate care for patients in all surgical settings.

SURG 4012. Oral Maxillofacial Surgery. 4 Credit Hours.
Senior students function as "interns" on the oral maxillofacial surgery service. They admit and discharge oral maxillofacial patients. They perform history and physical examinations, and keep daily records on oral maxillofacial patients. They follow patients in the outpatient clinics, in the emergency department, in the intensive care units, and on general wards. They participate in operations for their patients. They participate in pre-and post-operative care of oral maxillofacial issues including outpatient sedation and anesthesia, dentoalveolar surgery, facial fractures, facial aesthetic and reconstructive surgery, management of facial and dental pain, and management of facial infections.

Dual Degree M.D./Ph.D. Program

On July 1, 2018, the Dual-Degree M.D./Ph.D. Program became an NIH-awarded Medical Scientist Training Program (NIH T32GM113896). This prestigious award distinguishes UT Health San Antonio as an exceptional physician-scientist training program at a national level.

The goals of the MSTP are:

- to prepare physician-scientists to become accomplished health care providers and investigators with problem-solving knowledge and skills
- to train physician-scientists in the conduct of clinical and translational research in culturally diverse settings
- to develop future leaders in academic health care and biomedical research

Admissions Requirements

To apply for the M.D./Ph.D. Program, applicants must submit a completed and verified application using the American Medical College Application Service (AMCAS) prior to the application deadline. Applicants who also seek to be considered for admission into the M.D. program at the Long SOM must also submit an application using the Texas Medical and Dental School Application Service (TMDSAS) prior to the application deadline. The precise deadlines for these applications vary, but for the AMCAS application, the deadline is typically on November 1 of the year preceding enrollment.

The Long SOM Admissions Committee has full and final authority for all students admitted to the M.D. program. The M.D./Ph.D. subcommittee of the Long SOM Admissions Committee will assist the M.D./Ph.D. Program with reviews, interviews, assessments, and selections of potential applicants. The members of the M.D./Ph.D. subcommittee present at deliberations will approve applicants on behalf of the entire Long SOM Admissions Committee.

Degree Requirements

The M.D./Ph.D. Program is seven to nine years in length. Students usually begin with two years of the preclinical curriculum in the Long SOM. After successful completion of USMLE Step 1, they enter a three- to five-year Ph.D. program in the Graduate School of Biomedical Sciences (GSBS), after which they return to the Long SOM for two years of clinical rotations. With the guidance and approval of the M.D./Ph.D. dean and M.D./Ph.D. Program Steering Committee, students select laboratory rotations, graduate program affiliation in one of several Ph.D. disciplines or programs, and a Supervising Professor from the graduate school faculty throughout the institution. Enrichment activities include a monthly "Bench-to-Bedside" course, two annual M.D./Ph.D. retreats, a M.D./Ph.D. journal club, several clinician-scientist competencies workshops, and a clinical refresher course to provide smooth transition from graduate school into the remaining clinical years. Opportunities exist for student research during the fourth year of medical school. With completion of this program, M.D./Ph.D. graduates are prepared for careers as dual-degree physician-scientists.

Program Policies

The M.D./Ph.D. Program is under the supervision of the M.D./Ph.D. program directors, deans of the Long SOM and the GSBS, and the M.D./Ph.D. Steering Committee. The M.D./Ph.D. Advisory Committee, with representation from the Long SOM and GSBS, provides direction and oversight of all activities of the M.D./Ph.D. Program and advises the M.D./Ph.D. program directors. The M.D./Ph.D. Steering Committee provides strategic planning and oversight of financial support of the M.D./Ph.D. Program. An independent M.D./Ph.D. Program Promotions Board reviews the progress of M.D./Ph.D. students every six months throughout medical and graduate school enrollment. Progression is assessed on the basis of academic performance, USMLE Step 1 and USMLE Step 2CK/USMLE Step 2CS scores, research rotation reports, research and scholarly activities, evaluations from the Supervising Professor, and student self-assessments. Recommendations from the M.D./Ph.D. Promotions Board are reviewed at the next monthly meeting of the M.D./Ph.D. Advisory Committee.

The M.D./Ph.D. Program expects students who are pursuing the dual degree to maintain standards of academic excellence, to progress in a timely fashion toward both M.D. and Ph.D. degrees, and to maintain
professionalism. Students will be subject to the academic guidelines and progression policies of both the Long SOM and the GSBS. However, they will be subject to additional requirements as specified by the M.D./Ph.D. Program in order to remain members of that program. The M.D./Ph.D. Program provides for stipend, tuition and fees during the entire course of studies (M.D. and Ph.D.) for students in good standing in the program.

Students in the M.D./Ph.D. Program must satisfactorily achieve milestones and criteria established by the M.D./Ph.D. Advisory Committee and the Long SOM Student Progression and Promotions Committee (SPPPC) policies. Failure to meet or achieve the established standards will result in denial of advancement and dismissal from the M.D./Ph.D. Program. A student’s academic standing and ability to progress with respect to either the Long SOM or the GSBS are administered through the appropriate dean’s office or their designees. M.D./Ph.D. students shall have the right to appeal a decision of dismissal from the program. The appeal may be heard by the M.D./Ph.D. Advisory Committee or the Long SOM SPPPC based on the body taking dismissal action. Solely on procedural concerns can a student appeal to a higher institutional administration.

Master of Deaf Education and Hearing Science

The Master of Deaf Education and Hearing Science (MDHES) Program, nationally certified by the Council on Education of the Deaf, was created in 2002 in order to provide graduate students in deaf education and medicine the opportunity to build the relationships needed to provide quality services to children with hearing loss. This program is one of only a handful in the country that provides intensive training in how to help children with hearing loss develop spoken language through the use of residual hearing, high-powered hearing aids and modern surgical procedures such as cochlear implants. The San Antonio based program holds courses at an approved off campus location, Sunshine Cottage School for Deaf Children. A Houston-based cohort is accepted biannually with synchronous courses held via teleconference at the Center for Hearing and Speech.

Certified teachers for children with hearing loss are in high demand. Every year positions across the nation go unfilled because of the lack of qualified professionals. In Texas alone, 20-30 teacher vacancies go unfilled annually. If you have an interest in children, language and communication, and a bachelor’s degree already, the MDEHS could be the next step in your career. There are generous tuition scholarships available.

For cohorts beginning in May of 2019 and after, the MDEHS Program will consist of 45 credit hours completed in six semesters (24 months). MDEHS students will take three courses at the University of Texas at San Antonio (UTSA) in Educational Psychology (EP).

Admissions Requirements

Application for admission to the Master of Deaf Education and Hearing Science (http://www.uthscsa.edu/shp/dehs) (MDEHS) Program may be completed online at https://www.applytexas.org/adappc/commonapp.WBX. Completed application, application fee, official transcripts, and supporting documents must be submitted between August 1 and February 1.

All required admissions information and documents must be submitted to the department before an applicant is considered for admission. Because applications and documents are reviewed as they are received, applicants are encouraged to apply early in the application period. Classes begin in the summer semester each year.

Admission Factors

In addition to the academic factors listed below, the following non-academic factors are considered for selecting students for the MDEHS:

- Hometown or county of residence that has been designated a medically underserved and/or health professions shortage area, especially South Texas
- Employment history, especially as it occurred simultaneously with undergraduate academic preparation
- Positions of leadership held
- Public/community service or volunteer activities
- Volunteer activities in education-related areas
- Prior experience in providing educational-related services
- Extracurricular activities
- Communication skills – as demonstrated in the essay and personal interview
- Commitment/desire to serve in an underserved region of the state following graduation
- Reference letters or recommendations
- Research accomplishments
- Future goals
- Knowledge of, and preparation to enter, the profession of deaf education gained through observing or volunteering in a school setting or other setting

Admission Requirements

To be admitted to the MDEHS (http://www.uthscsa.edu/shp/dehs) Program, applicants must have earned a baccalaureate degree from an accredited college or university, with an overall grade point average of 3.0. Incoming students must have completed a baccalaureate degree in education or a related field (e.g., communication science disorders). Depending on the applicant’s background, collateral coursework in Curriculum and Instruction from another college or university may be required. In addition, 50 hours of classroom observation and 25 hours of field experience may be required for non-education majors. Observation and field experience hours may be waived based upon review of undergraduate transcripts and experience.

Degree Requirements

State Certification

Deaf Education and Hearing Science is a profession requiring certification in teaching hearing-impaired children. State of Texas Certification examinations are administered through the State Board of Educator Certification (SBEC) (http://www.tea.state.tx.us/index4.aspx?id=3461). All students who enter the program already holding teacher certification must pass the Texas Examinations of Educator Standards (TExES) Deaf and Hard of Hearing (#181). Students who enter the program as non-teachers must also become certified as teachers in Texas and must pass the Pedagogy and Professional Responsibilities Exam, EC–12 (TExES). The MDEHS Program is nationally accredited through the Council on Education of the Deaf (CED) (http://www.deafed.net/PageText.asp?hdnPageSize=58). It is highly recommended that students apply for certification through CED as well.
Co-Requisites
Two sign language classes from an accredited college or university must be completed during coursework.

Sample Plan of Study

<table>
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<tr>
<th>First Year</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Summer</td>
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<tr>
<td>DEHS 5005</td>
<td>Factors In Child Language Acquisition 2.5</td>
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<td>DEHS 5007</td>
<td>Introduction to Audiology 3</td>
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<td>Fall</td>
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<tr>
<td>DEHS 5003</td>
<td>Speech Mech-Anatomy/Physiology/Acoustics 2.5</td>
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<td>Language Development 3</td>
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<tr>
<td>DEHS 6008</td>
<td>Speech for Hearing Impaired Student 2.5</td>
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<td>DEHS 6009</td>
<td>Aural (Re) Habilitation 2.5</td>
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<tr>
<td>DEHS 6002</td>
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<tr>
<td>INTD 5064</td>
<td>Applied Statistics for Health Care Practitioners 3</td>
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<td>DEHS 5001</td>
<td>Foundations of Ed for the Deaf 2.5</td>
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<td>Comprehensive Examination 0</td>
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For cohorts beginning May 2019 and after:

Co/Pre-Requisites
- ALS I
- ALS II

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<th>First Year</th>
<th>Credit Hours</th>
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<td>DEHS 5007</td>
<td>Introduction to Audiology 3</td>
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<td>DEHS 5011</td>
<td>Language Development 3</td>
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<tr>
<td>EDP 5303</td>
<td>Principles and Techniques of Evaluation 1</td>
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<td>DEHS 6009</td>
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<td>DEHS 6002</td>
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<td>EDP 6243</td>
<td>Cognitive Assessment and Intervention 1</td>
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Second Year

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<th>Credit Hours</th>
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<tr>
<td>INTD 5064</td>
<td>Applied Statistics for Health Care Practitioners 3</td>
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<tr>
<td>DEHS 6004</td>
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<tr>
<td>EDP 5033</td>
<td>Human Development Across the Lifespan 1</td>
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<td>DEHS 6006</td>
<td>Best Practices in Early Intervention 2.5</td>
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<td>Spring</td>
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<tr>
<td>DEHS 6022</td>
<td>Teaching/Management Apprenticeship 2 4</td>
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<tr>
<td>DEHS 5001</td>
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<td>Total Credit Hours: 45.0</td>
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1 These are educational psychology courses that will be taken at UTSA.

Objectives/Program Outcomes
The MDEHS (http://www.uthscsa.edu/shp/dehs) Program is based on, and committed to, teaching future teachers of the deaf the auditory-oral methods of intervention/education for children with hearing loss, as stated in the Auditory-Verbal Position Statement published by the Board of Directors of Auditory-Verbal International.

In addition, the program’s philosophy encompasses the following educational assumptions:

- Many profoundly deaf children can obtain an excellent education in an auditory-oral or auditory-verbal environment;
- At some time during the educational years, it is desirable that a child with hearing loss attend school with her/his hearing peers;
- Applicants with a baccalaureate degree in education or related fields can become effective teachers of the hearing impaired through application of previously gained knowledge and skills plus the acquisition of procedures, techniques, and information unique to the hearing-impaired child. The MDEHS curriculum addresses topics and skills required for Texas teacher certification and national certification.

Each child with a hearing loss is a unique combination of learning styles, degrees of and adjustment to a hearing loss, motivation toward learning, home and community experiences, intellectual abilities, and personal responses to the environment. A dually prepared teacher is in an enviable position of being able to identify these factors and create a learning setting that would permit maximum attainment not only by the child with a hearing loss but also the typically developing children.
Deaf Education Program Grading System

Grades
The standing of students in their work is expressed by the following grades:

A = Excellent
B = Above Average
C = Average
D = Below Average
F = Failure

Grades for courses in which performance is graded an S (Satisfactory) or U (Unsatisfactory) are not used in computing the grade point average. The symbol I (incomplete) may be recorded for a student who has not completed course assignments at the conclusion of the course.

In some programs, students have the option of seeking exemption from certain courses in the curriculum if they have successfully completed an equivalent course in the curriculum at another college or university or content in an examination. The symbol CR (Credit) is recorded for a course(s) for which the student has been exempted.

Grades in Clinical Rotations, Practicums, and Fieldwork Courses
Clinical Rotations, Practicums, and Fieldwork Courses may be graded S (Satisfactory) or U (Unsatisfactory), or may be assigned a letter grade, depending on the departmental policy.

A grade of S or other designation of an acceptable grade is assigned if the student successfully satisfies the criteria for clinical courses. Failure to successfully satisfy the course criteria may result in an I (Incomplete) or a U (Unsatisfactory) or a letter grade considered unsatisfactory based on departmental policy.

Criteria and time frame for removal of an I or U or other unsatisfactory grade in clinical courses are determined based on clinical documentation and consultation with the clinical supervisor/clinical instructor, not to exceed one full calendar year. An I or U or other unsatisfactory grade may require that the student complete an additional clinical affiliation or other remediation that could extend the professional curriculum beyond the expected graduation date. More than one unsatisfactory grade is not allowed within the total clinical course sequence.
SCHOOL OF DENTISTRY

Accreditation
All educational programs in the School of Dentistry are accredited by the Commission on Dental Accreditation of the American Dental Association, a specialized accrediting agency recognized by the U.S. Department of Education. The Commission’s last site visit was in February 2012. All programs in the School of Dentistry are currently accredited. The Commission on Dental Accreditation may be contacted by phone at 1-800-621-8098. The Commission is located at 211 East Chicago Avenue, Chicago, Illinois 60611.

Brief History
The Texas legislature created the Health Science Center School of Dentistry, a public institution, in 1969 with the first class entering in 1970. Located in the heart of the South Texas Medical Center, it is one of five Health Science Center schools. A leader in research activities, the School of Dentistry also has strong clinical and didactic programs. Numerous research opportunities are available to students, and the interdisciplinary aspect of many research programs is regarded as one of the institution’s strengths. Clinical training occurs in the school’s clinics and University Hospital, as well as at various extramural sites in San Antonio and southern Texas. The School of Dentistry also offers advanced education in all of the dental specialties, advanced training in general dentistry and a Bachelor of Science in Dental Hygiene. The School of Dentistry is accredited by the Commission on Dental Accreditation. The school is situated in northwest San Antonio, the seventh largest city in the United States.

Mission
The School of Dentistry (http://www.uthscsa.edu/academics/dental) mission is to improve oral health through excellence in education, research, patient care, and community engagement.

Vision
To be recognized as the leading academic oral health institution.

Doctor of Dental Surgery (D.D.S.)
The Doctor of Dental Surgery is the dental degree that is required for the practice of general dentistry. It also is required for any advanced dental education programs. Our program at the School of Dentistry combines multidisciplinary training with a strong clinical focus, which prepares our students for a range of dental careers. The curriculum in the first two years of the Doctor of Dental Surgery program is an integrated basic and clinical sciences program. This program provides a foundation of science in context. Clinical experiences begin in the first year and increase each year until it predominates in the junior and senior years.

Doctor of Dental Surgery (D.D.S.) Program Admissions Requirements
Information about admission requirements is detailed on the School of Dentistry website. Applicants must have at least 90 semester-hour credits from a U.S. or Canadian accredited college or university. Applicants are required to complete courses by the end of the spring semester before entering School of Dentistry, and with a grade no lower than C.

BIOLOGICAL SCIENCES
• 14 semester hours (12 semester hours of lecture & 2 semester hours of formal lab) or 21 quarter hours (18 quarter lecture hours & 3 quarter lab hours) of Biological Science are required.
• Includes all Biological Science courses applied toward Baccalaureate degree in traditional science fields, such as General Biology, Biochemistry, Microbiology, Molecular Biology, Genetics, Ecology, Immunology, Parasitology and Anatomy & Physiology.

GENERAL CHEMISTRY
• 8 semester hours or 12 quarter hours of General Chemistry, as required for college science majors, including the corresponding laboratory experience are required. (8 semester hours = 6 hours of lecture & 2 hours of lab; 12 quarter hours = 9 hours of lecture & 3 hours of lab).
• Should include familiarity with analytic and volumetric techniques. Inorganic courses include General Chemistry, Physical Chemistry and Quantitative Analysis.

ORGANIC CHEMISTRY
• 8 semester hours or 12 quarter hours of Organic Chemistry, as required for college science majors, including the corresponding laboratory experience are required. (8 semester hours = 6 hours of lecture & 2 hours of lab; 12 quarter hours = 9 hours of lecture & 3 hours of lab).

BIOCHEMISTRY
• 3 semester hours or 5 quarter hours of Biochemistry is required. This requirement is in addition to the Biological Science requirement of 14 hours and may not be used to fulfill the Biological Science requirement. The course may be taught in the Biology, Biochemistry or Chemistry department. Must have a grade of C or better.

PHYSICS
• 8 semester hours or 12 quarter hours of Physics, as required for college science majors, including the corresponding laboratory experience are required. (8 semester hours = 6 hours of lecture & 2 hours of lab; 12 quarter hours = 9 hours of lecture & 3 hours of lab)
• Includes all physics courses applied toward a baccalaureate degree in any traditional science field.

ENGLISH
• 6 semester hours or 9 quarter hours of college English are required.
• Any course accredited by the English Department that fulfills a general education English requirement of a baccalaureate degree will be accepted. Remedial or developmental courses or “English As a Second Language” courses are not accepted.

STATISTICS
• 3 semester hours or 5 quarter hours of Statistics is required. The Statistics course should be taught in a Math or Statistics Department. Individual dental schools may consider statistics courses taught in other departments on an individual basis with appropriate documentation from faculty.

In addition to scholastic requirements for admission, all candidates are required to take the Dental Admission Test (DAT) and, must perform certain essential functions, as described at http://dental.uthscsa.edu/admissions/DDS_requirements.php. All applicants who are legal residents of Texas must apply through the Texas Medical and Dental Schools Application Service. Applications are available online at http://www.utsystem.edu/tmdsas. Applications are also accepted from the American Association of Dental Schools Application Service (AADSAS)
for non-Texas residents. AADSAS applications can be found online (https://portal.aadsasweb.org).

**Deposit Fee for Admitted Applicants**
The School of Dentistry assesses a deposit fee of $60 for admitted applicants wishing to secure their spot in the entering class. The deposit is non-refundable.

**Applicant and Student Criminal Background Check Policy**

**Criminal Background Checks for Applicants and Students of the School of Dentistry of the Health Science Center.**

**I. Applicability**
This policy applies to applicants or students enrolled in an educational program that includes, or may include at a future date, assignment to a clinical health care facility. Visiting students who enroll in courses with such an assignment are also subject to the policy. Presently, programs that require a background check include:

1. Doctor of Dental Surgery Students  
2. International Dentist Education Program (IDEP) Students  
3. Dental Hygiene Students  
4. Advanced Dental Education Students

**II. Policy**
Effective immediately, applicants must submit to and satisfactorily complete a criminal background check review as a condition to admission into all programs designated as requiring a criminal background check. An offer of admission will not be final until the completion of the criminal background check(s) with results is deemed favorable. Admission may be denied or rescinded based on a review of the criminal background check.

Students who refuse to submit to a criminal background check or do not pass the criminal background check review may be dismissed from the program.

**III. Rationale**
Health care providers are entrusted with the health, safety and welfare of patients, have access to controlled substances and confidential information, and operate in settings that require the exercise of good judgment and ethical behavior. Thus, an assessment of a student or applicant's suitability to function in such a setting is imperative to promote the highest level of integrity in health care services.

Clinical facilities are increasingly required by accreditation agencies, such as Joint Commission on Accreditation of Healthcare Organization (JCAHO), to conduct criminal background checks for security purposes on individuals who provide services within the facility and especially those who supervise care and render treatment. To facilitate this requirement, educational institutions have agreed to conduct these criminal background checks for students and faculty.

Clinical rotations are an essential element in certain curriculum programs. Students who cannot participate in clinical rotations due to criminal or other adverse activities that are revealed in a criminal background check are unable to fulfill the requirements of the program. Additionally, many healthcare licensing agencies require individuals to pass a criminal background check as a condition of licensure or employment. Therefore, it is in everyone's interest to resolve these issues prior to a commitment of resources by the School of Dentistry, the student or applicant.

The School of Dentistry is obligated to meet the contractual requirements contained in affiliation agreements between the university and the various healthcare facilities.

**IV. Criminal Background Check Report**

1. **Obtaining a Criminal Background Check Report.** The School of Dentistry will designate approved company(ies) to conduct the criminal background checks and issue reports directly to the School of Dentistry. Results from a company other than those designated will not be accepted. Students and applicants must contact a designated company and comply with its instructions in authorizing and obtaining a background check. Students and applicants are responsible for payment of any fees charged by a designated company to provide the background check service.

2. **Scope.** Criminal background checks include the following and cover the past seven years:
   
a. Criminal history search, including convictions, deferred adjudications or judgments, expunged criminal records, and pending criminal charges involving felonies, Class A, Class B, and Class C violations

   b. Social Security Number (http://www.ssa.gov/ssnumber) verification


   e. General Services Administration (GSA) (http://www.gsa.gov/) search


   g. Applicable State Exclusion List (Texas)


3. **Rights.** Students and applicants have the right to review the information reported by the designated company for accuracy and completeness and to request that the designated company verify that the background information provided is correct. Prior to making a final determination that will adversely affect the applicant or student, the School of Dentistry will provide applicants or students a copy of or access to the criminal background check report issued by the designated company, and inform them of their rights, how to contact the designated company to challenge the accuracy of the
report and that the designated company was not involved in any decisions made by the School of Dentistry.

V. Procedure

1. Applicants

   a. The criminal background check report will be submitted to the Assistant Dean for Students for its review. If the report contains negative findings, the Associate Dean for Student Affairs may request that the applicant submit additional information relating to the negative finding, such as a written explanation, court documents and police reports. The Assistant Dean for Students, in consultation with the School of Dentistry administrative leadership team, will review all information available to it and determine whether the offer of admission should be withdrawn. For Advanced Education trainees, the background check report will be submitted to the Assistant Dean for Students and Advanced Education Program director in the relevant Department. Advanced Education Programs will review the information and, with consultation of the Advanced Education Committee, will make determinations about amending admissions decisions.

   b. Admissions decisions are final and may not be appealed.

2. Committee Review Standards. In reviewing the background check reports and any information submitted, a committee may consider the following factors in making its determinations: the nature and seriousness of the offense or event, the circumstances surrounding the offense or event, the relationship between the duties to be performed as part of the educational program and the offense committed, the age of the person when the offense or event occurred, whether the offense or event was an isolated or repeated incident, the length of time that has passed since the offense or event, past employment and history of academic or disciplinary misconduct, evidence of successful rehabilitation, and the accuracy of the information provided by the applicant or student in the application materials, disclosure forms or other materials. The committee should bear in mind both the safety interests of the patient and the workplace, as well as the educational interest of the student. In reviewing background checks and supplementary information, advice may be obtained from university counsel, university police, or other appropriate advisors, including state regulating bodies such as licensing boards.

3. Deferral. A reviewing committee may extend an offer of admission for up to one year while the matter is resolved.

VI. Confidentiality and Record Keeping

1. Background check reports and other submitted information are confidential and may be reviewed by university officials and affiliated clinical facilities in accordance with the Family Educational Records and Privacy Act (FERPA) (http://www2.ed.gov/policy/gen/guid/fpco/ferpa).

2. Students. Criminal background check reports and other submitted information of students will be maintained in the School of Dentistry in accordance with the university's record retention policy for student records.

3. Applicants Denied Admission. Criminal background check reports and other submitted information of applicants denied admission into the program will be maintained in accordance with the university's record retention policy.

VII. Other Provisions

1. The School of Dentistry shall inform students who have negative findings in their background check report and are nonetheless permitted to enroll that the School of Dentistry's decision is not a guarantee that every clinical facility will permit the student to participate in the educational program at its facility, or that any state will accept the individual as a candidate for registration, permit or licensure.

2. A criminal background check will be honored for the duration of enrollment if the student is continuously enrolled. A student who has a break in enrollment is required to complete a new criminal background check. A break in enrollment is defined as non-enrollment of at least one semester in the approved curriculum of the certificate or degree program. However, a student whose attendance has been suspended due to a licensing agency's eligibility certification process will not be considered as having a break in enrollment. An officially approved leave of absence is not considered a break in enrollment.

3. Falsification of information, including omission of relevant information, may result in denial of admission or dismissal from the educational program.

4. Criminal activity, which occurs while a student is in attendance at the university, must be reported immediately by the student to the School of Dentistry administration. Criminal activity committed while in attendance and failure to report criminal activity that has occurred may result in disciplinary action, including dismissal, and will be addressed through the university's academic or disciplinary policies.

Doctor of Dental Surgery (D.D.S.) Degree Requirements

Standards for promotion and graduation:

A. The degree of Doctor of Dental Surgery is awarded by the Board of Regents upon recommendation of the faculty to the Dean, and certification by the Dean to the President. Candidates must have satisfactorily fulfilled the academic requirements of the dental curriculum, have a GPA of 2.0 or above, have passed Part II of the National Board Dental Examinations, be in good professional standing, and comply with all necessary legal and financial requirements.

B. Candidates for the degree must have fulfilled all requirements within six years of registering in the freshman class. Approved leaves of absence will not be included in this time period.

Promotion:

A. Recommendation for promotion to the next year of the curriculum is made by the Academic Performance Committee. A student will be recommended for promotion to the next year of the curriculum if a grade-point average of 2.0 or above is achieved in both the Group A* and Group B** courses of the year's curriculum and a passing grade has been achieved in all courses in the year's curriculum. Promotion to the senior year also requires having passed the National Board Dental Examination, Part I.

*Group A - all basic science and dental didactic courses

**Group B - all pre-clinical laboratory and clinic courses
Doctor of Dental Surgery (D.D.S.) Sample Plan of Study

The overall curriculum consists of approximately 4,500 hours of educational opportunities over a four-year program. The curriculum consists of fall and spring semesters in each of the four years with separate ‘summer’ sessions as part of the spring semester, between years 1 and 2, 2 and 3, and between years 3 and 4. The School of Dentistry curriculum is extensively hands-on with students receiving more than 2,000 hours of patient care learning experiences including a substantial number of hours providing patient care in community-based clinics. Approximately 75% of the curriculum is devoted to the diagnosis and treatment of oral diseases, 18% is devoted to underlying and foundational biomedical principles with emphasis on the pathophysiology of dental diseases and medical disorders that have oral manifestations, and 7% of the curriculum addresses practice management and public health. The four-year curriculum continuum is designed to provide dental students with a progressive learning experience in four phases that evolves from: (1) the biomedical foundations of normal human function, to (2) analysis of the causes and presentation of abnormalities, to (3) acquisition of skills needed for patient assessment and performance of procedural tasks, to (4) supervised provision of patient care in School of Dentistry clinics and affiliated community sites.

The following section reviews the focus of the curriculum.

The curriculum for the first two years features:

- Integrated basic and clinical sciences; foundation science in context; “just-in-time” learning
- Learning about the craniofacial region, before the systemic health and disease
- Reinforcement of didactic material through preclinical activities
- Earlier hand skills development/earlier clinical experiences
- Earlier transition to clinic with DS 2 didactic and preclinical curriculum ending in mid-March

The curriculum structure divides the courses into three tracks:

- Human Health and Disease (HHD): Emphasizes the integrated foundation knowledge
- Foundations of Restorative Dentistry (FRD): Highlights clinical hand skill development
- Introduction to Patient Care (IPC): Combines tracks for non-surgical patient care experiences in small groups

The contemporary and integrated curriculum provides our students:

- An easier transition to junior clinic
- More meaningful clinical experiences due to the knowledge and skills learned in the first and second year curriculum
- More applications of critical thinking/problem solving skills

The summer between the sophomore and junior year allows students to enrich their education with selectives and clinical rotations. A minimum of one selective course is required.

Junior Year

The third year of the curriculum has a strong clinical focus as students apply the knowledge, skills, and values acquired in the freshman and sophomore years to the oral health care of patients. Junior students join one of eight General Practice Groups (GPGs) and remain in a GPG during their 3rd and 4th years of dental school. A team of faculty guides each GPG and work closely with students in their group to provide hands-on coaching and feedback. The GPGs provide students with an environment where they have continuous contact with a small group of instructors and also provides a forum for case conferences, student reports, faculty demonstrations and case reviews, and other learning activities to enrich the students’ clinical education. Learning experiences, derived from the process of patient assessment and treatment, are orchestrated to facilitate students’ acquisition of many of the 31 curriculum competencies that are evaluated by faculty assessment of students’ daily interaction with patients and performance on formal competency examinations where students provide patient care independent of faculty assistance.

Students also receive focused instruction and patient care experiences during discipline-specific rotations in the junior year; each rotation must be passed to progress to the senior year. An important component of the GPG experience is evaluation of students’ professionalism, which occurs via the Patient Management course. Students cannot progress to the senior year if they are found to be deficient in professionalism and consequently fail the Patient Management course. Additional information about this course appears in the junior year course descriptions.

Summer Session between Years 3 and 4

The summer between the junior and senior years allows students to enrich their education with selectives and clinical rotations. A minimum of a two-week clinical selective is required for all students except those who enroll in a full summer research selective. Students may continue selectives into the senior year.

Senior Year

Students continue their focus on acquisition of clinical competency through extensive patient care experiences within the GPG framework as previously described. Seniors are expected to demonstrate increasing capacity for independent functioning with less reliance on GPG faculty for guidance and assistance. Through the patient assignment function of the GPGs, seniors receive opportunities to provide care for patients with a wider variety of oral health needs and to treat dental problems that are more complex. To enrich and diversify their education, seniors participate in focused rotations in general dentistry, pediatric dentistry, and oral surgery at various community locations. Student evaluation in the senior year is based on several sources including: performance on exams that measure progress toward competency; daily assessment of patient care quality by supervising faculty; acceptable clinic utilization.

Below is a representative list of courses per year and credit hours that students must successfully complete. This list is subject to change based on changes recommended by the faculty to enhance student learning or to better meet the CODA (Commission on Dental Accreditation) or SACS (Southern Association of Colleges and Schools) Standards.

Dental Selectives

The School of Dentistry has a selective program that allows students to enrich their education through courses of their choosing.

Satisfactory completion of selectives will be recorded on the transcript as CR. No credit hours will accrue, and the computation of the GPA will be unaffected. When a student has been officially enrolled in a selective course, the selective becomes a mandatory part of the student’s curriculum and must be completed unless proper procedures for
withdrawal are followed. Failure to withdraw properly or unsuccessful
completion of the selective will be recorded on the transcript as an F
grade. This will be treated by the Academic Performance Committee as
any other failing grade in any required course.

Selective courses are offered primarily in the summer, but many are
year-round as selectives by arrangement. Courses are offered to all level
of students. Rising DS2 and DS3 students are required to complete a
minimum of one selective. Rising DS4 students are required to complete
two-week continuous clinical selective, a six-week research selective,
or another approved plan. The two-week selective may be one of the
following:

- South Texas Rotation
- General Practice Dental Emergency Care (DECC)
- Oral and Maxillofacial Surgery
- Pediatric Dentistry Summer Selective

Current selectives are listed below; however, offerings may vary each
year. An updated list is sent to students twice a year to allow them to plan
ahead. The list with course descriptions, teacher, location, etc. can be
found online at http://dental.uthscsa.edu/selectives/index.php.

1 Subject to change.

Freshman Year (Entering Class of 2017)

The curriculum is organized into three 'tracks': Human Health Disease
(HHD), Introduction to Patient Care (IPC) and Foundations for Restorative
Dentistry (FRD). The HHD track is an integrated approach to teaching
the clinical sciences so that students are learning the foundation
sciences in context of the clinical sciences. In IPC, students gain a
familiarity with the patient care environment and acquire a variety of non-
invasive clinical skills. FRD is designed to allow students to develop
the manual dexterity and hand-eye coordination necessary to perform
laboratory and clinical tasks required for clinical practice. The time frame
for each track is equally divided- three each per week. A unique feature
of this curriculum is that we start with the head and neck in year one and
then move into other organ systems in year two.

Freshman Year - Group A

First Year

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<tr>
<th>Units</th>
<th>Semester</th>
<th>Semester</th>
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<td>II</td>
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<td>Oral Health and Dental Disease</td>
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<tr>
<td>DHHD 5002 Craniofacial Complex</td>
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<td>DHHD 5003 Periodontium and Pulp</td>
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Freshman Year - Group B

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<tr>
<td>DIPC 5001 Patient Care Foundations</td>
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<td>II</td>
</tr>
<tr>
<td>DFRD 5001 Introduction to Restorative Dentistry (Lecture)</td>
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<td>DFRD 5002 Introduction to Preclinical Restorative Dentistry (lab)</td>
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Sophomore Year - Group A

Second Year

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<tr>
<td>DHHD 6005 Cardiovascular and Pulmonary Systems</td>
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<td>DHHD 6006 Renal, Gastrointestinal &amp; Liver</td>
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<tr>
<td>DHHD 6007 Hematopoietic / Lymphoid and Musculoskeletal Systems; Orofacial Pain</td>
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<td>DHHD 6008 Endocrine, Reproductive, Nervous System and Mental Health</td>
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<td>DIPC 6004 Developmental Dentistry Year 2 Fall Semester</td>
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<td>DIPC 6005 Oral and Maxillofacial Surgery, Management of Pain, Anxiety and Medical Emergencies</td>
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<td>DFRD 6005 Advanced Restorative Procedures (Lecture)</td>
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<td>DFRD 6007 Replacement of Teeth (Lecture)</td>
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<td>DFRD 6008 Advanced Head &amp; Neck/Oral</td>
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<td>DFRD 6010 Patient-Centered Oral Health Care: Behavioral, Ethical, and Evidence-Based Dentistry</td>
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Sophomore Year - Group B

Second Year

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<td>DIPC 6002 2nd Year Patient Care Foundations</td>
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<td>DFRD 6006 Advanced Restorative Procedures (Lab)</td>
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## Junior Year - Group A

### Third Year

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<td>DIAG 7036</td>
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<td>DIAG 7052</td>
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<td>DIAG 7055</td>
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<td>EMSP 7001</td>
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<td>PATH 7023</td>
<td>Oral &amp; Maxillofacial Pathology: Clinicopathologic Conference</td>
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Total Units in Sequence: 17

### Junior Clinic Rotations

All junior dental students enhance their clinical experiences by participating in several School of Dentistry and off-campus required clinical rotations including the following. These are subject to change based on community availability:

- Oral Surgery
- Dental Emergency
- Geriatrics
- Pediatric Dentistry
- Periodontics

## Senior Year - Group A

### Fourth Year

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<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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Total Units in Sequence: 8.5

## Senior Year - Group B

### Fourth Year

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Total Units in Sequence: 26.5

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1 A single grade at the end of the year is given for courses that extend through both semesters.

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Senior Clinical Rotations

All senior dental students enhance their clinical experiences by participating in several School of Dentistry and off-campus required clinical rotations including the following. These are subject to change based on community availability.

Doctor of Dental Surgery (D.D.S.)
Objectives/Program Outcomes

1. Students will be able to provide oral health care within the scope of general dentistry, demonstrate the capacity to lead oral health care teams, and collaborate with other health care providers.

2. Students will be able to manage the oral health care of infants, children, adolescents and adults, the unique needs of women, the elderly and patients with physical, cognitive, emotional or development challenges.

3. Students will be able to integrate biomedical knowledge, best quality research, clinical expertise and patient values to provide evidence-based oral health care, including critical appraisal of new treatment methods.

4. Students will be able to provide ethically and socially responsible oral health care in compliance with the laws and regulations governing the practice of dentistry, and use psychosocial, behavioral and patient centered approaches to provide oral health care for diverse patient populations within contemporary models of health care delivery and in multicultural work environments.

Program Policies

Academic Standards
The academic standards for successful completion and grade assignment shall be established by the department or ad hoc committee under which the course is administered. In arriving at a final grade, consideration will be given to written, oral, and practical examinations as well as clinical performance when applicable. Non-cognitive factors such as performance under stress, integrity, initiative, interpersonal relations, and personal and professional characteristics will also be considered. A passing grade will not be awarded to a student whose performance in non-cognitive areas is unacceptable.

The academic standards for successful completion and grade assignment shall be established by the department or ad hoc committee under which the course is administered. In arriving at a final grade, consideration will be given to written, oral, and practical examinations as well as clinical performance when applicable. Non-cognitive factors such as performance under stress, integrity, initiative, interpersonal relations, and personal and professional characteristics will also be considered. A passing grade will not be awarded to a student whose performance in non-cognitive areas is unacceptable.

The academic standards can be accessed on the School of Dentistry intranet; and at the beginning of an academic year, all students will be reminded of their existence and location.

Final Grades
A final grade shall be reported after completion of a course as:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
</tr>
<tr>
<td>C</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>D</td>
<td>Poor</td>
</tr>
<tr>
<td>F</td>
<td>Failure in a graded course or failure to successfully complete an ungraded course</td>
</tr>
<tr>
<td>CR</td>
<td>Satisfactory completion of a required course for which no letter grade is given</td>
</tr>
<tr>
<td>EX</td>
<td>Exemption</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete. Not a final grade.*</td>
</tr>
<tr>
<td>WP</td>
<td>Withdrew Passing</td>
</tr>
<tr>
<td>WF</td>
<td>Withdrew Failing</td>
</tr>
</tbody>
</table>

*This grade is assigned by the course director when the student's reason for failure to satisfactorily complete all required work is acceptable. A grade of ‘I’ must be corrected during the summer remediation period or by a specified time approved by the Academic Performance Committee.

**Recorded when a course is dropped before first examination/grade assignment.

Credit Hours and Grade Point Average
One [1] semester hour credit is given for each:
- 16 clock hours of lecture or conference
- 48 clock hours of technique laboratory
- 64 clock hours of clinic

Grade point average is calculated in the standard manner with the following weight assigned to grades:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Grade Point Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
</tr>
<tr>
<td>CR</td>
<td>Not used in calculation of GPA</td>
</tr>
</tbody>
</table>

Midyear Progress Reports
Final grades awarded at midyear will be submitted to the University Registrar and the Associate Dean for Academic, Faculty and Student Affairs for each student enrolled in a course when that course has been completed.

Academic Warning
1. An academic warning is an official communication between the Associate Dean for Academic, Faculty and Student Affairs and the “at risk” student. Academic warning is a courtesy to the student, allowing for supportive dialog between the student and the School of Dentistry’s administration.

2. Academic warning is offered only at midyear. A student will receive an academic warning from the Associate Dean for Academic, Faculty and Student Affairs for achieving a grade point average less than 2.0 for either Group A or Group B courses completed during the fall semester.
3. An academic warning, unto itself, does not require prescribed action on the part of the student. It is expected that the student who has received an academic warning will correct midyear academic deficiencies by the end of the academic year.

Academic Probation
1. In addition to other reasons, a student receiving a final grade of "F" in a course at any time during the academic year will be placed on academic probation.
2. A student who is on academic probation is prohibited from graduation or promotion to the next academic year. Academic probation must be corrected, therefore, before the student may advance or graduate.
3. Unless the student is dismissed, a student will remain on academic probation until all academic deficiencies are corrected.
4. Once on academic probation, the student has a required timeline to improve his/her academic deficiencies. If not corrected in the prescribed amount of time, the student will be considered for dismissal.

b. Criteria

   i. A student will be placed on academic probation if s/he meets one or more of the following conditions:
      1. Receipt of a final "F" grade in any course at any time during the academic year.
      2. Receipt of a GPA less than 2.0 in either Group A or Group B courses of a year's curriculum, unless the student is dismissed.
      3. Failure to pass National Board Dental Examinations, Part I by the end of the DS3 year.
      4. Failure to pass National Board Dental Examinations, Part II by the end of the DS4 year.

   c. Removal from Academic Probation Status

      i. A student is recommended for removal from academic probation once all academic deficiencies have been corrected. The Academic Performance Committee recommends specific methods for students to improve their academic records:
         1. The remediation of specific courses.
         2. The repetition of the academic year in its entirety.
         3. The establishment of an altered curriculum, to include correction of National Board deficiencies.

   ii. A student no longer on academic probation is eligible for promotion to the next academic year or for graduation.

   iii. If the student does not improve his/her academic record in the prescribed time period to allow removal from academic probation status, the student will be considered for dismissal.

Recommendations for Specific Academic Situations
1. Correction of an "F" Grade Deficiency. In an effort to help a student correct an "F" Grade Deficiency in one or more courses, the Academic Performance Committee may recommend one of the following courses of action:

   a. Remediation of the course or courses for which an "F" grade has been assigned. Since failure to successfully remediate places the student in a category for academic dismissal, a student may elect to repeat the academic year in its entirety even though remediation has been recommended.

      i. A course director will not initiate a remediation program for a student unless remediation has been recommended by the Academic Performance Committee.

      ii. The remediation program previously designed and published in the course syllabus will be implemented by the course director.

      iii. Remediation for senior students may be scheduled during the academic year, but all other remediation will be scheduled during a specified period in the summer.

   b. Repetition of the academic year in its entirety. If remediation is not recommended by the Academic Performance Committee, the student must repeat the academic year in its entirety.

2. Correction of a Grade Point Deficiency

   a. A student receiving a GPA below 2.0 in Group A and/or Group B courses of a year's curriculum will be considered for dismissal. However, after reviewing the student's academic record and considering any extenuating circumstances, the Academic Performance Committee may recommend one of the following actions in lieu of dismissal:

      i. Remediation of one or more courses [F and/or D grades] designated by the Committee which will help raise the deficient GPA to 2.0 or above.

      1. Since failure to successfully remediate a deficient GPA places a student in a category for academic dismissal, a student may elect to repeat the academic year in its entirety even though remediation has been recommended.

      2. The remediation program will be designed by the course director.

      3. Remediation for senior students may be scheduled during the academic year, but all other remediation will be scheduled during a four-week period in the summer.
4. Failure to Successfully Remediate or Repeat Year
   a. The Academic Performance Committee will review the student’s academic record and consider any extenuating circumstances before making a recommendation for dismissal. Only in exceptional circumstances will the Academic Performance Committee recommend another correction program in lieu of dismissal. No student is allowed to repeat an academic year more than once.

Final Grade for Course Remediation/Repetition
   i. A grade of "C" is the highest grade that can be achieved in the remediation of a course. Following remediation of a course, the grade assigned will be the grade ("C", "D" or "F") achieved by the student as set forth in the academic standards of the remediation course.

   ii. Following repetition of a course during repetition of an academic year in its entirety, the grade assigned will be the grade achieved by the student as set forth in the academic standards of the course.

   iii. All grades achieved by a student in a course (i.e. original, remediation, repetition) will appear on the official transcript but only the most recent grade achieved will be used in calculating the grade point averages.

3. Correction of National Board Dental Examination Deficiency
   a. In an effort to help a student correct a National Board Dental Examination deficiency, the Academic Performance Committee may recommend completion of an altered curriculum which includes requirements for skills maintenance, preparation for retesting, and achievement of a passing grade in the National Board examinations.

   b. The altered curriculum will be developed by the Associate Dean for Academic, Faculty and Student Affairs in conjunction with an Ad Hoc Committee appointed by the Academic Performance Committee.

   c. Eligibility for promotion or graduation will be restored upon satisfactory completion of all requirements of the altered curriculum.

   d. Failure to successfully complete all requirements of the altered curriculum by the end of the academic year will place the student in a category for academic dismissal.

   e. Junior students who retake the National Board Dental Examinations, Part I in the "summer" preceding their senior year, are required to take the exam no later than May 20 of that summer. If a student has not passed Part I by the time grades are due for summer remediation, the student will not progress to the senior year unless this is due to extenuating circumstances.

4. Failure to Successfully Remediate or Repeat Year
   a. The Academic Performance Committee will review the student’s academic record and consider any extenuating circumstances before making a recommendation for dismissal. Only in exceptional circumstances will the Academic Performance Committee recommend another correction program in lieu of dismissal. No student is allowed to repeat an academic year more than once.

   i. A grade of "C" is the highest grade that can be achieved in the remediation of a course. Following remediation of a course, the grade assigned will be the grade ("C", "D" or "F") achieved by the student as set forth in the academic standards of the remediation course.

   ii. Following repetition of a course during repetition of an academic year in its entirety, the grade assigned will be the grade achieved by the student as set forth in the academic standards of the course.

   iii. All grades achieved by a student in a course (i.e. original, remediation, repetition) will appear on the official transcript but only the most recent grade achieved will be used in calculating the grade point averages.

iv. Calculation of GPA Following Course Remediation or Repetition of the Year
   1. "F" Grade Deficiency [REMEDIATION]: The grade achieved by the student in remediation of an "F" grade in a course is the grade that will be used in calculating the Group A or Group B GPA for the academic year and the overall GPA; however, both grades for the course will appear on the final transcript.

   2. "F" Grade Deficiency [REPETITION OF YEAR]: The grades achieved by the student in all courses in the repetition of the year in its entirety will be the grades used in calculating the Group A and Group B GPA’s for the academic year and the overall GPA; however, the previous grade or grades achieved in each course will also appear on the final transcript.

   3. Grade Point Deficiency [REMEDIATION]: The grade achieved by the student in remediation of a course in an attempt to correct a deficient Group A or Group B GPA (less than 2.0) is the grade that will be used in calculating the Group A or Group B GPA for the academic year and the overall GPA; however, both grades for the course will appear on the final transcript.

   4. Grade Point Deficiency [REPETITION OF YEAR]: The grades achieved by the student in all courses in the repetition of the year in its entirety will be the grades used in calculating the Group A and Group B GPA’s for the academic year and the overall GPA; however, the previous grade or grades achieved in each course will also appear on the final transcript.

Dismissal
1. A student can be considered for dismissal from the School for academic deficiencies or violation of University regulations. The Academic Performance Committee is responsible for considering students for academic dismissal.

2. Academic Dismissal
   a. An option to appear before the Academic Performance Committee will be extended to the student before a vote is taken to recommend academic dismissal. The purpose of the appearance is to inform the Committee of extenuating circumstances which may have contributed to the student’s performance. The student may request that other appropriate verbal and/or written testimony regarding these circumstances be presented at this meeting. Only members of the Committee will be present when the vote for dismissal is taken.

   b. A student will be considered for academic dismissal if s/he meets any of the following conditions:

      i. Receipt of a GPA less than 2.0 in either Group A or Group B courses of the year’s curriculum.
ii. Receipt of a GPA less than 2.0 in either Group A or Group B courses of the year’s curriculum after completing summer remediation or repetition of the academic year in its entirety.

iii. Unsuccessful attempt to remediate a course or courses for which an “F” grade has been given.

iv. Receipt of an “F” grade for a course or courses during the repeat of an academic year.

c. National Board Deficiency

i. Failure to successfully complete all the requirements of an altered curriculum designed to correct a National Board deficiency, which includes skills maintenance, preparation for retesting, and achievement of a passing grade in the National Board Dental Examination, Part I or Part II.

d. Disciplinary Dismissal and Probation

i. Violation of University regulations concerning standards of conduct which compromise professional integrity and/or competence will make a student eligible for dismissal. Procedures for dismissal will be governed by the guidelines contained in the Procedures and Regulations Governing Student Conduct and Discipline of the Health Science Center.

ii. If not dismissed, a student may be placed on disciplinary probation. While on probation, any academic failure or professionalism relapse will be grounds for dismissal.

Honors

Graduation with Distinction in Dental Education

The School of Dentistry contributes to the national effort within the dental education community to increase students’ awareness of the academic arm of the profession. The school also works to enhance awareness of career options in teaching, scholarship and academic administration. All of these efforts are extended to dental students through the Teaching Honors Program (THP). This program provides UT Health San Antonio School of Dentistry students with teaching and educational planning experiences and provides a way for them to learn about academic careers.

Gaining the Distinction in Dental Education recognition is reserved to students who complete additional enrichment coursework that immerses them into a world of teaching and academics. Students will have discussed career choices with faculty, participated in fundamental teaching practices, taught in classroom, lab and clinical settings, and participated in academic fellowship opportunities.

Description of the Program

In order for a dental or dental hygiene to graduate with the Distinction in Dental Education requires a student in good academic standing to complete selective courses unique to the Dental Education Teaching Honors Program. Throughout the dental and dental hygiene program, students progressively participate in faculty mentoring activities, acquire and apply teaching fundamentals needed for teaching in dental education. As senior students, in both dental and dental hygiene programs, participate in peer learning projects such as posing as “faculty for the day” where students use their previous knowledge and acquired skills to experience a day as an academician. The Director(s) for the School of Dentistry’s Teaching Honors Program monitors all students who wish to have the “Distinction in Dental Education” appear on their diploma and transcript and will need to submit supporting materials verifying completion of the activities and goals of the program. This includes verification of the core and enrichment selectives. Copies of all scholarly materials produced by student (i.e. abstracts, posters, manuscripts, evaluation forms, submission of assignments in the learning management system, or verified by faculty/mentor) shall be submitted to course director(s). Upon completion of all activities, the course director(s) will review all projects, and presentations for completion, and determine if graduating students have achieved “Distinction in Dental Education”. This list will be shared with the Office of Academic Affairs in the School of Dentistry. The course director(s) will also compile these names and share with the registrar’s office for conferring.

Graduation with Distinction in Research

The School of Dentistry recognizes individual student investigators who, in addition to completing their clinical dental program, have acquired research skills and accomplished significant research activity. The long-range goal is to foster scholarship and critical thinking, add to the body of scientific information and facilitate recruitment of students into dental research careers.

Gaining Distinction in Research Honors is limited to dental students who have demonstrated unusually significant scientific accomplishments. Students will have worked under the mentorship of an active scientist, prepared a research proposal, completed the research project, analyzed and presented the results at local and national research meetings and prepared a report for approval by the Dental School Research Committee.

Description of the Program

The Distinction in Research Program requires that a student in collaboration with a suitable faculty mentor completes a research project and prepares an original extended abstract that is suitable for incorporation into a peer-reviewed publication. The students should have played a significant role in the research project and will typically be listed as first author on an abstract and listed as a co-author on a peer-reviewed manuscript resulting from the research. The Director for Research and Associate Dean for Academic Affairs will monitor the program and bring candidates for consideration to the attention of the Dental School Research Committee. The Research Committee will review all applications and make recommendations to the Dean regarding the designation of the “Distinction” status for the students concerned. Students participating in the Distinction in Research Program are strongly encouraged to enter varied Student Research competitions as part of their training experience. These include but are not limited to the Hinman Research Symposium competition, the American Association of Dental Research(AADR) Warner-Lambert Hatton Award, the AADR Caulk/Dentsply competition, the International Association for Dental Research/Colgate Research in Prevention Travel Award and the Block Travel Award.

Faculty Responsibilities

1. It is the responsibility of the faculty to administer examinations in such a manner that student performance accurately reflects individual levels of knowledge and ability. Methods for achieving this objective may include:

   a. New exams each year with totally new, or majority of new questions, or similar questions but in a new format or with new distractors.
b. Randomized assigned seating of students in lecture rooms or laboratories.

c. Multiple forms of the same examination. (Three forms of the examination are recommended.)

d. Oral or essay examinations or components of examinations.

2. It is the responsibility of every faculty member to be aware of and comply with the rules and regulations of the Health Science Center delineated in the procedures and regulations governing Student Conduct and Discipline. In carrying out their responsibility for ensuring fair examinations and honesty on the part of all students, the faculty must comply with the following policies on examinations:

a. Proctor all written examinations. (Three or more are recommended.) Proctors shall be present and observant throughout the examination.

b. Proctor all practical examinations. (Two or more faculty proctors are recommended for each School of Dentistry MD multidiscipline laboratory — one for each bay.) Proctors should actively proctor throughout the examination and not engage in conversation with others, to avoid creating a distraction for students in the examination.

c. Ensure that examinations are conducted in a quiet, comfortable atmosphere.

d. Take immediate corrective action, as deemed necessary, to guarantee that the integrity of the examination is not compromised in case of observed violations of examination policies. Corrective action may include collecting examination papers or projects and/or relocating students.

e. Report student misconduct or failure to follow instructions during examinations to the Course Director. If the misconduct falls under specific policies governing those exams, policies will be updated to the Assistant Dean for Students. Corrective action may include collecting examination papers or projects and/or relocating students.

f. Schedule and conduct reexaminations whenever there is sufficient evidence to believe an examination has been compromised.

g. Maintain tight security during preparation, proofing, faculty review, printing, transporting, and storing of examinations. Examination questions stored on computer also must be protected from unauthorized access.

h. Ensure that students who ask questions during an examination are not given unfair advantage over other students if responses to questions are given. It is suggested that a policy be followed of not answering questions relative to interpretation of examination questions.

i. Identify casts, teeth, or other items to be used in practical examinations in a manner to preclude students from substituting items prepared prior to the examination.

j. Monitor students who need to leave the room during examination.

k. Course syllabi should be made available to students online on the day web registration begins, but no later than the first class meeting of the semester. After the first class, no changes can be made to the syllabus except for changes to logistical information. If the logistical information is changed, the updated syllabus must be posted within 48 hours so that it remains current.

Student Responsibilities

1. It is the responsibility of every dental/hygiene student to be aware of and comply with the rules and regulations of the Health Science Center delineated in the procedures and regulations governing Student Conduct and Discipline. In carrying out their responsibilities and ensuring fair examinations and honesty on the part of all students, students must follow these policies:

a. Except when specifically authorized to do so, students shall not use notes, books, manuals, models, audio tapes, or any other items or sources of information (cell phones, PDAs, pagers, smart watches, watches or other electronic communication devices). During written examinations, such items must be left in a designated area of the examination room or, preferably, not brought into the room. During examinations in MD laboratories, these items shall be placed in closed cabinets.

b. Students shall not communicate with other students in any manner, i.e., verbally, in writing, by visual signals or code, etc., during written or practical examinations.

c. Before beginning an examination, students should be prepared to complete the examination. However, if a student must leave the room temporarily while an examination is in progress, the student's examination materials shall be collected and held by a faculty proctor. Ordinarily, no more than one student will be permitted out of the examination at any one time. The student may not converse with another student or refer to reference material while out of the room.

d. If a student needs to do something outside the established protocol during a practical examination, such as unscrew or loosen a practical tooth or borrow an instrument, a proctor should be called for assistance and verification.

e. Students must refrain from all activities that detract from a quiet testing environment.

f. Students must take reasonable precautions to ensure that responses to examination questions or projects cannot be seen by other students.

g. Students must turn in their examination papers and practical examination projects promptly at the termination of an examination period, unless specifically instructed to do otherwise.

h. Students are expected to report any observed violation of these examination policies, or any other act they believe may compromise a fair examination process, to the Course Director or to the Assistant Dean for Students.

i. Students are expected to maintain the highest integrity during the examination.

j. If testing is in an electronic format, students must adhere to the specific policies governing those exams. Policies will be updated
and sent to the students at the beginning of the new academic year.

2. It is also the responsibility of every dental/hygiene student to request accommodations under the Americans with Disabilities Act (ADA) should be needed. The School of Dentistry does comply with the provisions set forth by the Americans with Disabilities Act (ADA) and the ADAAA. A qualified individual with a disability requesting accommodation must submit the appropriate request for accommodations under the Americans with Disabilities Act (ADA) as amended. Students, fellows and residents must submit a Student/Resident Request for Accommodation under the American with Disabilities Act (ADA), form ADA-100, to the Executive Director, Academic, Faculty, Student Ombudsperson and ADA Compliance Office with a copy of the current job description (if appropriate).

However, the School of Dentistry does not allow testing accommodations for preclinical or clinical skills testing. Skill tests are structured to simulate the general practice of dentistry.

Requests to Changes Schedule of Examinations
The official dates and times of all examinations are published in the final Class Schedules (http://uthscsa.edu/fsprec/schedules.asp) after consultation with Course Directors and representatives of all classes. Students or the Course Director may initiate requests for changes in the schedule of examinations. All requests should be submitted to the Office of the Associate Dean for Academic, Faculty and Student Affairs, as applicable.

A request to move an examination to a later date must be submitted at least two weeks prior to the original date of the examination. A request to move an examination to an earlier date must be submitted at least two weeks prior to the proposed date of the examination.

All requests for changes to the examination schedule published in the final Class Schedule must be accompanied by:

1. A written reason for the move that must be compelling and academically sound.
2. A written statement from the Course Director stating he/she is in agreement with the change.
3. The results (number of yes/no votes) of a secret ballot taken from all members of the class. The Associate Dean for Academic, Faculty and Student Affairs, as applicable will review the request and can approve it if the following requirements are met:
4. The request has been submitted within the guidelines.
5. The reason for the move is valid.
6. The Course Director is in agreement with the move.
7. No member of the class present and voting opposes moving the examination to an earlier date; or, 90 percent of those voting are in favor of moving it to a later date.
8. An appropriate classroom is available at the proposed time.

Academic Performance Committee
Seven full-time faculty members with at least five having primary appointments in the School of Dentistry are appointed to the committee. Absent voting members may not be represented by alternates.

The responsibility of this committee shall be to recommend to the Associate Dean for Academic, Faculty and Student Affairs appropriate action regarding the academic performance of students. Recommendations of this committee shall be based on established criteria set by the Faculty Council and may include promotion, academic warning, academic probation, an altered curriculum, remediation, repeat of the academic year or dismissal.

Chair – The Chair shall be appointed from the voting faculty members of the committee by the Associate Dean for Academic, Faculty and Student Affairs, with approval from the Dean. Vice-Chair - The Chair shall appoint a Vice-Chair from the voting faculty members of the committee. Secretary - The Chair shall appoint a Secretary to take Minutes of all meetings. The term of office shall be for three years.

Academic Grievance Policies
Due Process Grade Assignment Disagreement
A student wishing to appeal the assignment of a grade must submit her/his grievance to the Course Director within seven (7) days of the grade assignment. The appeal mechanism for challenging a grade is limited to: (1) possible clerical errors in calculating or recording a grade, or (2) allegation of mistakes or unfairness in application of the published academic standards in the assignment of a grade. It is the responsibility of the student to substantiate her/his assertion that an incorrect grade has been assigned.

If the student’s concerns are not resolved after a meeting with the Course Director, the student may submit a written appeal to the appropriate Department Chair. The written appeal must be made within seven (7) days of the student’s meeting with the Course Director and must contain information to substantiate the assertion that an incorrect grade has been assigned.

If the disagreement is not resolved at the departmental level, the student may submit a written appeal to the Dean of the School of Dentistry within seven (7) days of the departmental decision. If the Dean agrees to review the matter, he/she will review only that the appeal process was conducted appropriately. This School of Dentistry policy supersedes any other grievance policies, and decisions made in this process are final.

Appeals Process
1. A student may appeal an Academic Performance Committee decision that recommends a) remediation, b) repetition of the year or c) academic dismissal. The student submits written notification of his/her desire to appeal to the Dean’s office. This written request must be received by the Dean’s office within 5 days following the student’s receipt of the written notification of the Academic Performance Committee’s recommendation.
2. The Dean will consult with appropriate individuals and render a decision to uphold or overturn the Academic Performance Committee decision. The student will receive written notification of the Dean’s final decision.

Student Concerns
Various mechanisms are available at all levels for student input regarding their concerns. Individuals and groups who respond to these concerns include course directors, advisors and the Associate Dean for Academic, Faculty and Student Affairs. Procedures for grievances can be found in the General Section of the Catalog.

The president of the Student Body Organization meets bimonthly with presidents of other Health Science Center student groups to discuss problems or concerns affecting students in all schools with the university President. In addition, once a month, the Dean of the School of Dentistry
and Assistant Dean for Students meets with the presidents and vice presidents of all classes. Student liaisons for each course will meet with the respective course director as needed.

**Student Mistreatment**

Mistreatment of students will not be tolerated. Mistreatment, intentional or unintentional, occurs when behavior shows disrespect for the dignity of others and interferes with the learning process. Student mistreatment may take many forms all of which impact student performance. For more information click here. (p. 71)

**Clinical Attire and Grooming**

An excellent dental education is dependent on the number of patients and the diverse patient needs that allow students to provide a broad scope of oral health care to a large number of patients. As this is a totally voluntary system on the patient side, it is incumbent upon the School of Dentistry to provide an environment that gives patients the confidence to come to this institution knowing they will be treated in a professional manner, by professionals, and in a safe environment. To achieve this goal, first impressions are important; therefore, all students in the School of Dentistry need to look professional in dress and grooming since patient contact can occur in many areas of the building. When students have direct patient contact in the clinics, additional issues require students to pay particular attention to clinic attire and grooming because they affect patient safety as well as their own. The clinic manual is published on the School of Dentistry Intranet site, http://dserver.uthscsa.edu/. The manual includes general guidelines for attire and grooming, as well as specific requirements that relate to patient and personal safety.

**Class Attendance**

Students are expected to attend and actively participate in all regularly scheduled classes, laboratories, and clinical periods. The policy regarding attendance and the consequences for failure to comply is the prerogative of the course director and the department responsible for that portion of the curriculum, and will be provided in the course syllabus at the beginning of each course. It is the responsibility of the student to arrange with the faculty for making up any work that is missed.

Absences may be considered sufficient cause for issuing failing grades in courses requiring attendance.

**Reporting Absenteeism**

When a student must be absent from the School of Dentistry, he/she must report their absence online (https://fmcgi.uthscsa.edu/absence/). The office will maintain a roster of absentees and the reported reasons for absence.

In cases of absence during an assigned rotation or clinic, all students (including freshmen and sophomores) are responsible for contacting appropriate Rotation Directors immediately.

Students who will be absent from any examination must notify their Course Directors directly as well as complete an online student absence report.

Students are responsible for contacting Course Directors upon their return to school to schedule required makeup work.

**National Board Dental Examination Challenges**

Part 1 – Students are eligible to challenge Part 1 of the boards at the completion of the spring semester of the sophomore year provided they successfully completed the fall General Pathology course. Students are expected to take the exam between the end of the spring semester and beginning of the fall semester of the junior year. The School of Dentistry policy requires students to pass Part 1 to be considered for promotion to the senior year.

Part II – Students are eligible to challenge Part II of the boards in the summer before their senior year. The School of Dentistry policy requires students to pass Part II to be considered for graduation.

For both Parts I and II, the National Board policies require students to wait 90 days between attempts. Appeals to the 90 day requirement should be directed to the Assistant Dean for Students. Candidates who have not passed may apply for re-examination. An examination attempt is defined as any examination administration where the candidate has been seated at a computer at a test center, and electronically agreed to the confidentiality statement to start the examination. The Five Years/ Five Attempts Eligibility Rule applies to examination attempts occurring on or after January 1, 2012. Examination attempts occurring prior to this date are not considered under this regulation. ELIGIBILITY FOR RE-EXAMINATION: Candidates must wait a minimum of 90 days between test attempts. Under the JCNDE’s Five Years/Five Attempts Eligibility Rule, candidates must pass the examination within a) five years of their first attempt or b) five examination attempts, whichever comes first. Subsequent to the fifth year or fifth attempt, candidates may test once every 12 months after their most recent examination.

**Leave of Absence**

Students in good academic standing who wish an extended leave of absence for extenuating physical or personal reasons must submit a written request to the Dean stating reasons for such a request, the period of time involved, and intentions concerning resumption of dental studies. The Dean will consider such requests on their individual merit.

Generally, a leave of absence shall not exceed one academic year. Any additional leaves of absence must be reviewed and recommended by the Academic Performance Committee and approved by the Dean. The Dean's Office must be notified of intentions to re-enroll by the first day of April prior to the next academic year. Students who take a leave in the fall of the junior year will be required to repeat the sophomore year in order to regain the clinical skills and knowledge to provide patient care as a junior.

Upon approval, the student must request and complete a Student Clearance Form that is available from the Office of the University Registrar (317L MED).

**Readmission**

Readmission to the freshman year requires that a student apply again according to the procedures required for first-time applicants and be accepted in competition with other applicants for that year. Readmission into the sophomore, junior, or senior years is contingent upon available space in the class.

Application for readmission after a leave of absence must be in the form of a written request to the Dean and must include satisfactory evidence that the condition or conditions necessitating the absence have been corrected and that the student is able to resume dental studies. The request must be submitted no later than April 1 of the year the student wishes to be reinstated.

The policies contained in this Catalog concerning attendance, leave of absence, and readmission is those in effect at the time of publication but is subject to change. Students are responsible for inquiring about changes each year.
Student Appeals and Grievances
Student appeals and grievances are handled through established policies and procedures for the School of Dentistry as outlined in the General Regulations and Requirements section of this Catalog.

International Dentist Education Program (IDEP)

The School of Dentistry offers qualified graduates of foreign dental programs the opportunity to earn a Doctor of Dental Surgery (D.D.S.) degree. Completion of this advanced standing educational program will allow graduates to take state or regional dental board examinations and be eligible for licensure and practice in the United States.

Students in the International Dentist Education Program are given advanced standing in the School of Dentistry because much of their foundational curriculum was completed during their foreign dental school. The School of Dentistry allows for a transfer of hours for the first and second year of study. (The foundational coursework can include Biochemistry, Embryology, Introduction to Professional Ethics, Introduction to History Taking and Physical Exam Skills, Foundations of Professional Development, Gross Anatomy, Histology, Microbiology, Pharmacology, and Physiology).

The IDEP program requires a full-time, daily Prep Course (IDEP 5000) which consists of online learning, and hands-on didactic and pre-clinical laboratory training.

The course has 2 distinct and separate sections:

(1) Online Distance Learning
(2) Hands on Local Instruction

The online distance learning portion of the course includes: readings, videos, PowerPoints, interactive modules, projects, clinical scenarios, discussion groups and tests.

The hands-on section has lectures, readings, videos, preclinical laboratory projects, clinic simulation exercises and clinical patient care.

The Goal of the course is to assess current skills knowledge and values and to discover any gaps or differences from students currently enrolled at the level of an entering third year student.

The Course is followed by matriculation through the third and fourth years of the undergraduate dental program with classroom lectures and direct patient care in the group practices and departmental clinical courses and rotations. Students must complete the same requirements as all other dental students starting with year three.

Admissions Requirements
The application requirements for the IDEP are a dental degree from a foreign country, official, school-certified copies of transcripts; official course-by-course dental school transcript evaluation (ECE); a National Board Dental Examination Part I overall score of pass (within the past 5 years); minimum Test of English as a Foreign Language (TOEFL) examination score of 92 (Internet-based) or 580 (paper-based); three letters of evaluation surveys; and completion of personal learning and experience survey about the applicant's clinical experience, dental-related activities, and professional goals.

• Information about admission and application requirements is detailed on the School of Dentistry Web Site.
• Additional information about the IDEP can be obtained by contacting the IDEP office through e-mail at: IDEP@uthscsa.edu.
• *National Board Exams taken after January 1, 2012, will have scores reported as pass/fail. A passing score will be required for those applicants whose scores are reported as pass/fail.

Sample Plan of Study

Prep Course

IDEP Prep Course (IDEP 5000, 23.5 SCH)

Junior Year- Group A

Third Year

<table>
<thead>
<tr>
<th>Third Year</th>
<th>Semester</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
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<tr>
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<tr>
<td>DIAG 7052 Geriatrics¹</td>
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<tr>
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<tr>
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<tr>
<td>ORTH 7073 Junior Orthodontic Lectures And Case Analysis¹</td>
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<tr>
<td>PERI 7059 Implantology¹</td>
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<tr>
<td>PERI 7081 Periodontics</td>
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<td>PROS 7091 Removable Partial Denture Prosthodontics Lecture¹</td>
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<tr>
<td>PROS 7095 Complete Dentures Lecture¹</td>
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<tr>
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<tr>
<td>ORTH 7073 Junior Orthodontic Lectures And Case Analysis¹</td>
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<tr>
<td>PATH 7023 Oral &amp; Maxillofacial Pathology: Clinicopathologic Conference</td>
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<td>PERI 7059 Implantology</td>
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<tr>
<td>PROS 7018 Fixed Prosthodontics</td>
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<td>PROS 7095 Complete Dentures Lecture</td>
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Total Units in Sequence: 17

Junior Year- Group B

Third Year

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<td>Semester II</td>
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<td>ENDO 7043 Endodontics Clinic¹</td>
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Senior Year- Group B

Fourth Year

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<tr>
<td>GEND 8077 General Dentistry Clinic¹</td>
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</table>

Total Units in Sequence: 26.5

¹ A single grade at the end of the year is given for courses that extend through both semesters.

Senior Clinical Rotations

All senior dental students enhance their clinical experiences by participating in several School of Dentistry and off-campus required clinical rotations including the following. These are subject to change based on community availability:

- Dental Emergency
- Dental Hygiene
- Oral Medicine
- Oral Surgery
- Pediatric Dentistry
- Primary Dental Care - South Texas Rotation
- Primary Dental Care – SACDC at Haven for Hope

Dental Selectives ¹

The School of Dentistry has a selective program that allows students to enrich their education through courses of their choosing.

Satisfactory completion of selectives will be recorded on the transcript as CR. No credit hours will accrue, and the computation of the GPA will be unaffected. When a student has been officially enrolled in a selective course, the selective becomes a mandatory part of the student’s curriculum and must be completed unless proper procedures for withdrawal are followed. Failure to withdraw properly or unsuccessful completion of the selective will be recorded on the transcript as an F grade. This will be treated by the Academic Performance Committee as any other failing grade in any required course.

Selective courses are offered primarily in the summer, but many are year-round as selectives by arrangement. Courses are offered to all level of students. Rising DS2 and DS3 students are required to complete a minimum of one selective. Rising DS4 students are required to complete a two-week continuous clinical selective, a six-week research selective, or another approved plan. The two-week selective may be one of the following:

- South Texas Rotation
- General Practice Dental Emergency Care (DECC)
- Oral and Maxillofacial Surgery
- Pediatric Dentistry Summer Selective

Current selectives are listed below; however, offerings may vary each year. An updated list is sent to students twice a year to allow them to plan ahead. The list with course descriptions, teacher, location, etc. can be found online at http://dental.uthscsa.edu/selectives/index.php.
Dual Degree D.D.S./Ph.D. Program

The combined D.D.S./Ph.D. (https://www.uthscsa.edu/academics/dental/programs/phd-in-dentistry) (Doctor of Dental Surgery and Doctor of Philosophy) training program available through the School of Dentistry is a component of the Craniofacial Oral-Biology Student Training in Academic Research (COSTAR) T32 Training Program that is funded by the National Institutes of Health/National Institute of Dental and Craniofacial Research. Only 17 universities in the country have COSTAR programs. This national program focuses on creating the next generation of clinician scientists to ensure the future of the nation's oral health.

Students will become a clinician-scientist who can perform sponsored research in dental and craniofacial-related areas. Another goal of the program is to have trainees become dental school faculty.

Admissions Requirements

A student who wishes to obtain both a D.D.S. and a Ph.D. must obtain the entrance prerequisities of both the School of Dentistry (http://www.uthscsa.edu/academics/dental) and the Graduate School of Biomedical Sciences (https://www.uthscsa.edu/academics/biomedical-sciences). Students submit applications for admission to the Dual Degree Program through the Texas Medical and Dental Schools Application Service (http://www.tmdsas.com) and to the Health Science Center Graduate School of Biomedical Sciences (https://www.uthscsa.edu/academics/biomedical-sciences) during the fall prior to attendance. Approval for admission is made by the D.D.S./Ph.D. Admissions Review Panel (through the School of Dentistry Dean and Associate Dean for Student Affairs) and by the Graduate School of Biomedical Sciences.

Degree Requirements

Students will spend the first three years focusing on the Ph.D. component. They will enter the customized dental school training component only after completing the Ph.D. qualifying exam and making significant progress with their dissertation research.

The remaining requirements of the Ph.D. program (dissertation research and preparation) will be conducted concurrently with requirements of the D.D.S. curriculum. The combined program will take at least seven years to complete.

Accepted applicants must meet the full requirements defined for both the professional and the graduate degree. The total time for the dual degree program curriculum is designed to be at least seven years. However, utilization of summer sessions and elective periods is mandatory for this total time span.

The detailed logistics of pursuing a dual degree program will depend on the specific graduate program undertaken and, in every instance, should be worked out among the student, the appropriate Committee on Graduate Studies, the faculty mentor, the Associate Dean of the Graduate School of Biomedical Sciences, and the Associate Deans for Academic Affairs and Research of the School of Dentistry.

Advanced Dental Education

Advanced Dental Education

Accredited postdoctoral dental studies at the Health Science Center consist of Certificate Programs and the Master of Science in Dental Science Program.

Certificate Programs

Certificate programs are awarded to students successfully completing all requirements in either Advanced Education in General Dentistry, Dental Public Health, Endodontics, Oral and Maxillofacial Radiology, Oral and Maxillofacial Surgery, Orthodontics and Dentofacial Orthopedics, Pediatric Dentistry, Periodontics, or Prosthodontics. Full time enrollment is 8 semester credit hours per semester.

Master of Science in Dental Science Program

The Master of Science in Dental Science (MSDS) Program is supported by the faculty of the School of Dentistry and the Graduate School of Biomedical Sciences. The MSDS degree is conferred by the Graduate School of Biomedical Sciences. This Program is open only to students who have been accepted into, and continue in good standing in, a Health Science Center Certificate Program in either Advanced Education in General Dentistry, Oral and Maxillofacial Radiology, Endodontics, Orthodontics and Dentofacial Orthopedics, Pediatric Dentistry, Periodontics, or Prosthodontics.

Academic Grievance, Probation and Dismissal Policies

Grievance, Probation and Dismissal Policy

An advanced education student may be placed on academic probation for reasons of substandard performance in didactic, clinical, behavioral or professional/ethical areas. A student whose overall grade point average falls below B (3.0) or who receives a final grade of D, F or U for any course during any one grading period will be considered for a recommendation of academic probation by the departmental Residency Oversight Committee of the appropriate program. A recommendation for probation will be made to the Advanced Education Committee’s (AEC) Graduate Program Directors Subcommittee, which is comprised of the Program Directors of all the Advanced Education Programs in the Dental School and the Assistant Dean for Students. Only the Program Directors will be voting members of this Subcommittee; the Assistant Dean for Students will serve in an ex officio capacity as a non-voting member. In addition, the departmental Residency Oversight Committee may recommend to the AEC’s Graduate Program Directors Subcommittee that a student be placed on academic probation for clinical, behavioral or professional/ethical performance that does not meet the standards of the program.

An option to appear before the Advanced Education Committee’s (AEC) Graduate Program Directors Subcommittee will be extended to the student before a vote is taken to recommend academic probation. The purpose of the appearance is to inform the Subcommittee of extenuating circumstances which may have contributed to the student’s performance. The student may request that other appropriate verbal and/or written testimony regarding these circumstances be presented at this meeting. Only members of the Subcommittee will be present when the vote for probation is taken.

The AEC’s Graduate Program Directors Subcommittee will formally place the student on academic probation upon majority vote of the members.

A student placed on academic probation will be given written notification by the Chair of the Advanced Education Committee of such status.
or more credit hours of required letter-graded course work or recommendation. This written request must be received by the Dean. Procedural appeal may be made to the President in accordance with Health Science Center policy.

If the student's concerns are not resolved after a meeting with the Course Director, the student may submit a written appeal to the Program Director. The written appeal must be made within seven days of the student's meeting with the Program Director and must contain information to substantiate the assertion that an incorrect grade has been assigned.

If the disagreement is not resolved at the departmental level, the student may submit a written appeal to the Dean of the School of Dentistry within seven days of the departmental decision. If the Dean agrees to review the matter, he/she will review only that the appeal process was conducted appropriately. This School of Dentistry policy supersedes any other grievance policies, and decisions made in this process are final.

Academic Grievance Policies

Due Process Grade Assignment Disagreement
A student wishing to appeal the assignment of a grade must submit her/his grievance to the Course Director within seven (7) days of the grade assignment. The appeal mechanism for challenging a grade is limited to: (1) possible clerical errors in calculating or recording a grade, or (2) allegation of mistakes or unfairness in application of the published academic standards in the assignment of a grade. It is the responsibility of the student to substantiate her/his assertion that an incorrect grade has been assigned.

If the student's concerns are not resolved after a meeting with the Program Director, the student may submit a written appeal to the appropriate Department Chair. The written appeal must be made within seven days of the student’s meeting with the Program Director and must contain information to substantiate the assertion that an incorrect grade has been assigned.

If the disagreement is not resolved at the departmental level, the student may submit a written appeal to the Dean of the School of Dentistry within seven days of the departmental decision. If the Dean agrees to review the matter, he/she will review only that the appeal process was conducted appropriately. This School of Dentistry policy supersedes any other grievance policies, and decisions made in this process are final.

Student Concerns
Various mechanisms are available at all levels for student input regarding their concerns. Individuals and groups who respond to these concerns include course directors, advisors, Associate Dean for Academic Affairs, and the Assistant Dean for Students. Procedures for grievances can be found in the General Section of the Catalog.

Student Mistreatment
Mistreatment of students will not be tolerated. Mistreatment, intentional or unintentional, occurs when behavior shows disrespect for the dignity of others and interferes with the learning process. Student mistreatment may take many forms all of which impact student performance. For more information see the Student Mistreatment Policy in the Catalog.

Advanced Education in General Dentistry

Overview
The Department of Comprehensive Dentistry offers an accredited one-year Advanced Education in General Dentistry Program (AEGD). The department is committed to providing excellent advanced education in general dentistry to individuals who plan to seek careers in general dentistry. In keeping with the generalist concept, the majority of patient care is supervised by General Dentistry faculty, all of whom have had one
to three years of training in an AEGD and/or General Practice Residency (GPR).

Intensive clinical and didactic training in comprehensive care of patients with complex medical issues, critical thinking and treatment planning are the top priorities of our program. In addition, the AEGD program provides advanced training in the dental specialties in an effort to expand the treatment repertoire practiced by our program’s graduates. Program participants will also work and consult on a regular basis with orthodontists, periodontists, endodontists, and prosthodontists. Comprehensive dental care is provided in the Advanced General Dentistry Clinic (AGDC).

An optional second year of our AEGD program is available for interested 1st year AEGD participants. During the second-year, more time will be spent in the AGDC providing comprehensive care to a wide variety of patients. In addition, there are additional teaching responsibilities of first year AEGD participants and undergraduate dental students.

An optional M.S. in Dental Science degree track is available to qualified students.

Admissions Requirements
Our application process begins May 21st of each year, and ends on October 1st. Unfortunately, applications which are not postmarked by October 1st will not be considered for acceptance.

Applicants from ADA-accredited dental schools:
1. On track to graduate from an ADA-accredited dental school
   a. Graduation is required prior to matriculation
2. Completed PASS application (https://portal.passweb.org/)
   a. Official transcripts from all undergraduate and dental schools
   b. CV/Resume
   c. Five PPI and two Professional Evaluation Forms (letters of recommendation)
3. Successful completion Part I of National Dental Board Examination (prior to application deadline)
   a. Successful completion of Part II of National Dental Boards is required prior to matriculation
4. AEGD Program Application including 2x2 photo
5. Personal interview, if selected as finalist

Applicants from non-ADA-accredited dental schools:
1. Graduation from dental school
2. Completed PASS application (https://portal.passweb.org/)
   a. Translated and evaluated transcripts. Please use one of these services:
      i. www.wes.org (https://www.wes.org) Request WES ICAP course-by-course evaluation
      ii. www.ece.org (https://www.ece.org) Request the course-by-course evaluation
   b. CV/Resume
   c. Five PPI and two Professional Evaluation Forms (letters of recommendation)
3. Successful completion Part I and Part II of National Dental Board Examination (prior to application deadline)
4. TOEFL (iBT format). A minimum score of 92 or above on the iBT is required of all applicants
5. AEGD Program Application including 2x2 photo
6. Personal interview, if selected as finalist
7. ADAT is not mandatory but suggested

Degree Requirements
A Certificate in Advanced Education in General Dentistry will be awarded upon the student’s successful completion of the prescribed AEGD curriculum with a PASS in all courses, and recommendation of the program director to the Assistant Dean for Students and certification by the Dean to the President.

The M.S. in Dental Science degree will be awarded to students who successfully complete the certificate and the required courses (p. 110) in the Graduate School.

Sample Plan of Study
Certificate Year 1
First Year
Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
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Spring

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Total Credit Hours: 16.0

Certificate Year 1 and optional Year 2
First Year
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Spring

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Second Year
First Year
Fall

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Spring

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Total Credit Hours: 30.0

Additional Certificate Courses needed for Two Year Certificate and M.S. in Dental Science
Second Year
Fall

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Spring

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Third Year
Fall

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Our Institution Code Number is 6439 (University Of Texas HSCSA Dental AEGD): [www.ets.org/toefl](http://www.ets.org/toefl)
Perio/Pros/Endo/Orth Interdisciplinary Course

Spring

INTD 6014  Perio/Pros/Endo/Orth Interdisciplinary Course  1

2

Total Credit Hours:  4.0

Objectives/Program Outcomes

The Certificate in Advanced Education in General Dentistry program at the Health Science Center is to provide training beyond the level of pre-doctoral education in oral health care, using applied basic and behavioral sciences. Education in this program is based on the concept that oral health is an integral and interactive part of total health. The program is designed to expand the scope and depth of the graduates’ knowledge and skills to enable them to provide comprehensive oral health care to a wide range of population groups.

Program Outcomes: At the completion of the program the student will:

1. Act as a primary care provider for individuals and groups of patients. This includes: providing emergency and multidisciplinary comprehensive oral health care; providing patient focused care that is coordinated by the general practitioner; directing health promotion and disease prevention activities; and using advanced dental treatment modalities.
2. Plan and provide multidisciplinary oral health care for a wide variety of patients including patients who are medically-compromised and/or have special needs.
3. Function effectively and efficiently in multiple health care environments within interdisciplinary health care teams.
4. Apply scientific principles to learning and oral health care. This includes using critical thinking, evidence or outcomes-based clinical decision-making, and technology-based information retrieval systems.
5. Demonstrate professionalism, including ethical principles, patient centered care, adaptability, and acceptance of cultural diversity in professional practice.

Dental Public Health Certificate

Overview

The mission of the certificate program in Advanced Education in Dental Public Health at the Dental School, University of Texas Health Science Center at San Antonio (UTHSCSA) is to educate specialists in dental public health to promote oral health and prevent dental disease at both the population and individual level, with a focus on the oral health needs of South Texas and the Texas-Mexico border communities.

The goal of the certificate program in Advanced Education in Dental Public Health at the University of Texas Health Science Center at San Antonio is to educate competent dental public health professionals to strengthen the capacity of the dental public health workforce. The DPH Program fulfills this goal by:

- educating dental public health specialists in accordance with the guidance established by the American Board of Dental Public Health, and
- establishing an educated dental public health workforce, which is critical to the implementation of the essential (core) public health functions.

Admissions Requirements

Admission into the Dental Public Health (DPH) Program is systematic and considers candidate applications based upon a holistic review of each application. Individuals are eligible to apply for admission if they have a dental degree (can be international) and have completed a Master's degree in public health from a school that is accredited by the U.S. Department of Education. These criteria for admission are established by the American Board of Dental Public Health. Applications must be postmarked by the application deadline (December 1) to be considered. Initially, the applications undergo a review for completeness. Applications cannot be reviewed if deemed incomplete by the DPH Program Director. The applications are forwarded to the Dental Public Health Program Committee that consists of members of the teaching faculty, representation from individuals with education in dental public health from the community, and the Program Director. Applications are reviewed based upon established criteria that include, but are not limited to, oral and written communication, previous work experiences, research/publications, community experiences, potential for success, and academic performance.

A preliminary review of the applications is conducted by the Committee who select candidates for a telephone interview. Once the Committee completes the telephone interview, the Committee decides which two or three candidates to consider for a face-to-face interview. The interview provides the committee with the ability to evaluate the candidate’s intellectual curiosity, career objectives and goals, and suitability for the program. Based upon input received from the interviewers, the Committee meets and recommends the individuals for admission to the DPH Program Director who will notify applicants of the disposition of the application.

Once admitted into the DPH Program, the following information must be provided to the Director before matriculation: 1) each candidate will need to provide proof of current immunizations; 2) each candidate must demonstrate that they have health insurance or purchase student health insurance, and; 3) each candidate must complete a criminal background check through the University. A candidate cannot matriculate until all official transcripts are verified.

Degree Requirements

The curriculum is designed to provide the dental public health advanced education student with experiences leading to competence in the field of dental public health. At the completion of the program in dental public health, the candidate should have obtained fundamental knowledge of the philosophy, principles and practice of dental public health and should have developed skills to practice dental public health, including research, administration, and education. The program is arranged to address the competency statements, allowing the resident to develop core knowledge in the area. The required experiences and courses cover a wide range of information believed to be essential for graduates in the field. The curriculum consists of five content areas, including didactic coursework, research, rotations, undergraduate dental teaching, and field clinical and service - learning experiences. The curriculum components are combined into two courses per semester titled “Advanced Education in Dental Public Health 1” and “Research Methodology in Dental Public Health 1” that is offered in the fall semester and “Advanced Education in Dental Public Health 2” and “Research Methodology in Dental Public
Health 2” that is offered in the spring semester. Upon demonstration of competency in dental public health, the advanced education students are awarded a specialty certificate.

Sample Plan of Study

First Year

Fall

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
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Spring

<table>
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<tbody>
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<tr>
<td>PBHL 5015</td>
<td>Research Methodology in Dental Public Health</td>
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</table>

Total Credit Hours: 4.0

Objectives/Program Outcomes

1. to educate a culturally competent public health dentist that can address the oral health needs of children and adults;
2. to provide service-learning experiences that will ensure understanding of efficient and effective dental public health programs that increase access to community preventive services;
3. to cultivate professionals with advanced training in dental public health who can address oral health disparities and inequities;
4. to develop a dental public health workforce that is prepared to work in a dental public health career in academics, local, state and federal agencies (e.g. Indian Health Service, Agency for Healthcare Research and Quality, Health Resources and Services Administration), armed forces, international health agencies, health care management, financing, and management agencies; and,
5. to prepare candidates to challenge the examination for board certification by the American Board of Dental Public Health.

Endodontics Certificate

Overview

The Advanced Education Program in Endodontics is a 26-month Certificate program of intensive study, research and clinical activity designed to meet the formal requirements for eligibility to take the certifying examination of the American Board of Endodontics. Following admission to the Certificate Program, students have the option to apply for the M.S. in Dental Science Program (36-month). Prior to the student’s graduation, dental research results are expected to be formally written in publishable format and submitted for publication in a refereed scientific journal and a variety of 10 clinical cases must be submitted in the American Board of Endodontics format.

Admissions Requirements

- ADEA PASS application
- Official transcripts from all schools attended. This includes trade schools, community colleges and universities, submitted to PASS
- Official evaluation of dental school transcripts for all international applicants, submitted to PASS
- National Board Part 1 exam scores for all applicants, submitted to PASS
- GRE exam scores for all international applicants, submitted to PASS
- TOEFL exam scores for all international applicants, submitted to PASS
- GPA/Class Rank, submitted to PASS
- Three professional evaluations, submitted to PASS
- Institution evaluation, submitted to PASS
- $50.00 application fee, sent to Endodontic Department

Degree Requirements

Students must complete all course work with a minimum of a 3.0 GPA, complete a research project and complete a portfolio of ten treatment cases to be submitted to the American Board of Endodontics.

The M.S. in Dental Science degree will be awarded to students who successfully complete the certificate and the required courses (p. 110) in the Graduate School.

Sample Plan of Study

First Year

Fall

<table>
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<tr>
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Spring

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Total Credit Hours: 50.0
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<tr>
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### Third Year

#### Fall

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#### Total Credit Hours:
4.5

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**Objectives/Program Outcomes**

**Goals**

Consistent with the Health Science Center mission and with the Standards for Advanced Specialty Education Programs in Endodontics, the program goals are to provide each student with an excellent, individualized educational experience in four areas: 1) biomedical sciences, 2) clinical sciences, 3) teaching, 4) research and to ultimately prepare each student to achieve certification by the American Board of Endodontics.

**Objectives**

The objectives of the program are to provide instruction and/or clinical experience in the following areas:

1. **Biomedical sciences**
   - a. Anatomy and histology, including embryology
   - b. Microbiology, infection and immunology
   - c. Oral medicine and pathology
   - d. Biochemistry and physiology
   - e. Pharmacology
2. **Clinical sciences**
   - a. Patient evaluation and management, including emergencies
   - b. Endodontic radiology, diagnosis and treatment plans
   - c. Pain and infection, including pharmacologic management
   - d. Nonsurgical and surgical endodontic procedures
   - e. Restoration of endodontically treated teeth
   - f. Evaluation of endodontic therapy
   - g. Practice management

3. **Teaching endodontics**
   - a. Presentations in lectures, seminars and table clinic
   - b. Preclinical instruction of undergraduate students
   - c. Clinical instruction of undergraduate students

4. **Research**
   - a. Statistics, research design and methodology
   - b. Investigation and evaluation of the literature
   - c. Written and oral presentation of research results

The curriculum of instruction and experience in biomedical and clinical sciences is well balanced with teaching and research experience. The ultimate objective of the program is to develop students who are well prepared for candidacy for certification by the American Board of Endodontics and for continued career progress in clinical practice or academic achievement.

**Oral and Maxillofacial Radiology Certificate**

**Overview**

The advanced education program in oral and maxillofacial radiology consists of a 36-month study leading to a Certificate. Qualified students also have the option to pursue the M.S. in Dental Science degree in the Graduate School of Biomedical Sciences. Students in the Certificate program receive extensive training in radiation physics and radiation biology, radiographic techniques, and interpretation.

Students are responsible for performing, interpreting and updating conventional and advanced radiographic procedures such as CT, Cone Beam CT and magnetic resonance images acquired in the graduate clinic, extramural clinics, or assigned in courses. Students report on imaging studies and consult with clinicians nationwide.

Successful completion of the Certificate Program can fulfill the formal education requirements of the American Board of Oral and Maxillofacial Radiology.

**Admissions Requirements**

- D.D.S. or D.M.D. degrees from U.S. or Canada are preferred. All others will be considered and are encouraged to apply.
- Minimum of 1 year experience in general practice residency or in general practice is preferred.
- Deadline to apply: September 1st of each year for the following year’s matriculating class. Application materials include:
  - Completed application
  - Three letters of recommendation
  - Original transcripts from all the schools attended. In addition, international applicants must have transcripts evaluated by evaluation firms such as ECE or WES including GPA calculations. All transcripts and evaluation reports must be received prior to application deadline
  - GRE and TOEFL scores are required for international applicants.
GRE scores are mandatory for the Master’s program and must be received prior to the application deadline.

National board scores, if available

Degree Requirements
The student must complete all the courses listed in the plan of study to receive a certificate.

CODA Standard 6 for Advanced Specialty Education Programs requires that “Advanced specialty education students/residents must be given the opportunity to participate in research.” Each UTHSCSA Advanced Dental Education Specialty Program’s plan of study includes a requirement for participation in research.

UTHSCSA Advanced Dental Education Specialty Program students may satisfy this CODA standard in either one of the two following ways:

1. In the School of Dentistry: Under guidance of Program Director or faculty designated by the Program director, the student will plan, execute, analyze, summarize, and present the results of, a Research Project. The specifications for the scope, performance, presentation, and timetable of this project, as well as the faculty supervision and evaluation standards for student performance, are determined by the Program Director. This is experiential learning, not associated with a course, and no academic credit will be awarded. The Program Director will notify the Registrar by memo when this project is successfully completed. The student’s transcript will note that the Research Project was successfully completed. This option is for students pursuing only a Certificate in one of the Advanced Dental Education Specialty programs. This option is not for students pursuing, or intending to pursue, the MS in Dental Science degree.

- or -

2. In the Graduate School of Biomedical Sciences: Students also enrolled in the UTHSCSA MS in Dental Science Program, and who successfully complete the MSDS courses Research 1/Research 2/Research 3, may transfer those course credits into their corresponding School of Dentistry Specialty Certificate Program. This transfer will satisfy the research requirement in lieu of the above mentioned Research Project. In these cases, the student’s transcript will note the transfer of these credits in satisfaction of the research project requirement.

Note: The Graduate School of Biomedical Sciences will NOT accept the Research Project described above in option 1, as a substitute for the fulfillment of the requirement for the Research 1/Research 2/Research 3 courses. There will be no exceptions. An MSDS degree will not be awarded to any student who has not successfully completed the Research 1/Research 2/Research 3 courses, along with the other degree requirements.

The M.S. in Dental Science degree will be awarded to students who successfully complete the certificate and the required courses (p. 111) in the Graduate School.

<table>
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<th>First Year</th>
<th>Credit Hours</th>
<th>Second Year</th>
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<tbody>
<tr>
<td>DIAG 5017</td>
<td>Literature Review 1</td>
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<td>Graduate Oral And Maxillofacial Clinic 3</td>
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| Total Credit Hours: 26.0

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Note: The Graduate School of Biomedical Sciences will NOT accept the Research Project described above in option 1, as a substitute for the fulfillment of the requirement for the Research 1/Research 2/Research 3 courses. There will be no exceptions. An MSDS degree will not be awarded to any student who has not successfully completed the Research 1/Research 2/Research 3 courses, along with the other degree requirements.
Oral And Maxillofacial Radiology Interpretation 3

Objectives
- Provide comprehensive training that assures resident knowledge and proficiency in Oral and Maxillofacial Radiology through extensive training in radiation physics, radiography, radiographic techniques and interpretation, anatomy of the head and neck and diagnostic imaging interpretation of the maxillofacial region using conventional and advanced radiographic procedures such as CT, Cone Beam CT, and magnetic resonance images acquired in the graduate clinic or in assigned courses.
- Prepare the residents to successfully challenge the Oral and Maxillofacial Radiology board exams and become certified Radiologists.

Oral & Maxillofacial Surgery Certificate

Overview
The Oral and Maxillofacial Surgery Program is a six-year course of study leading sequentially to an M.D. and then a Certificate. The program is designed to integrate the advanced biological basic sciences into progressive clinical training. There is an excellent balance between inpatient admissions and outpatient visits encompassing dentoalveolar surgery, maxillofacial trauma, pathology, orthognathic, preprosthetic, temporomandibular, and reconstructive surgery. There are approximately 24,000 outpatient procedures performed annually in the oral surgery clinic and 1,200 hospital admissions. Emphasis is placed on total health care of the hospitalized patient. Residents are expected to become competent in overall patient management including physical diagnosis, fluid and electrolyte administration, medication, interpretation of laboratory data, etc. Other activities that are used to supplement hospital clinical oral and maxillofacial surgery experiences and rotations include a School of Dentistry assignment, emergency room duty, special clinics, and conferences and teaching rounds.

Graduates are expected to be able to act as oral and maxillofacial surgery specialists in private practice, educational, and/or hospital settings; to plan and provide oral and maxillofacial surgery care for a wide variety of patients including those with complex disease comorbidities; to function effectively and efficiently in interdisciplinary health care teams; to apply scientific principles to the selection and provision of oral and maxillofacial surgical services, including evidence-based and critical thinking, outcomes-based quality improvement, and technology based information systems; and to demonstrate professionalism, including ethical principles, patient-centered care, and adaptability.

Admissions Requirements
All applicants for the Oral and Maxillofacial Surgery Program must be graduates of dental schools in the United States or Canada which are accredited by the Commission on Dental Accreditation. The application should have demonstrated outstanding academic ability, maturity, judgment and ambition. The Oral and Maxillofacial Surgery residency program participates in the Postdoctoral Application Support Service (PASS) for application and the National Dental Matching program for selection. You can receive information at: http://www.adea.org/passapp/ or by writing:

PASS
1625 Massachusetts Ave., NW Suite 101
Washington, DC 20036
(202) 332-8790

Degree Requirements
The Oral and Maxillofacial Certificate Program is a full-time course of study, requiring completion of the M.D. as a prerequisite, and then successful completion of 36 months of clinical rotations and successful completion of 6 semester credit hours of required course work.

Sample Plan of Study
Each course in the following sequence contains modules in: case conference, dentofacial deformities, anesthesia and pain control, journal club, oral pathology, prosthodontics conference, and morbidity and mortality conference. Students at each of the various levels participate in common session seminar, lecture, discussion, and case presentation sessions. At each progressive course level, increased knowledge, higher skills, and more-deeply-informed attitudes are expected of the student.

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<thead>
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Total Credit Hours: 6.0

This course is shared with the certificate and the M.S. Dental Science.
Objectives/Program Outcomes

Upon completion of this program, the graduate should be able to:

- provide competent patient care as evaluated in the six domains of colleague/faculty communication, assessment and data analysis, decision making and judgment, patient communication, patient/family education, and performance of procedures;
- make use of a fund of medical knowledge in the following three domains: to develop a clear rationale for procedures, to use evidence-based reasoning, and to address clinical problems;
- demonstrate adequate technical abilities in the practice of oral and maxillofacial surgery.

Orthodontics & Dentofacial Orthopedics Certificate

Overview

The mission of the Orthodontics and Dentofacial Orthopedics Certificate Program in the School of Dentistry, at the Health Science Center is to educate specialists in orthodontics to prevent and correct dental malocclusions and dentofacial deformities at both the population and the individual level, thus contributing to the improvement of oral health of the population of South Texas. This mission will be accomplished by educating clinical orthodontic specialists competent and proficient in providing services in evidence-based clinical practice and to participate in education of future orthodontists.

The mission of the Orthodontics and Dentofacial Orthopedics Certificate Program will be fulfilled by achieving the following goals over the 35 months of the Program:

1. Graduated and certified orthodontic specialists will demonstrate competency in clinical orthodontics and professional and ethical behavior in clinical practice.
2. The graduates will be prepared and qualified for certification by the American Board of Orthodontists (ABO).
3. The graduates will demonstrate a thorough knowledge base of etiology of dental malocclusions, dentofacial deformity, growth and development and management of malocclusions according to accepted standards of care in orthodontics.
4. The graduates will demonstrate a knowledge in and understanding of research by completing a research project that includes protocol development, data collection and analysis, preparation of a publishable quality scientific paper and presentation of findings at a scientific forum.

Admissions Requirements

1. Graduation from a Dental School with a D.D.S., D.M.D., or non-U.S. equivalent prior to matriculation.
2. Completed online PASS application for admission to the Graduate Orthodontics and Dentofacial Orthopedics Program.
   b. A copy of Graduate Record Exam (GRE) scores  
   c. A copy of the Test of English as a Second Language (TOEFL) results if an international student and English is a second language  
   d. A copy of the National Boards Part I results.  
4. Submission deadline is September 15.

Degree Requirements

Certificates will be awarded upon the student’s successful completion of the prescribed curriculum with a 3.0 minimum grade point average, recommendation of the program director to the Associate Dean for Student Affairs and certification by the Dean to the President.

The M.S. in Dental Science degree will be awarded to students who successfully complete the certificate and the required courses (p. 111) in the Graduate School.

Sample Plan of Study

<table>
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<tr>
<th>First Year</th>
<th>Credit Hours</th>
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<td>ORTH 5030</td>
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**ORTH 5035** Current Literature Review 1
**ORTH 5037** Orthodontic Lecture Series 1
**ORTH 5028** ABO Literature Review 1
**INTD 6014** Perio/Pros/Endo/Orth Interdisciplinary Course 2

Total Credit Hours: 12.0

**Third Year**

**Fall**

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Total Credit Hours: 12.0

**Spring**

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Pediatric Dentistry Certificate

The program in pediatric dentistry is designed to offer the advanced student a balanced curriculum in both didactic and clinical areas. Particular emphasis is placed on hospital dentistry, conscious sedation, interceptive orthodontics and special patient care. The program is administered by the Department of Developmental Dentistry, of the School of Dentistry, and is approved and accredited by the Commission on Dental Accreditation (CODA). Upon successful completion of all requirements, the student is awarded a certificate in Pediatric Dentistry and meets the eligibility requirements for the American Board of Pediatric Dentistry.

Admissions Requirements

Students are admitted to the certificate programs through registration as postdoctoral certificate students in the School of Dentistry. To be eligible for admission, individuals must have earned a D.D.S. or D.M.D. degree or non-U.S. equivalent prior to matriculation and must present their dental education transcripts, three letters of recommendation and three personal potential index evaluations. A personal interview is required.

All applications should be submitted through the PASS program. The application cycle begins May 21st and continues through September 16th.

Graduates of dental schools which have not been accredited by the Commission on Dental Accreditation must have successfully passed the National Boards prior to application.

Applicants for whom English is not the native language are required to submit scores from the Test of English as a Foreign Language (TOEFL).

The Pediatric Dentistry Certificate students studying in Laredo receive 100% of their instruction off-site in Laredo.

Degree Requirements

A Certificate will be awarded upon the student’s successful completion of the prescribed curriculum with a 3.0 minimum grade point average, recommendation of the program director to the Assistant Dean for Students and certification by the Dean to the President.

The M.S. in Dental Science degree will be awarded to students who successfully complete the certificate and the required courses (p. 112) in the Graduate School.

Plan of Study

**First Year**

**Fall**

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<td>PEDO 5043</td>
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**Spring**

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Objectives/Program Outcomes

The Orthodontics & Dentofacial Orthopedics Certificate Program at the Health Science Center School of Dentistry is designed to prepare students to acquire the knowledge and clinical skills necessary to provide comprehensive orthodontic care and correct malocclusions and limited skeletal deformities in children and adults, including those with special health care needs.

Program Outcomes: At the completion of the program the student will:

1. Demonstrate competency and proficiency as a clinical orthodontic specialist in evidence-based clinical practice.
2. Demonstrate the understanding of and competency in professional and ethical behavior in clinical practice.
3. Demonstrate a thorough knowledge base of etiology of dental malocclusions, dentofacial deformity, growth and development and management of malocclusions according to accepted standards of care in orthodontics.
4. Complete a research project that includes protocol development, data collection and analysis, preparation of a publishable quality scientific paper and presentation of findings at a scientific meeting.
Objectives/Program Outcomes

The Certificate in Pediatric Dentistry program at the Health Science Center is designed to prepare students to have the knowledge and clinical skills to provide comprehensive pediatric preventive and restorative oral health care to infants, children and adolescents, including those with special health care needs.

At the completion of the program the student will:

1. Demonstrate excellence as a clinical pediatric dentist.
2. Demonstrate excellence in evidence-based clinical practice.
3. Demonstrate a thorough knowledge base of medical and dental diseases and their management according to accepted standards of care in the pediatric dental setting.
4. Complete a research project that includes protocol development, data accumulation and analysis, preparation of a scientific paper and presentation of findings in a scientific forum.

Periodontics Certificate

Overview

In this three-year advanced education program, residents learn all facets of periodontics and dental implant therapy, including biomedical sciences, patient evaluation, diagnosis of periodontal and other oral diseases, interdisciplinary treatment planning, non-surgical and surgical periodontal treatment, and dental implant therapy.

Admissions Requirements

Information and Documentation Required for Application

- Our residency program will participate in Phase I of the Match during the Fall application cycle (for students who will start the residency in June). Applicants must register with the Match program. The Match and ADEA PASS share a registration portal for applicants, so applicants who want to register for the Match must go to the ADEA PASS website to complete the Match registration process. Applicants will be charged the Match registration fee at that time. For more information, go to Match web site: https://natmatch.com/dentres/

- APPLICATION DEADLINE: August 1. This is the deadline for all application materials, including those submitted to ADEA PASS (http://www.adea.org/PASSapp). NOTE: the first step in using PASS is for the applicant to register and pay your PASS registration fee. Nothing will happen at PASS until you have paid and are registered.

- Interviews for our program will be held during late August and September. Applicants and programs will submit rank order lists to the Match in late October to early November. Final results of the Match are released to applicants and programs in late November. See the Match web site for further details.

- Application through ADEA PASS (http://www.adea.org/PASSapp) (ADEA PASS (http://www.adea.org/PASSapp) application materials are accepted in mid-May)

- Official Transcripts uploaded to ADEA PASS (http://www.adea.org/PASSapp) (all colleges, dental school). If you have attended a non-U.S. college/university, it is required that all international transcripts be evaluated by either ECE (https://www.ece.org) or WES (http://www.wes.org) foreign credentialing services. We do not allow international applicants to use any credential evaluation services other than ECE (Education Credential Evaluators) or WES (World Education Services).

- Three Professional Evaluation Forms (Letters of Recommendation) uploaded to ADEA PASS (http://www.adea.org/PASSapp)

- Institution Evaluation Form (formerly called the Dean’s Letter) submitted by the Dean's Office to ADEA PASS (http://www.adea.org/PASSapp). This form will include GPA, Class Rank and National Board Examination scores.

- GRE and/or ADAT scores uploaded to ADEA PASS (http://www.adea.org/PASSapp). All applicants who graduated from a dental school not accredited by Commission on Dental Accreditation are required to take either the GRE or the Advanced Dental Admission Test (ADAT); applicants may take both exams if they desire but must take at least one. GRE scores taken more than 5 years before the application date will not be accepted.

  - While not mandatory for applicants from CODA-accredited dental schools, ADAT or GRE exam are still recommended, especially for applicants from schools that do not rank or provide grades.

- Test of English as a Foreign Language (TOEFL iBT) scores uploaded to ADEA PASS (http://www.adea.org/PASSapp). All international students must provide their official TOEFL test scores. A minimum TOEFL iBT test score of 92 is required for admission consideration. TOEFL test scores taken more than 3 years before application date will not be accepted.

- Application for Admission form (http://www.uthscsa.edu/sites/default/files/Periodontics_Grad_App.pdf) for the Graduate Periodontics Residency Program. (Submitted directly to program office at the address listed on the form)

  - A brief curriculum vitae-submitted directly to our office.

- Applicants who are Permanent Residents of the U.S. must provide a certified copy of both the front and back sides of their federal Green Card. All international students must provide their full legal name as it appears on immigration documents. Send copies directly to the program office, Attn: Shirley Kraft

- Send a scanned copy of the following to the program office at krafs@uthscsa.edu:

  - NBDE scores
  - GRE scores (if applicable)
  - TOEFL scores (if applicable)
  - ADAT scores (if applicable)
• Application Fee of $50.00. At this time we only accept checks or cashier’s checks. The check must be in U.S. Dollars and must be issued by an American bank. Please make the check out to “Department of Periodontics” and send the check to the following address:

• Brian L. Mealey, DDS, MS (http://profiles.uthscsa.edu/?pid=faculty_index&ind=all&sfilt=&dfilt=0T50VE6AL)
Graduate Program Director
Dept. of Periodontics - MSC 7894
7703 Floyd Curl Drive
San Antonio, Texas 78229-3900

Phone: 210-567-3589
Fax: 210-567-3761
Email: krafts@uthscsa.edu or mealey@uthscsa.edu (krafts@uthscsa.edu)

Application Deadline
August 1 for all materials, including those submitted to ADEA PASS (http://www.adea.org/PASSapp). We will not accept any late application materials.

Degree Requirements
A certificate in periodontics will be awarded upon the student’s successful completion of the prescribed periodontics curriculum with a minimum 3.0 GPA, recommendation of the program director to the Assistant Dean for Students and certification by the Dean to the President.

The Master of Science in Dental Science degree will be awarded upon the student’s successful completion of the designated courses in the sample plan of study below with a minimum 3.0 GPA, successful defense of M.S. thesis, award of a certificate in Periodontics, recommendation of the Committee on Graduate Studies and certification of the Faculty Council of the Graduate School to the President.

The M.S. in Dental Science degree will be awarded to students who successfully complete the certificate and the required courses (p. 112) in the Graduate School.

Sample Plan of Study

First Year

Fall

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Spring

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Second Year

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Total Credit Hours: 23.5
Third Year
Fall

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Spring

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</tr>
</tbody>
</table>

Total Credit Hours: 19.5

1 This course is shared with the certificate and the M.S. Dental Science.

Objectives/Program Outcomes

The primary goal of the Periodontics Program is to produce outstanding clinical periodontists who engage in a broad scope of periodontal procedures and who are capable of engaging in research, teaching and leadership activities. We hope to produce the most well trained clinical periodontists coming out of residency programs in the U.S., so that they can offer the highest quality of care to their patients, provide for their families, and give back to the community and the profession.

Program Outcomes:

1. Demonstrate foundational didactic knowledge and insight in the biomedical sciences.
2. Demonstrate a high level of clinical skill in a comprehensive variety of periodontal and dental implant treatment modalities, as set out in CODA Standards for Accreditation of Advanced Education in Periodontics Programs.
3. Demonstrate knowledge of the scientific evidence in periodontology and surgical implant dentistry, including interpretation, analysis, and critical evaluation.
4. Demonstrate knowledge of and clinical skills in multidisciplinary patient care (prosthodontic, orthodontics, TMD, endodontics).
5. Demonstrate knowledge of and clinical skills in methods of adjunctive anxiety and pain control including conscious sedation using intravenous, oral and inhalation routes. Emphasis will be placed on IV sedation.
6. Program graduates will be able to obtain specialty board certification.
7. Demonstrate professional/ethical behavior in all aspects of residency training and patient care.
8. Develop an understanding of the scientific method, hypothesis testing and use of evidence based methodologies. Demonstrate active engagement in research leading to Master of Science degree by the conclusion of residency.

Prosthodontics Certificate

Overview

The Advanced Education in Prosthodontics Certificate Program provides a progressive clinical, laboratory and didactic experience in fixed, removable, maxillofacial and implant prosthodontics (including the surgical placement of implants). Graduates will be prepared to skillfully practice the clinical art and science of prosthodontics in a specialty practice, and will be prepared to complete the certification examination of The American Board of Prosthodontics.

An optional M.S. in Dental Science degree track is available to qualified students.

Admissions Requirements

The deadline for all application materials is August 1

- Graduation from dental school with a DDS, DMD, or non-US equivalent degree prior to matriculation
- Completion of an ADEA PASS application
- Registration for Match

Submit through PASS

- Official transcripts from all colleges/universities attended
  - If you attended a college/university outside the U.S., PASS requires transcripts to be submitted by either ECE (Educational Credential Evaluators) or WES (World Education Services)
- Three Professional Evaluation Forms
- Institution Evaluation Form
- Curriculum Vitae
- Advanced Dental Admission Test (ADAT) exam scores
  - Required for all applicants who graduated from dental schools not accredited by CODA
  - Required for students who graduated from CODA-accredited schools that are Pass/Fail and/or do not provide class ranking
  - Recommended for all other applicants
- Test of English as a Foreign Language (TOEFL iBT) scores for international applicants for whom English is not the first language
  - The IELTS test is not accepted
  - A minimum TOEFL iBT test score of 92 is required for application consideration
  - TOEFL test scores more than 3 years old at the time of application will not be accepted

Submit directly to the program

Advanced Education in Prosthodontics
Department of Comprehensive Dentistry, MSC 7912
UT Health San Antonio
7703 Floyd Curl Dr.
San Antonio, TX 78229-3900
• Application for Admission form (https://www.uthscsa.edu/sites/default/files/ProsApplicationform.pdf)
• Application fee of $50 by check in U.S. dollars submitted directly to the program made out to “Advanced Education in Prosthodontics”
• Applicants who are Permanent Residents of the U.S. must provide a certified copy of both the front and back sides of their federal Green Card. All international students must provide their full legal name as it appears on immigration documents.

Qualified applicants will be notified of their selection as a finalist and invitation for a personal interview. An in-person interview is a requirement for admission.

Degree Requirements

A certificate in prosthodontics will be awarded upon the student’s successful completion of the prescribed prosthodontic curriculum with a minimum 3.0 GPA, recommendation of the program director to the Assistant Dean for Students and certification by the Dean to the President.

The Master of Science in Dental Science degree is optional for the Prosthodontics Program and will be awarded upon the student’s successful completion of the required courses (p. 114) in the sample plan of study below with a minimum 3.0 GPA, successful defense of M.S. thesis or manuscript for publication, award of a certificate in Prosthodontics, recommendation of the Committee on Graduate Studies and certification of the Faculty Council of the Graduate School to the President.

Sample Plan of Study

First Year

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<thead>
<tr>
<th>Fall Credit Hours</th>
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<tbody>
<tr>
<td>PATH 5035 Oral Pathology 2</td>
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Spring

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Second Year

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Spring

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Total Credit Hours: 21.5

Third Year

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Spring

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Total Credit Hours: 26.5

1 This course is shared with the certificate and the M.S. Dental Science.
Objectives/Program Outcomes

The primary goal of the Advanced Prosthodontic Education Program at the Health Science Center is to provide educational experiences for our students that create clinically competent prosthodontists. It is our belief that board certification, sub-specialization and successful careers in research, teaching, private and institutional practice are all derivatives of prosthodontic clinical competence. Our secondary goal is to provide a sufficient exposure to the derivative fields of the specialty to guide our students in their long term career decisions.

Program Outcomes:

1. Students will demonstrate a comprehensive understanding of education in biomedical sciences as a foundation for clinical prosthodontics.
2. Students will demonstrate a historical and evidence-based understanding of contemporary prosthodontic practice.
3. Students will successfully challenge progressive didactic, laboratory and clinical experiences in fixed, removable, maxillofacial and implant prosthodontics (including surgical placement of implants) and demonstrate adequate preparation for skillful practice of the art and science of prosthodontics at the specialty level.
4. Students will successfully practice in a service oriented model of specialty care with experiences that focus on the best interests of the patient in a climate of interdisciplinary consultation and collaboration.
5. Students will successfully complete didactic and clinical instruction that will potentiate future roles as prosthodontic educators.
6. Students will demonstrate adequate preparation to successfully challenge the certifying examinations of the American Board of Prosthodontics.
7. Students will apply a sufficient understanding of dental research that will permit successful completion of a Master of Science degree or a scholarly publication / presentation.

Dental Hygiene

Dental hygienists are licensed health care professionals that specialize in preventing oral health problems and diseases. To become a licensed, registered dental hygienist requires successful completion of an ADA accredited dental hygiene program, The National Dental Hygiene Board Examination, and a state or regional examination. The primary responsibility of a dental hygienist is to treat and educate patients in the control and prevention of oral diseases. Typical functions of the clinical dental hygienist include assessment of health histories, evaluating and charting oral conditions, removing deposits (plaque, tartar, and stain) from the teeth, exposing and processing dental x-rays, applying preventive agents to the tooth surfaces such as fluoride and sealants, and providing individualized oral hygiene instruction services.

This growing career field is projected to be one of the 30 fastest growing occupations. The population growth combined with the increasing rate of retention of natural teeth will continue to stimulate the need for dental hygienist. For additional information on the profession of dental hygiene, contact the American Dental Hygienists’ Association (http://www.adha.org).

Program Policies

Academic Advising

The division director and faculty serve as student advisors. The advisor can assist the student to recognize and acknowledge that he or she is in academic difficulty and can provide appropriate guidance. At all times, the faculty member can act to reassure, counsel, advise and refer students to appropriate individuals for help with their particular problem. Topics that may be addressed through faculty advising include academic issues, program policies, study problems, time management, and clinical progress, as well as the advisor’s referral to other support systems in the university or community.

Academic Warning

The Academic Performance Committee meets twice per semester to review students’ academic progress in the program. At the mid-semester meeting, students identified as performing at an unsatisfactory level in any course are sent a letter from the program director requesting that they meet with their course instructor and academic advisor. An academic warning, unto itself, does not require prescribed action on the part of the student. It is expected that the student who has received an academic warning will correct mid-semester academic deficiencies by the end of that particular semester.

An academic warning is an official communication between the program director and the “at risk” student. Academic warning is offered at mid-semester. Academic warning is a courtesy to the student, allowing for supportive dialog between the student and the dental hygiene administration.

Advancement, Probation and Dismissal

A satisfactory rate of progress toward the degree is determined by the Academic Performance Committee (APC) for the bachelor’s degree according to the following standards. A student can be considered for dismissal from the School of Dentistry for academic deficiencies or violation of University regulations. The Academic Performance Committee is responsible for considering students for academic dismissal. Students may be suspended, dismissed, and/or refused readmission at any time if circumstances of an ethical, legal, moral, health, social, psychomotor skill development, or academic nature are considered to justify such an action.

Academic Dismissal: An option to appear before the Academic Performance Committee will be extended to the student before a vote is taken to recommend academic dismissal. The purpose of the appearance is to inform the Committee of extenuating circumstances which may have contributed to the student’s performance. The student may request that other appropriate verbal and/or written testimony regarding these circumstances be presented at this meeting. Only members of the Committee will be present when the vote for dismissal is taken.

Performance Review: Each student’s performance is reviewed at the middle and end of every term by the APC. At mid-term the APC determines whether the student is progressing satisfactorily or whether a warning letter is indicated. Warning letters specify each course in which the student is performing unsatisfactorily and suggest that the student meet with the course director to assist in remediation strategies. Students are responsible for arranging instructor counseling and assistance in remediating any academic deficiencies.

Promotion Recommendations: At semester’s end, the APC determines the student’s promotion status. The APC evaluates other aspects of the
student’s performance: (1) course grade(s), (2) attendance record, (3) professionalism, (4) and psychomotor skill development. The APC also may assess extenuating circumstances that might have affected student progress on an individual basis. Recommendations are forwarded to the program director for final approval. A student performing at an unsatisfactory level will receive written notification of her/his status from the Associate Dean of Academic Affairs.

The policies below apply to students in the bachelor’s degree programs (entry-level and degree completion).

Unconditional Advancement – A student may be considered for Unconditional Advancement if the student:

- Achieves a minimum grade point average of 2.0 each semester,
- Successfully completes all prescribed courses and semester requirements, and
- Earns a satisfactory grade in each course taken.

In addition, the faculty will consider all areas listed above under Promotion Recommendations.

Probationary Advancement – A student may be considered for Probationary Advancement if the student:

- Withdraws from a prescribed course with the approval of the department chair but meets all other conditions for Unconditional Advancement (bachelor completion only),
- Receives an unsatisfactory grade in a single course; or
- Receives an I (Incomplete) grade in any course(s).

A student who receives an unsatisfactory grade in any course may be required to repeat all or part of the academic year. When repeating any portion of the academic year the student must earn a satisfactory grade in each course or be subject to dismissal from the program.

Dismissal – Dismissal from the program may be recommended if a student receives an unsatisfactory grade(s) in:

- One or more courses in one semester,
- A course being repeated,
- A course being remediated,
- Any course taken while repeating any portion of the academic year, or
- Any course taken while on probation
- Receiving an unsatisfactory or failing grade in professionalism

Appeal Procedures

1. A student may appeal an Academic Performance Committee decision that recommends: a) remediation, b) repetition of the year or c) academic dismissal. The student submits written notification of his/her desire to appeal to the Dean's office. This written request must be received by the Dean's office within 5 days following the student's receipt of the written notification of the Academic Performance Committee's recommendation.

2. The Dean will consult with appropriate individuals and render a decision to uphold or overturn the Academic Performance Committee decision. The student will receive written notification of the Dean's decision.

Student appeals and grievances are handled through established policies and procedures for the School of Dentistry, outlined in the Academic Grievance Policies (p. 44) section of the Catalog.

Grades

The standing of students in their work is expressed by the following grades:

A = Excellent
B = Above Average
C = Average
F = Failure
P = Pass
W = Withdraw

Grades in courses in which performance is graded an S (Satisfactory) or U (Unsatisfactory) are not used in computing grades point average.

A = 4 points
B = 3 points
C = 2 points
F = 0 points

The symbol I (Incomplete) may be recorded for a student who has not completed course assignments at the conclusion of the course.

Final Grade for Course Remediation/Repetition

A grade of "C" is the highest letter grade that can be achieved in the remediation of a course. Following remediation of a course, the grade assigned will be the grade ("C", "F" or Pass) achieved by the student as set forth in the academic standards of the remediation of the course.

Following repetition of a course during repetition of an academic year in its entirety, the grade assigned will be the grade achieved by the student as set forth in the academic standards of the course.

All grades achieved by a student in a course (i.e., original, remediation, repetition) will appear on the official transcript but only the most recent grade achieved will be used in calculating the grade point averages.

Grades in Clinical Rotation and Practicums

Clinical rotations and Practicums may be graded S (Satisfactory) or U (Unsatisfactory), or may be assigned a letter grade, depending on the department policy.

A grade of S or other designations of an acceptance grade is assigned if the student successfully satisfies the criteria for clinical courses. Failure to successfully satisfy the course criteria may result in an I (Incomplete) or a U (Unsatisfactory) or a letter grade considered unsatisfactory based on departmental policy.

Criteria and time frame for removal of an I or U or other Unsatisfactory grade in clinical courses are determined based on clinical documentation and consultation with the Clinical Coordinator/Clinical Instructor. An I or U or other unsatisfactory grade may require that the student complete an additional affiliation or other remediation that could extend the professional curriculum beyond the expected graduation date. More than
one unsatisfactory grade is not allowed within the total clinical course sequence.

**Incomplete**
The assignment of an "I" grade indicates that the student failed to complete requirements for the course due to unexpected and extenuating circumstances, such as illness, family emergency, or other non-academic and urgent matters. A grade of Incomplete "I" is not acceptable as a temporizing measure in situations of substandard academic performance. The outstanding work must be completed by the designated date issued by the faculty but no later than one year of the issuance of the "I" grade. When the course is completed the qualitative grade issued by the instructor will be submitted to the Office of the University Registrar using a Change of Grade Form. If the course work is not satisfactorily completed within the designated time, the "I" grade will be changed to an "F" grade. Incomplete grades should not be confused with failing grades of "F" in which a student failed to complete requirements without proper notice to the instructor.

**Academic Grievance Policies**

**Due Process Grade Assignment Disagreement**
A student wishing to appeal the assignment of a grade must submit her/his grievance to the Course Director within seven (7) days of the grade assignment. The appeal mechanism for challenging a grade is limited to: (1) possible clerical errors in calculating or recording a grade, or (2) allegation of mistakes or unfairness in application of the published academic standards in the assignment of a grade. It is the responsibility of the student to substantiate her/his assertion that an incorrect grade has been assigned.

If the student's concerns are not resolved after a meeting with the Course Director, the student may submit a written appeal to the Division Director. The written appeal must be made within seven days of the student's meeting with the Course Director and must contain information to substantiate the assertion that an incorrect grade has been assigned.

If the disagreement is not resolved at the division level, the student may submit a written appeal to the Department Chair within seven days of the Division Director's decision. The written appeal must be made within seven days of the student's meeting with the Division Director and must contain information to substantiate the assertion that an incorrect grade has been assigned.

If the disagreement is not resolved at the departmental level, the student may submit a written appeal to the Dean of the School of Dentistry within seven days of the departmental decision. If the Dean agrees to review the matter, he/she will review only that the appeal process was conducted appropriately. This School of Dentistry policy supersedes any other grievance policies, and decisions made in this process are final.

**Dropping a Course**
There is a six course drop limit established by the Texas Senate (SB 1231). This legislation is applicable to all Texas public colleges and universities.

**Withdrawal from a Course**
Withdrawal refers to the procedure by which students voluntarily remove themselves from courses in which they are enrolled. Each course in the curriculum is built upon and is dependent upon a foundation established in a prior course. To withdraw from a course, a student should seek counseling from the Course Director and the Program Director. In addition, the student will make an appointment with the Program Director to discuss the decision, explore options, and make necessary changes to the degree plan when withdrawing from any course. The student will have to have an official withdrawal form signed by the course director and Program Director after the form has been provided and signed by the appropriate Associate Dean.

If a student withdraws from school or drops a course prior to the first examination/graded assignment, a grade of W will be recorded.

**Leave of Absence**
Students in good academic standing who wish an extended leave of absence for extenuating physical or personal reasons must submit a written request to the Dean stating reasons for such a request, the period of time involved, and intentions concerning resumption of dental studies. The Dean will consider such requests on their individual merit.

Generally, a leave of absence shall not exceed one academic year. Any additional leaves of absence must be reviewed and recommended by the Academic Performance Committee and approved by the Dean. The Dean's Office and Program Director must be notified by the student of their intentions to re-enroll by a date determined by the Associate Dean for Academic, Faculty and Student Affairs and the Dental Hygiene Program Director prior to the next academic year. Any additional leaves of absence must be reviewed and recommended by the Academic Performance Committee and approved by the Dean.

Upon the leave of absence approval, the student must request and complete a Student Clearance Form that is available from the Office of the University Registrar (317L MED).

**Requests to Change Schedule of Examinations**
The official dates and times of all examinations are published in the final Class Schedules (http://uthscsa.edu/fsprec/schedules.asp) after consultation with Course Directors and representatives of all classes. Students or the Course Director may initiate requests for changes in the schedule of examinations. All requests should be submitted to the Office of the Associate Dean for Academic Affairs/Dental Hygiene Division Director, as applicable.

A request to move an examination to a later date must be submitted at least two weeks prior to the original date of the examination. A request to move an examination to an earlier date must be submitted at least two weeks prior to the proposed date of the examination.

All requests for changes to the examination schedule published in the final Class Schedule must be accompanied by:

1. A written reason for the move that must be compelling and academically sound.
2. A written statement from the Course Director stating he/she is in agreement with the change.
3. The results (number of yes/no votes) of a secret ballot taken from all members of the class. The Associate Dean for Academic Affairs/ Dental Hygiene Division Director, as applicable will review the request and approve it if the following requirements are met:
4. The request has been submitted within the guidelines.
5. The reason for the move is valid.
6. The Course Director is in agreement with the move.
7. No member of the class present and voting opposes moving the examination to an earlier date; or, 90 percent of those voting are in favor of moving it to a later date.

8. An appropriate classroom is available at the proposed time.

Class Attendance
Students are expected to attend and actively participate in all regularly scheduled classes, laboratories, and clinical periods. The policy regarding attendance and the consequences for failure to comply is the prerogative of the Course Director and the department responsible for that portion of the curriculum, and will be provided in the course syllabus at the beginning of each course. It is the responsibility of the student to arrange with the faculty for making up any work that is missed.

Absences may be considered sufficient cause for issuing failing grades in courses requiring attendance.

Reporting Absenteeism
Attending all scheduled class sessions will provide the student with the opportunity to clarify and apply new concepts and terminology, and benefit from class discussion. Attendance is mandatory at all clinic, lab and lecture classes. If a student is ill to where they cannot attend class, they are required to report their absence immediately. As a courtesy to the course director, absences will be reported online (https://fmcgi.uthscsa.edu/absence/) by 7:30 am the day of the absence. The dental hygiene office will maintain a roster of absentees and the reported reasons for absence.

In cases of absence during an assigned rotation or clinic, all students are responsible for contacting appropriate Rotation Directors and Clinic Coordinators immediately.

Students who will be absent from any examination must notify their Course Directors directly as well as complete an online student absence report.

Students are responsible for contacting Course Directors upon their return to school to schedule required make up work that is missed and obtain related course materials.

Dress Code and Grooming
An excellent dental education is dependent on the number of patients and the diverse patient needs that allow students to provide a broad scope of oral health care to a large number of patients. As this is a totally voluntary system on the patient side, it is incumbent upon the School of Dentistry to provide an environment that gives patients the confidence to come to this institution knowing they will be treated in a professional manner, by professionals, and in a safe environment. To achieve this goal, first impressions are important; therefore, all students in the School of Dentistry need to look professional in dress and grooming since patient contact can occur in many areas of the building. When students have direct patient contact in the clinics, additional issues require students to pay particular attention to clinic attire and grooming because they affect patient safety as well as their own. The dress code policy is published on the School of Dentistry Intranet site, http://dsserver.uthscsa.edu/intranetdocs/UTDentistry_Dress_Code.html. Any additional dress code/ grooming requirements will be addressed by the program director and/or course director.

Student Concerns
Various mechanisms are available at all levels for student input regarding their concerns. Individuals and groups who respond to these concerns include course directors, advisors, associate dean for academic affairs, and the associate dean for student affairs. Procedures for grievances can be found in the General Section of the Catalog.

The president of the Student Body Organization meets bimonthly with presidents of other Health Science Center student groups to discuss problems or concerns affecting students in all schools with the university President. In addition, once a month, the Dean of the School of Dentistry meets with the presidents of all classes. Student liaisons for each course will meet with the respective course director as needed.

National Board Dental Hygiene Examination
Senior dental hygiene student will be eligible to take the written national board the spring semester of their senior year provided they successfully complete the fall senior courses. In order to be considered for graduation, senior dental hygiene students are expected to take the board exam before their last class day in the spring semester as indicated in the academic calendar. If an extenuating circumstance prevents a student from taking the exam prior to the last class day of the spring semester, the Academic Performance Committee will meet to recommend a course of action.

If a student is unsuccessful on the board exam on the first attempt, the National Board policy requires a student to wait 90 days before attempting the exam again. Additionally, candidates must pass the examination within five years of their first attempt or five examination attempts, whichever comes first. Subsequent to the fifth year or fifth attempt, candidates may test once every 12 months after their most recent examination attempt.

Dean's List
Current students in the dental hygiene bachelor's degree program with a grade point average (GPA) of 3.5 or greater for an academic semester may qualify for inclusion on the Dean's List. Incoming students in the Fall of 2018 will be eligible for the Dean's List with a GPA of 3.75 or greater for an academic semester. In addition to the minimum GPA, Dean's List students must not have an Incomplete (I) grade for an academic semester.

Honors Program
Graduation with Distinction in Dental Education
The School of Dentistry contributes to the national effort within the dental education community to increase students’ awareness of the academic arm of the profession. The school also works to enhance awareness of career options in teaching, scholarship and academic administration. All of these efforts are extended to dental students through the Teaching Honors Program (THP). This program provides UT Health San Antonio School of Dentistry students with teaching and educational planning experiences and provides a way for them to learn about academic careers.

Gaining the Distinction in Dental Education recognition is reserved to students who complete additional enrichment coursework that immerses them into a world of teaching and academics. Students will have discussed career choices with faculty, participated in fundamental teaching practices, taught in classroom, lab and clinical settings, and participated in academic fellowship opportunities.
Description of the Program
In order for a dental or dental hygiene to graduate with the Distinction in Dental Education requires a student in good academic standing to complete selective courses unique to the Dental Education Teaching Honors Program. Throughout the dental and hygiene program, students progressively participate in faculty mentoring activities, acquire and apply teaching fundamentals needed for teaching in dental education. As senior students, in both dental and hygiene programs, participate in peer learning projects such as posing as “faculty for the day” where students use their previous knowledge and acquired skills to experience a day as an academian. The Director(s) for the School of Dentistry’s Teaching Honors Program monitors all students who wish to have the “Distinction in Dental Education” appear on their diploma and transcript and will need to submit supporting materials verifying completion of the activities and goals of the program. This includes verification of the core and enrichment selectives. Copies of all scholarly materials produced by student (i.e. abstracts, posters, manuscripts, evaluation forms, submission of assignments in the learning management system, or verified by faculty/mentor) shall be submitted to course director(s). Upon completion of all activities, the course director(s) will review all projects, and presentations for completion, and determine if graduating students have achieved “Distinction in Dental Education”. This list will be shared with the Office of Academic Affairs in the School of Dentistry. The course director(s) will also compile these names and share with the registrar’s office for conferring.

Graduation with Distinction in Research
The School of Dentistry recognizes individual student investigators who, in addition to completing their clinical dental program, have acquired research skills and accomplished significant research activity. The long-range goal is to foster scholarship and critical thinking, add to the body of scientific information and facilitate recruitment of students into dental research careers.

Gaining Distinction in Research Honors is limited to dental students who have demonstrated unusually significant scientific accomplishments. Students will have worked under the mentorship of an active scientist, prepared a research proposal, completed the research project, analyzed and presented the results at local and national research meetings and prepared a report for approval by the Dental School Research Committee.

Description of the Program
The Distinction in Research Program requires that a student in collaboration with a suitable faculty mentor complete a research project and prepares an original extended abstract that is suitable for incorporation into a peer-reviewed publication. The students should have played a significant role in the research project and will typically be listed as first author on an abstract and listed as a co-author on a peer-reviewed manuscript resulting from the research. The Director for Research and Associate Dean for Academic Affairs will monitor the program and bring candidates for consideration to the attention of the Dental School Research Committee. The Research Committee will review all applications and make recommendations to the Dean regarding the designation of the “Distinction” status for the students concerned. Students participating in the Distinction in Research Program are strongly encouraged to enter various Student Research competitions as part of their training experience. These include but are not limited to the Hinman Research Symposium competition, the American Association of Dental Research (AADR) Warner-Lambert Hatton Award, the AADR Caulk/Dentsply competition, the International Association for Dental Research/Colgate Research in Prevention Travel Award and the Block Travel Award.

Student Mistreatment
Mistreatment of students will not be tolerated. Mistreatment, intentional or unintentional, occurs when behavior shows disrespect for the dignity of others and interferes with the learning process. Student mistreatment may take many forms all of which impact student performance. For more information, reference the Student Mistreatment policy (p. 71).

Bachelor of Science in Dental Hygiene
Dental hygienists are licensed health care professionals that specialize in preventing oral health problems and diseases. To become a licensed, registered dental hygienist requires successful completion of an ADA accredited dental hygiene program, The National Dental Hygiene Board Examination, and a state or regional examination. The primary responsibility of a dental hygienist is to treat and educate patients in the control and prevention of oral diseases. Typical functions of the clinical dental hygienist include assessment of health histories, evaluating and charting oral conditions, removing deposits (plaque, tartar, and stain) from the teeth, exposing and processing dental x-rays, applying preventive agents to the tooth surfaces such as fluoride and sealants, and providing individualized oral hygiene instruction services.

This growing career field is projected to be one of the 30 fastest growing occupations. The population growth combined with the increasing rate of retention of natural teeth will continue to stimulate the need for dental hygienists. For additional information on the profession of dental hygiene, contact the American Dental Hygienists’ Association (http://www.adha.org).

Entry Level Track
The Bachelor of Science (BS) Entry level program may be considered by applicants wishing to become a Dental Hygienist. The Division of Dental Hygiene offers a Bachelor of Science Degree Program that prepares graduates for licensure and entry into the profession. The program consists of two academic years of upper-level coursework in dental hygiene theory, laboratory, and clinical skills. Applicants must complete specific general education prerequisite courses before entering the dental hygiene major. The Bachelor’s program requires students to successfully complete a total of 123 semester hours to earn the degree (includes Texas Core, prerequisites, and dental hygiene major courses). Upon completion of the program, graduates are eligible to take dental hygiene licensing examinations for eligibility to practice. The Division of Dental Hygiene is administered under the Department of Periodontics.

Application and Admission Requirements for the Entry-Level Bachelor’s Degree Program
A maximum of up to 30 qualified students can be admitted to the Bachelor of Science degree program. In addition to the academic admission requirements, non-academic factors may be considered when selecting students for admission to the BS Entry program.

Required prerequisite courses: The Texas Core Curriculum and program prerequisites must be completed by the end of the spring semester of the entering year. The program specific prerequisites are listed below. Applicants must complete a minimum of 60 semester credit hours. For further information see the Texas General Education Core Web Center.
The University of Texas Health Science Center at San Antonio

Applications are encouraged to seek advisement from their college counselors.

**Program Prerequisites**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Chemistry with laboratory</td>
<td>4</td>
</tr>
<tr>
<td>Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Nutrition</td>
<td>2</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Microcomputer Applications or equivalent</td>
<td>3</td>
</tr>
<tr>
<td>Elective (may be any academic course)</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: **18**

**Application**

Applicants will submit an application via ADEA DHCAS (Dental Hygiene Centralized Application System) at [http://www.adea.org/dhcas.aspx](http://www.adea.org/dhcas.aspx). Applicants must have a minimum overall grade point average (GPA) of 2.7 and prerequisite courses GPA of 2.7 with all courses completed with a grade of "C" or better. Applicants must meet all requirements to be considered for admission and must submit all required information to ADEA DHCAS by December 31. Transcripts containing fall courses must be submitted by Jan 15.

Up to 6 credit hours may be in progress during the spring semester prior to admittance with all science courses completed by the previous fall. The 6 credit hours must be completed by May and final transcripts submitted by June 1.

**Bachelor of Science in Dental Hygiene – Entry Level Track Degree Requirements**

Dental Hygiene Bachelor of Science degree is awarded at the successful conclusion of the program. Licensure is granted through the state of Texas following graduation, successful completion of the National Board Dental Hygiene Examination, the Western Regional Examining Board (WREB), and a state Jurisprudence Examination. Other Texas licensure requirements are detailed on the Texas State Board of Dental Examiners website.

**Bachelor of Science in Dental Hygiene – Entry Level Track Sample Plan of Study**

**Entry-Level Bachelor’s Degree Program Curriculum**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENH 3004 Oral Anatomy</td>
<td>2</td>
</tr>
<tr>
<td>DENH 3006 Preclinical Dental Hygiene</td>
<td>2</td>
</tr>
<tr>
<td>DENH 3018 Dental Radiography</td>
<td>3</td>
</tr>
<tr>
<td>DENH 3019 Preventive Dental Hygiene Theory</td>
<td>3</td>
</tr>
<tr>
<td>DENH 3022 Dental Materials</td>
<td>3</td>
</tr>
<tr>
<td>DENH 3023 Intro To Clinical Theory</td>
<td>3</td>
</tr>
<tr>
<td>DENH 3033 Structures Of The Head And Neck</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours: **18.0**

**First Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENH 3020 Clinic 1 Seminar</td>
<td>2</td>
</tr>
<tr>
<td>DENH 3021 Clinic 1 Practicum</td>
<td>3</td>
</tr>
<tr>
<td>DENH 3034 Periodontics</td>
<td>3</td>
</tr>
<tr>
<td>DENH 3035 Pharmacotherapeutics</td>
<td>4</td>
</tr>
<tr>
<td>DENH 3040 Histology/Embryology</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours: **14.0**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENH 3020 Clinic 1 Seminar</td>
<td>2</td>
</tr>
<tr>
<td>DENH 3021 Clinic 1 Practicum</td>
<td>3</td>
</tr>
<tr>
<td>DENH 3034 Periodontics</td>
<td>3</td>
</tr>
<tr>
<td>DENH 3035 Pharmacotherapeutics</td>
<td>4</td>
</tr>
<tr>
<td>DENH 3040 Histology/Embryology</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours: **19.0**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENH 4015 Clinic 3 Practicum</td>
<td>3</td>
</tr>
<tr>
<td>DENH 4016 Clinic 3 Seminar</td>
<td>2</td>
</tr>
<tr>
<td>DENH 4017 Community Oral Health Practicum 2</td>
<td>2</td>
</tr>
<tr>
<td>DENH 4019 Practice Management</td>
<td>2</td>
</tr>
<tr>
<td>DENH 4111 Current Issues In Dental Hygiene</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: **12.0**

**Bachelor of Science in Dental Hygiene – Entry Level Track Objectives/Program Outcomes**

**Objectives**

The Bachelor of Science in Dental Hygiene program at the Health Science Center is designed to prepare students to have the knowledge and clinical skills to provide preventive educational and clinical dental hygiene oral health care to infants, children, adolescents, adults, and those with special health care needs.

**Program Outcomes**

1. Students will be able to provide clinical assessment and preventive oral health care within the scope of dental hygiene practice to infants, children, adolescents and adults.

2. Students will be able to provide clinical assessment and preventive oral health care within the scope of dental hygiene practice to the unique needs of women, the elderly and patients with physical, cognitive, emotional or development challenges.

3. Students will have ability to assess oral and systemic risk factors related to individual health status and collaborate with other health care providers.

4. Students are prepared to provide ethically and socially responsible oral health care in compliance with the laws and regulations.
governing the practice of dental hygiene within the dental clinic workforce, community health clinics, and educational settings.

5. Students will be able to enhance the oral health of individuals and the community through risk assessment, prevention, promotion of healthy lifestyle and education.

**Degree Completion Track**

Dental hygienists are licensed health care professionals that specialize in health promotion and disease prevention. The Bachelor of Science Degree Completion program is designed to be completed by a licensed dental hygienist (RDH) who graduated from an ADA/CODA accredited dental hygiene program in the U.S. or Canada. Although the majority of dental hygienist are employed in a clinical setting, an increasing number of additional career opportunities have attracted the skills of the dental hygienist with a bachelor's degree. These prospects can lead to careers in sales, education, administration, academia, or employment with government research/public health agencies. Salaries vary, depending on the career choice.

All didactic course work is offered online and may be taken on a part-time schedule. Generally, students who enter this program complete the remaining 30 of 123 hours toward a Bachelor of Science degree. Individual hours may vary and require a full unofficial transcript evaluation by the program director. A maximum of twelve students may be admitted to the program each year. Applications are accepted through a centralized dental hygiene application system found at: http://www.adea.org/dhcas.aspx from November – December 31 with the next class beginning early July. For more details review the "Admissions Requirements" section.

**Admissions Requirements**

The Bachelor of Science (BS) Degree completion may be considered by applicants who are already Registered Dental Hygienists (RDH). This program will allow you to complete a Bachelor of Science degree online. In addition to the academic admission requirements, non-academic factors may be considered when selecting students for admission. Required prerequisite program/courses:

1. An active license as a Registered Dental Hygienist in good standing
2. Graduation from an ADA (http://www.ada.org)/CODA (http://www.ada.org/117.aspx)-accredited dental hygiene program in the U.S. or Canada. (All credits earned in the entry hygiene program will be accepted toward BS requirements)
3. A grade point average (GPA) of at least 2.7 for all college courses taken
4. Completion of the Texas Core Curriculum (p. 33) requirements (42 hours)
5. Completion of 18 hours Program Prerequisites
6. All course requirements for entry into the program are listed at: http://www.uthscsa.edu/academics/dental/dental-hygiene-program-admissions-prerequisite-course-list
7. Applicants outside of Texas MUST reside in a participating National Council for State Authorization Reciprocity Agreements NC-SARA state to be accepted into our program. To see if your state participates and get more information, please visit NC-SARA website (http://nc-sara.org).

The Texas Core Curriculum and 18 hours of program prerequisites must be completed by the end of the spring semester of the year you are entering. For further information see the Texas General Education Core Web Center. Applicants are encouraged to seek advisement from the program director or college counselor.

Application: Applicants must meet all qualifications and submit all required information by December 31. Transcripts containing fall courses must be submitted by Jan 15. Up to 6 credit hours may be in progress during the spring semester prior to admittance but must be completed and transcripts submitted by June 1.

**Degree Requirements**

Dental Hygiene Bachelor of Science degree is awarded at the successful conclusion of the program. Non-Health Science Center graduates wishing to earn a B.S. degree must complete a minimum of 30 semester credit hours of elective courses in the program. Health Science Center graduates (prior to 2005) who wish to earn a B.S. degree must complete from 6-9 elective credit hours.

**Sample Plan of Study**

Students must complete 30 semester credit hours of elective courses from the list below:

<table>
<thead>
<tr>
<th>Fall Course Offerings</th>
<th>Spring Course Offerings</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENH 3007 Preclinical Teaching Practicum 4</td>
<td>EMSP 4011 Management of Elder Abuse 3</td>
</tr>
<tr>
<td>DENH 3015 Public Health Practicum 4</td>
<td>EMSP 4012 Management of Medical Emergencies 3</td>
</tr>
<tr>
<td>DENH 4007 Clinical Administration Practicum 4</td>
<td>EMSP 4013 Dental Hygiene Program Elective 3</td>
</tr>
<tr>
<td>DENH 4018 Introduction to Research 3</td>
<td>EMSP 4014 Dental Hygiene Program Elective 3</td>
</tr>
<tr>
<td>DENH 4023 Special Topics 1-3</td>
<td>EMSP 4015 Dental Hygiene Program Elective 3</td>
</tr>
<tr>
<td>DENH 4025 Advanced Periodontics 3</td>
<td>EMSP 4016 Dental Hygiene Program Elective 3</td>
</tr>
<tr>
<td>DENH 4027 The Summer Institute In Aging 3</td>
<td>EMSP 4017 Dental Hygiene Program Elective 3</td>
</tr>
<tr>
<td>DENH 4029 Dental Hygienist Role in the Management of Elder Abuse 3</td>
<td>EMSP 4018 Dental Hygiene Program Elective 3</td>
</tr>
<tr>
<td>DENH 4030 Introduction to Professional Writing 1</td>
<td>EMSP 4019 Dental Hygiene Program Elective 3</td>
</tr>
<tr>
<td>DENH 4091 Independent Study 1-3</td>
<td>EMSP 4020 Dental Hygiene Program Elective 3</td>
</tr>
<tr>
<td>DENH 4103 Health Promotion 3</td>
<td>EMSP 4021 Dental Hygiene Program Elective 3</td>
</tr>
<tr>
<td>EMSP 4007 Human Resource Development 3</td>
<td>EMSP 4022 Dental Hygiene Program Elective 3</td>
</tr>
</tbody>
</table>

**Program Outcomes:**

The Online Bachelor of Science Degree Completion program at the Health Science Center is designed to prepare dental hygienists with skills in written communication, critical thinking, and problem solving on a flexible educational platform to build the next generation of leaders.
Program Objectives:
Upon graduation the Bachelor of Science Degree Completion candidate will:

1. Successfully apply critical thinking by demonstrating the ability to retrieve, interpret, and evaluate evidenced-based literature.

2. Demonstrate increased professional written communication practices, and problem solving skills through gathering, integrating, and conveying information in course work.

3. Demonstrate contributions to the body of knowledge in the field of dental hygiene or health care by integrating a lifelong approach to learning, and professional achievements.
SCHOOL OF HEALTH PROFESSIONS

The School of Health Professions is a dynamic center of learning, service, research, and practice for future allied health professionals who will serve the people of Texas and the nation. Allied health represents the largest group of health care providers in the United States. There are over 100 allied health disciplines representing more than 7 million workers and constituting approximately 60% of the health care workforce.

All educational programs in the School of Health Professions are accredited by their respective specialized accrediting bodies. Information about accreditation status and the accrediting body are presented in each department's section of this Catalog.

History

When the Board of Regents reorganized all existing biomedical units within The University of Texas System in 1972, the Health Science Center became one of four such institutions of The University of Texas System, each having a medical school, a graduate school of biomedical sciences and a school of allied health sciences, in addition to at least one of the following health professional schools: a school of nursing, a school of public health or a dental school.

Before the reorganization, San Antonio had been the site of the Medical School, the Dental School, and the School of Nursing. When the Health Science Center was established by the Board of Regents, the Medical and Dental schools and the newly established Graduate School of Biomedical Sciences and School of Allied Health Sciences (SAHS) became the original components. With the integration of the School of Nursing in 1976, the institution consisted of five schools.

In 1975, The University of Texas at San Antonio (UTSA) independently developed three allied health programs: medical technology (now medical laboratory sciences), occupational therapy and physical therapy. As these programs began to develop at UTSA, it became apparent that a linkage with the Health Science Center was needed to satisfy accreditation standards for the three new programs. The Health Science Center and UTSA subsequently developed a jointly awarded baccalaureate degree. Administrative responsibility for these three programs was transferred to the Health Science Center School of Allied Health in 1980.

In 1991, the SAHS programs earned departmental status and program directors officially became "Department Chairs" in the spring of 1992. That same year, the School of Allied Health Sciences began awarding its own Bachelor of Science degrees in Clinical Laboratory Sciences, Occupational Therapy and Physical Therapy, independent of the UTSA joint degree. The Department of Respiratory Care was established in 1993 to offer a Bachelor’s degree in Respiratory Care and the Master of Physical Therapy degree was offered for the first time in fall 1995. In 1999, the Department of Occupational Therapy began offering a Master of Occupational Therapy.

The School of Allied Health Sciences began offering a Bachelor of Science in Physician Assistant Studies in 1996 through a collaborative agreement with the United States Army. The Department of Physician Assistant Studies began offering a stand-alone baccalaureate curriculum in the Fall of 2000. In 2003, the Department of Physician Assistant Studies began offering a Master’s Curriculum.

The Department of Emergency Health Sciences, formerly Department of Emergency Medical Technology, originated in the School of Medicine, Division of Orthopedic Surgery and began offering EMS certification programs in 1974. The Department was one of the first nationally accredited programs in 1983 and transferred to the School of Allied Health in 1989 and was granted approval to offer the state's first Bachelor of Science in 2000.

In 2008, the School of Allied Health Sciences became known as the School of Health Professions; that same year, the Department of Physical Therapy revised the Master of Science degree program and began offering a Doctor of Physical Therapy degree. In 2015, the Department of Respiratory Care began offering the Master of Science in Respiratory Care.

Today the School of Health Professions includes five departments: Health Sciences, Emergency Health Sciences, Occupational Therapy, Physician Assistant Studies and Physical Therapy. Together, these departments offer two doctoral degrees, five master's degrees, three bachelor's degrees, and two certificates.

Mission Statement

The mission of the School of Health Professions is to make lives better through excellence in education, research, health care and community engagement.

Strategic Objectives

1. Excellence in education
   - Educating a diverse student body to become excellent health care providers, scientists and leaders.
   - Advancing health science education through research, scholarship and practice.

2. Excellence in research and scholarship
   - Engaging in research to understand health and disease, and to commercialize discoveries, as appropriate, to benefit the public.
   - Discovering and disseminating new knowledge to advance health, health care, education and training.

3. Excellence in health care
   - Providing compassionate and culturally proficient health care, and influencing thoughtful advances in health policy.
   - Providing leadership in health and health care delivery.

4. Excellence in service and community engagement
   - Engaging our community to improve health.
   - Providing leadership for our professions.

5. Operational effectiveness
   - Ensuring faculty engagement and support.
   - Developing outstanding faculty and leaders.
   - Advancing fiscally responsible and strategic growth.
   - Ensuring sound stewardship of resources.
Vision
By 2020 the School of Health Professions at the Health Science Center will be recognized as a world class school whose programs are among the best in the United States.

School of Health Professions Application and Admission
Application and admission requirements vary by department and program; please see the respective department section in this Catalog for specific information. Applicants are advised to pay close attention to application deadlines, as they also vary by department and program. An application packet is not considered complete until all required documents have been received.

Admission to all programs within the School of Health Professions is on a competitive basis. A limited number of students are admitted each year. Applicants should be aware that the selection process usually involves choosing among highly qualified applicants rather than between qualified and unqualified applicants.

Applicants may submit transcripts for an unofficial evaluation of prerequisite coursework to the School of Health Professions Office of Admissions and Special Programs. Additional information about application and admission is available by calling (866) 802-6288 (toll-free) or (210) 567-6220.

Upon admission to any program within the School of Health Professions, these additional items are required:

Background Check
Prior to Matriculation
Acceptance is contingent upon completing and passing a background check (https://www.uthscsa.edu/academics/health-professions/background-checks). An offer of admission will not be final until the criminal background check is completed with results deemed satisfactory. Students must pay costs for the criminal background check. Directions for the background check process will be included in the offer of admission letter. Students should be advised that persons with certain types of criminal convictions may not be eligible for state licensure and/or national registry or certification. In addition, many employers perform criminal background checks and may not hire individuals with certain types of criminal convictions. Concerned students should check with the respective department for further clarification.

Clinical Rotations
Programs offered in the School of Health Professions often require that clinical rotations, practicums, internships or other learning experiences be successfully completed in hospitals and other health care facilities in order to meet program requirements. Because use of these facilities is required, students must be able to successfully complete their assigned rotations in order to fulfill the academic requirements of their program.

Hospitals and other health care facilities often have policies requiring criminal background checks for employees, students, and volunteers. These facilities may refuse to accept individuals for clinical, practicum or other experiential rotations based on past criminal convictions.

Some medical facilities require students that rotate in their facility to undergo drug screening prior to being awarded temporary privileges. It is the student’s responsibility to comply with this screening. It is the student’s responsibility to arrange for the screening in a timely fashion so as not to impact their rotation duties. The student is responsible for any applicable fees associated with drug screening.

Students should be prepared to comply with the policies and procedures at any facility where they are assigned as part of their educational program and may not request facility assignments in an effort to avoid specific requirements. Students who have certain types of information in their criminal background checks may be ineligible to complete rotations in specific facilities. Students who are not allowed to participate at assigned facilities, or who are terminated from rotations based on the results of a criminal background check will be unable to complete the program requirements for graduation and will be subject to dismissal on academic grounds.

Self-reporting
Current students must report to the Associate Dean for Student Affairs in writing, within five business days, any criminal complaints, information, indictment, no contest plea, guilty plea, and criminal convictions, excluding misdemeanor offenses punishable only by fine such as a traffic ticket. If a misdemeanor offense carries more than a punishment by fine, for example, community service, the offense must be reported. As noted above, persons with certain types of criminal convictions may not be eligible for state licensure and/or national registry or certification and many employers perform criminal background checks and may not hire individuals with certain types of criminal convictions.

Drug Screening
In compliance with the Student Drug Testing Policy (https://www.uthscsa.edu/sites/default/files/2018/final_shp_drug_testing_policy.pdf), the School of Health Professions requires that all health professions students have a negative urine drug screen. All students will be required to provide a drug screening prior to matriculation and at other times, as deemed necessary by the School or its clinical sites. Additionally, some medical facilities require students that rotate in their facility to undergo drug screening prior to being awarded temporary privileges. It is the student’s responsibility to comply with this screening. It is the student’s responsibility to arrange for the screening in a timely fashion so as not to impact their rotation duties. The student is responsible for any applicable fees associated with drug screening.

Health Insurance Coverage
Accepted students must show evidence of current health insurance, including dates of coverage. Unless proof of proper insurance coverage is provided before the first day of classes, students will be charged for a policy provided by the University. The health insurance fee is non-removable once the payment due date passes, and non-refundable once paid.

Immunizations
All required immunizations (http://shc.uthscsa.edu/immunization_info.asp) (e.g. TB skin test, tetanus, MMR, Varicella, Hepatitis B) must be completed prior to registration to protect the student’s health, the health of patients, and to minimize any adverse reactions during the early part of the student’s training. Be aware that it may take some time to obtain the immunizations and the information/ signature from the student’s health care provider. Specific immunization
information can be obtained through the Student Health Clinic (http://shc.uthscsa.edu/immunization_info.asp).

Immunization Records must be returned to the Student Health Center at least 30 days prior to registration. Students accepted less than 30 days before registration, should hand-deliver their Immunization Record to the Student Health Center as soon as possible. If accepted more than 30 days before registration, students drop off or mail completed form to:

The University of Texas Health Science Center at San Antonio
Student Health Center - MSC 7934
7703 Floyd Curl Drive
San Antonio, Texas 78229-3900

Tuition Deposit Fee
Payment of the non-refundable tuition deposit fee is required to reserve a place in each program. The entire deposit fee will be credited to tuition when officially matriculated. Failure to enroll will result in forfeiture of the entire fee.

Texas Core Curriculum
Students who will be receiving their first baccalaureate degree from the Health Science Center must successfully complete the Texas Core Curriculum requirements. See the General Education Core Curriculum Policy for more information, including changes to the Health Science Center’s Core Curriculum based on legislation passed in 2013 and applicable to students matriculating in the fall of 2014.

Any student concurrently enrolled at more than one institution of higher education must follow the core curriculum of the institution in which they are classified as a degree-seeking student. Accordingly all degree-seeking students at the Health Science Center must meet the core curriculum requirement set forth by the Health Science Center to be considered core complete. Students who complete core curriculum of another institution while enrolled at the Health Science Center as a degree-seeking student are, regardless of their status with the other institution, only considered core complete if their coursework satisfies all core curriculum requirements at the Health Science Center.

If a student’s transcript from another Texas public college or university indicates that the student has completed the institution’s core curriculum, no additional core curriculum requirements will be imposed. An Associate in Applied Science degree does not deem a student core complete. If a student has not completed the core requirements at another Texas institution prior to entering the Health Science Center, the Health Science Center will accept academic credits from another Texas public college or university the core curriculum courses successfully completed, with grades of “C” or better only. The same requirements also apply to out of state students and students who attended a private college or university.

International Applicants
International applicants who have completed all or part of their college-level education at schools outside the United States must:

- Have foreign transcripts evaluated by an approved Foreign Credentialing Agency. Acceptable agencies include current members of National Associate of Credential Evaluation Services (http://www.naces.org) (NACES). These evaluations should be provided to the Office of the University Registrar (http://students.uthscsa.edu/registrar).
- Submit scores on the Test of English as a Foreign Language (TOEFL) (http://www.ets.org/toefl). Required minimum scores on the TOEFL are 560 (paper test) or 68 (Internet). Official copies of TOEFL scores must be submitted to the Office of the University Registrar (http://students.uthscsa.edu/registrar).

Non-Degree Student Status
An individual who wishes to enroll in courses offered by the School of Health Professions without entering a certificate or degree program must apply for admission as a non-degree seeking student. In general, a non-degree seeking student will have an academic background similar to those ordinarily admitted to Health Professions programs; course prerequisites and minimum grade point averages (GPA) are generally consistent with the published admissions criteria for each program. Permission to enroll as a non-degree seeking student may be granted by the Dean, Associate Dean, or Department Chair. Students will be enrolled only if space is available.

Students seeking non-degree status must:

- receive approval for registration each semester by the Dean, Associate Dean, or Department Chair and the instructor of each course
- maintain a minimum grade point average consistent with the department’s established policies for regular students; and
- enroll for no more than 9 semester credit hours during fall or spring semesters or 6 hours during the summer session.

Course grading policies and standards for non-degree seeking students are the same as those for regular students. All grades received as a non-degree seeking student will be included on the student’s transcript and used for computing the cumulative GPA if the student is subsequently admitted to a certificate or degree program. Under special circumstances, such as the computation of the GPA to determine academic probation, the Dean or Associate Dean may grant exceptions to this policy.

Transfer by Advanced Standing
Students who wish to transfer from another health professions program to an equivalent program at the School of Health Professions (example: DPT to DPT, MPAS to MPAS) may be considered on a space-available basis; placement is for highly qualified students from other institutions. Students must be in good standing and eligible for readmission at their current/former school of health professions and have well-founded personal reasons for wishing to transfer. Not all departments accept advanced standing transfer students, so please check with the department prior to applying. Note that space must be available in the program for the transfer.

Students desiring to transfer must also:

- have completed the same prerequisites required by the program;
- meet the program GPA requirements;
- have a letter of reference from the former program director stating the student is in good standing and eligible to continue or return to the program;
- have a satisfactory criminal background check;
- have required immunizations; and
- meet all university requirements for entering and continuing students.

Students who are ineligible for Transfer by Advanced Standing:
• have been dismissed from their health professions program;
• are not meeting normal curriculum progress at their current institution

Due to the varying requirements of each program and limited space, interested students should contact the specific department Chair for additional requirements, application requirements, deadlines and approval. The Chair may admit a student on a non-degree basis. If admitted, the student must adhere to all program and institutional policies and procedures.

Additional information about application and admission is available from the School of Health Professions Office of Admissions and Special Programs or by calling (866) 802-6288 (toll-free) or (210) 567-6220.

College Level Examination Program (CLEP)

Course credit for specified general education and elective prerequisites may be accepted without a letter grade in the School of Health Professions certificate and degree programs if a student earns a satisfactory score on College Level Examination Program (CLEP) (http://www.collegeboard.com/student/testing/clep/about.html) examinations.

Conditions and Limitations

- Applicants and students are responsible for requesting that official CLEP scores be sent by The College Board to the Office of the University Registrar.
- CLEP credit awarded by another institution is acceptable if scores are consistent with the minimum scores. Notation of CLEP credit (CR) on an official transcript from the institution is sufficient documentation.
- CLEP credit cannot be used to establish credit for prerequisite courses for which a grade of F had been recorded.
- CLEP credit will not be recognized for prerequisite courses in which the student received college credit for the same course or its equivalent.
- Credit for CLEP exams used to satisfy requirements for entry into a program will not be listed on the transcript.

More information can be found in this Catalog under the Policy on Awarding Academic Credit, Transfers and Substitutions.

Credit By Examination

Students in some Health Professions certificate or degree programs may earn credit by examination for designated courses. Credit by examination will not be given for credit-bearing courses that the student previously failed at the Health Science Center or any other college or university.

Academic credit is awarded only to officially enrolled students or former students. With the approval of the Dean, additional eligibility requirements may be established by each department. Information about additional requirements is available from the department office or the Office of the University Registrar.

Credit by examination satisfies degree requirements in the same way as credit earned by passing a course. Credit earned by examination does not jeopardize eligibility for scholarships that require a certain class standing (e.g. junior class).

A student may be eligible for credit by examination by passing the requisite examination according to criteria set by the department. Credit by examination is reported to the Office of the University Registrar by the department upon the student’s successful completion of the specified examination. At the department’s request, the Office of the University Registrar will post the credit earned by examination on the student’s official transcript. Credits earned by examination are not included in the calculation of the student’s grade point average.

More information can be found in this Catalog under the Policy on Awarding Academic Credit, Transfers and Substitutions.

Defense Activity for Non-Traditional Education Support (DANTES)

Course credit for specified core curriculum requirements and program prerequisites may be accepted without a letter grade in the School of Health Professions professional certificate and degree programs if a student earns a satisfactory score on Defense Activity for Non-Traditional Education Support (DANTES) (http://www.dantes.doded.mil/examinations/#sthasheetUs9lydpbs) examinations.

Conditions and Limitations

- Applicants and students are responsible for requesting that official DANTES scores be sent by DANTES to the Office of the University Registrar.
- DANTES credit awarded by another institution is acceptable if scores are consistent with the minimum scores. Notation of DANTES credit on an official transcript from the institution is sufficient documentation.
- DANTES credit cannot be used to establish credit for core curriculum or program prerequisite courses for which a grade of F had been recorded.
- DANTES credit will not be recognized for core curriculum or program prerequisite courses in which the student received college credit for the same course or its equivalent.

More information can be found in this Catalog under the Policy on Awarding Academic Credit, Transfers and Substitutions.

Essential Functions

Many departments in the School of Health Professions have adopted statements of “essential functions” or “core performance standards” that stipulate the function level of capability required to perform competently in the education program and/or as a professional after graduation.

Individuals with disabilities are encouraged to apply to the School of Health Professions programs. It is the responsibility of the student to submit a Request for Accommodation under the American’s with Disabilities Act (p. 69) (ADA), to the ADA Compliance Office. Reasonable accommodations will be decided by the department in concurrence with the ADA Compliance Office. For further information, see the University Handbook of Operating Procedures 4.2.3 Request for Accommodations under the ADA and the ADA Amendments Act of 2008 or contact the School of Health Professions Associate Dean for Academic and Student Affairs.

Scholarships

A variety of scholarships are available to students in the School of Health Professions. Some are available to all students in the school and others are available only to students in a specific department. A scholarship application and supporting documentation are required on an annual basis. Information is usually sent out in the spring for scholarships to be awarded for the upcoming academic year. For more information, consult with the Associate Dean for Academic and Student Affairs.
Tuition and Fees

Tuition and fees in the School of Health Professions vary by department and program; please see the department web site for specific program costs. In addition to tuition, there are required fees for all students. There are also additional program-specific fees that vary by department and course. There is no on-campus housing at the Health Science Center and program expenses do not reflect day-to-day living expenses. Travel and living expenses for local and out-of-town clinical experiences are not included in program costs. For more information on tuition and fees, contact the Office of the Bursar (http://www.uthscsa.edu/business/bursar).

School of Health Professions Departments

For the School of Health Professions, allied health professionals are defined as those who are involved in the identification, evaluation, treatment, and prevention of diseases, injuries, and other health-related conditions, while educating the public on prevention, wellness, and self-management for healthful lifestyles.

At the School of Health Professions, educational programs are provided in the following disciplines:

Health Sciences
- Bachelor of Science in Medical Laboratory Sciences
- Master of Science in Medical Laboratory Sciences
- Bachelor of Science in Respiratory Care
- Bachelor of Science in Respiratory Care Degree Advancement Track
- Master of Science in Respiratory Care
- Master of Science in Respiratory Care Degree Advancement Track

Emergency Health Sciences
- EMT- Basic certificate
- Advanced Practice/Community Paramedic Certificate
- Bachelor of Science in Emergency Health Sciences

Occupational Therapy
- Doctor of Occupational Therapy
- Master of Occupational Therapy (being phased out)

Physical Therapy
- Doctor in Physical Therapy

Physician Assistant Studies
- Master of Physician Assistant Studies

Communication Sciences and Disorders
- Master of Science in Speech Language Pathology

School of Health Professions Policies and Procedures

Academic Advising

Students in Health Professions programs may be assigned a faculty advisor to assist the student’s progress through the program. Advisors assist students in solving problems and/or finding alternatives or options. The advisor provides advice and opinions, facts or information, and clarifies policies for the student. Topics that may be addressed through faculty advising include academic issues, professionalism, program policies, study problems, time management, and clinical progress, as well as the advisor’s referral to other support systems in the university or community. It is the student’s responsibility to meet with his or her advisor when encountering difficulties. In addition, it is highly recommended that students meet with their advisors at least once per academic session to review their progress, address issues and prepare for the upcoming academic session or for graduation. Further information about the department’s policies and practices regarding faculty advisors is provided in each department’s student manual/handbook.

Admissions

The School of Health Professions strives to ensure the admissions process is fair and unbiased. Review of program applications uses an individualized, holistic review process to consider each program applicant. As part of the admissions review policies and procedures, all applicants will submit an online application by the programs’ reported deadlines through the programs’ designated application service, where they will report all required and additional information for review. During review, applicants may be evaluated based on multiple performance and experience-based data points; these may include overall GPA, science or prerequisite GPA, standardized test scores such as GRE, pending or completed prerequisite coursework, hours of community service, hours of health care experience, shadowing hours, hours of military service, and affiliation with a medically underserved region. Individual admission items, information, or a combination of these will not guarantee an invitation to interview, admission or selection into School of Health Professions’ programs.

Information received by University officials regarding individual applicants outside of the formal admissions process or system will not be considered in the admissions review or selection process. Also, any faculty member will recuse themselves from admissions review in its entirety for that cycle for a conflict of interest or perceived conflict of interest.

Advancement, Probation, and Dismissal

Decisions about advancement, probation, suspension and dismissal will be made on the basis of academic performance and professional behaviors. Academic standards for advancement in the certificate or degree program are determined by the faculty of each department. Failure to meet the academic and professional standards may result in probation, suspension or dismissal from the program.

Continuation in a School of Health Professions program is dependent on maintenance of a minimum cumulative grade point average as set by the department. A student whose cumulative GPA falls below
the minimum may be subject to academic probation. All decisions concerning probation or dismissal will be based on recommendations from the Student Progress Committee within the department. The faculty and the committee may recommend (1) academic probation; (2) repetition of the course when next offered; (3) suspension with repetition of the course when next offered; (4) repetition of the year or semester; or (5) dismissal.

In health professions education, professionalism is a required academic standard. Students who do not adhere to professional conduct standards may be subject to probation, suspension or dismissal from the certificate or degree program. Other standards and policies may be set forth by the faculty as described in their course syllabi or program handbook. Professional behavior and ethics standards from professional organizations may also be applied.

Students may be dismissed, suspended, or refused readmission at any time if circumstances of a legal, moral, health, social, or academic nature are considered to justify such action.

Grades
The standing of students in their work is expressed by the following grades:

- A = Excellent
- B = Above Average
- C = Average *
- D = Below Average (Note: some departments do not recognize a D grade; see individual departments for information regarding grading structure.)
- F = Failure

* some programs designate a grade of "C" as below average

Grades for courses in which performance is graded an S (Satisfactory) or U (Unsatisfactory) are not used in computing the grade point average.

The grade point average is calculated using the following grade points:

- A = 4 points
- B = 3 points
- C = 2 points
- D = 1 point
- F = 0 points

In some programs, students have the option of seeking exemption from certain courses in the curriculum if they have successfully completed an equivalent course in another college or university or demonstrated mastery of the course content via an appropriate content or practicum examination. The grade of CR (Credit) is recorded for a course(s) for which the student has been exempted. A minimum of 25 percent of the total credit hours of the required coursework must be instruction provided by the school granting the award.

Advanced Standing
Individuals may have acquired academic credit in allied health professional courses from other accredited programs, schools and universities. Some individuals may acquire knowledge through experience and on the job training. When such persons apply for admission into the School of Health Professions, an attempt is made to grant academic credit for equivalent educational courses, equivalent knowledge acquired from experience and/or successful completion of appropriate board certifying agency examinations.

All students graduating from the programs within the School of Health Professions must meet the same standards for graduation; the awarding of advanced standing does not signify a lesser quality education than that offered through regular course work. Rather, it is a method to provide credit to the student for those areas of the curriculum in which the student has already achieved the required knowledge, skills and competencies. Programs have identified the competencies that graduates must achieve in order to provide safe, high quality patient care and related services. Documentation of achievement of these competencies is required for program completion for all students.

Program specific policies and procedures have been developed to ensure that those individuals who receive advanced standing have achieved the requisite competencies and that the process adheres to University, School and Departmental policies.

DEFINITION
Advanced standing is defined as a special and individually determined status granted to a student in a formal educational setting, who has already gained through other sources or through non-academic experiences, the knowledge, skills and professional attributes required by his or her professional program. Advanced standing may be granted by transfer credit and/or equivalency examinations for specific course work.

Grades in Clinical Rotations, Practicums, and Fieldwork Courses
Clinical Rotations, Practicums, and Fieldwork Courses may be graded S (Satisfactory) or U (Unsatisfactory), or may be assigned a letter grade, depending on the Departmental policy. A grade of S or other designation of an acceptable grade is assigned if the student successfully satisfies the criteria for clinical courses. Failure to satisfy the course criteria successfully may result in an I (Incomplete) or a U (Unsatisfactory) or a letter grade considered unsatisfactory based on departmental policy.

Criteria and time frame for removal of an I or U or other unsatisfactory grade in clinical courses are determined based on clinical documentation and consultation with the clinical supervisor/clinical instructor. Any unsatisfactory grade may require that the student complete an additional clinical affiliation rotation or other remediation that could extend the professional curriculum beyond the expected graduation date.

Incompletes
A grade of I (Incomplete) may be assigned when a student has not satisfactorily completed all course requirements by the conclusion of the course due to non-academic reasons such as illness, family emergency, or other non-academic matters. Unless the student has been granted a Leave of Absence, all incomplete work must be completed within one year, at which time the grade will be changed to the appropriate letter grade. When an I is issued pending a grade in a course that is a prerequisite for another course, the I must be removed before the student is allowed to enroll in the next sequential course.

Dropping or Adding Courses
Students may add or drop courses prior to the official census date. The census date varies by program and semester so students must refer to their specific academic calendar. If a student drops one or more classes (but not all classes) before the Census Date, a grade will not be assigned; however, if a student drops all classes a grade of W will be assigned for all courses. When a student withdraws after the first class day, a grade of W will be assigned for all courses.
Any courses that are approved to be added or dropped outside of the official web registration dates must be documented on a completed and signed Add/Drop form.

Students adding or dropping a course may be subject to additional tuition and fees or may be eligible for a refund.

A student may drop a course and receive a grade of W (Withdraw) on his/her transcript if an official Add/Drop form is signed and processed after the census date and before the final course exam or, if there is no final course exam, before the final class meeting for the course.

A student can be administratively dropped from a course when the course instructor makes that recommendation to the Department Chair and can show circumstances warrant such action. If approved by the Department Chair, a grade of W will be assigned.

It is the student’s responsibility to drop a course by the appropriate deadline. If a student fails to drop a course, even if the student does not attend the course, he/she may receive a grade of “F” in the class or the grade earned up the point of nonattendance. Faculty and staff will not drop a student from a course automatically for nonattendance; the student must initiate the process and complete any necessary steps to ensure that the class is dropped.

Students who wish to drop all courses after the semester begins should refer to the Withdrawal from Program/University found below.

**Withdrawal from Program/University**

Special circumstances may require a student to voluntarily withdraw from a program. A student may withdraw from a program (drop all courses for which they are enrolled during a specific semester) and receive a grade of W (Withdraw) on his/her transcript if the withdrawal is completed before the final course exam or, if there is no final course exam, before the final class meeting for the course. Withdrawal requests must be approved by the Department Chair.

Student who wish to withdraw from a program must meet with their faculty advisor and the Department Chair, fill out the withdrawal form and obtain all required signatures.

Any student who does not remain continuously registered and who has not obtained an official leave of absence or registered in absentia for the period of non-attendance may be deemed to have voluntarily withdrawn from a program and surrenders his/her right of matriculation. Re-enrollment following program withdrawal requires the student reapply through regular admissions procedures.

**Dean’s Honor List**

Students in certificate or bachelor’s degree programs in the School of Health Professions with a grade point average (GPA) of 3.5 or greater for an academic semester or session may qualify for inclusion on the Dean’s Honor List. In addition to the minimum GPA, Dean’s Honor students must complete at least 9 semester credit hours during a regular semester or 5 semester credit hours during a summer session.

**Graduation with Honors**

Honors designations are awarded to students graduating from the baccalaureate programs based upon the following scale:

- **Cumulative GPA 3.5 – 3.69: Cum Laude**
- **Cumulative GPA 3.7 – 3.89: Magna Cum Laude**
- **Cumulative GPA 3.9 – 4.00: Summa Cum Laude**

**TeamSTEPPS**

TeamSTEPPS is an evidence-based set of teamwork tools, aimed at optimizing patient outcomes by improving communication and teamwork skills among health care professionals.

*Beginning in the 2018-2019 academic year, new students will participate in the program (certain programs and/or students may be exempt from TeamSTEPPS). Programs will identify half of their new students to participate in the fall semester and half in the spring semester. This will guarantee all programs participating in both the fall and spring semesters. The program will be led by SHP faculty members who are certificated as Master TeamSTEPPS trainers.*

5 sessions per semester - 12:00-1:00pm (lunch provided)

- Module 1 – Introduction (50 min)
- Module 2 – Team Structure (50 min)
- Module 3 – Communication (50 min)
- Module 4 – Situation Monitoring (50 min)
- Module 5 – Summary: Putting It All Together (50 min)

**Professional Conduct**

Professionalism relates to the intellectual, ethical, behavioral, and attitudinal attributes necessary to perform as a health care provider. Students are expected to:

- Demonstrate sound judgment commensurate with the level of training and experience.
- Serve all patients without discrimination.
- Recognize and respect the role and competencies of other professionals and cooperate with them to provide effective health care.
- Exhibit concern primarily for the patient’s welfare rather than for a grade.
- Exhibit an attitude of respect, concern, and cooperativeness toward peers, staff, and faculty.
- Hold in confidence the details of professional services rendered and the confidences of any patient.
- Achieve the highest degree of honesty and integrity by communicating and behaving in an honest, ethical manner.
- Practice the highest standards of academic integrity and promptly report breeches of academic integrity or ethical misconduct by others.
- Accept responsibility for own work and results: demonstrate willingness to accept suggestions or improvement.
- Maintain physical, mental, and emotional composure in all situations.
- Abide by the regulations and policies of the program and clinical training sites.
- Practice appropriate personal grooming and hygiene.
- Practice appropriate safety and aseptic techniques.
- Provide the patient with relevant information to enable the patient to participate in making decisions regarding her/his condition, prognosis, and treatment options.
• Refuse to participate in or conceal any unlawful, incompetent, or unethical practice.

**Professional Attire**

Students in the School of Health Professions programs must dress at all times in a manner consistent with a professional image while on campus and at practicum sites. Appropriate attire for clinical rotations, practicums, or other clinical/educational settings will vary depending upon department requirements, facility environments, local customs and expectations. It is the student’s responsibility to inquire about dress expectations and to comply with them.

**Professional Characteristics and Demeanor**

Health Professions students are regarded as professional persons and are expected to conduct themselves in a professional manner. Professionalism relates to the intellectual, ethical, and behavioral attributes necessary to perform as a health care provider. Students are expected to perform at a professional level when interacting with other students, faculty, staff, health care professionals, patients and their families, and the general public when representing the institution at clinical sites and community activities. A breach of professional conduct may be considered grounds for disciplinary action or dismissal from the program.

Additional guidelines for professional conduct may be issued by Health Professions departments and/or professional organizations. Students are responsible for knowing and adhering to these.

**HIPAA and Patient Privacy**

Health Science Center students have a legal and ethical responsibility to safeguard the privacy of all patients and protect confidentiality and security of all health information. Protecting the confidentiality of patient information means protecting it from unauthorized use or disclosure in any format — verbal, fax, written or electronic. Patient confidentiality is a central obligation of patient care. Any breaches in patient confidentiality or privacy is considered unprofessional conduct and may result in disciplinary action, up to and including dismissal.

The laboratory component of some courses may use students as simulated patients. Practicing the medical history and physical examination may place students in close contact with their peers and lead to the sharing of personal information and physical findings. Similarly, students may use personal experiences in patient role-playing exercises. All shared and personal medical information and physical examination findings are to be treated with utmost confidentiality. Failure to protect the confidentiality of any information related to the activities in a course or clinical rotation may result in disciplinary action, up to and including suspension or dismissal.

**Academic Integrity**

Students in the School of Health Professions are expected to be above reproach in all professional and academic activities. Policies on academic dishonesty and integrity will be strictly enforced; students who fail to conform to standards of academic integrity and scholastic honesty are subject to disciplinary action. Academic dishonesty includes, but is not limited to, cheating on examinations or assignments, plagiarism, falsifying data or results, presenting another person’s work as one’s own without giving proper credit or citation, knowingly recording information in the medical record which is incorrect or inaccurate or providing inaccurate or misleading information in writing or orally to instructors, preceptors, or medical personnel caring for patients. Violations of academic integrity standards may result in severe penalties including probation, suspension or dismissal from the university. Academic dishonesty is a form of unprofessional conduct and as such, allegations of academic dishonesty will be reviewed by the departmental Student Progress Committee. Any student found to be cheating on an examination may receive a “0” for the examination and will be subject to formal disciplinary action, which may include probation, suspension or dismissal from the program. Failure to report incidents involving academic dishonesty on the part of another student will be considered unprofessional conduct and may also result in disciplinary action. To avoid charges of academic dishonesty, consult with the department chair or faculty member about expectations. Procedures for dealing with charges of academic dishonesty or cheating are described below (see Unprofessional Conduct).

**Unprofessional Conduct**

Students are expected to demonstrate appropriate professional characteristics and behaviors in all activities related to their training and education. Examples of critical errors in professional conduct and judgment include, but are not limited to: (1) Failure to place the patient’s safety and welfare as first priority; (2) Failure to maintain physical, mental and emotional composure; (3) Consistent ineffective/inefficient use of time; (4) Failure to be honest with patients, faculty and colleagues; (5) Critical errors in judgment which may place patients or others at risk; (6) Scholastic dishonesty in any form; (7) Failure to maintain patient privacy and confidentiality; (8) Failure to serve all patients without discrimination; (9) Failure to abide by regulations and policies set forth by the university, program, and its clinical and organizational affiliates.

**Procedure for Unprofessional Conduct**

In general, for issues that are not satisfactorily resolved between the instructor or preceptor and student, the following guidelines should be followed for unprofessional conduct:

Step 1. The student will have been identified as violating an established standard of professional conduct, judgment or ethical behavior, and the department chair or program director will have been notified.

Step 2. The department chair or program director will meet with the individual(s) making the allegation and the student’s faculty advisor to review the available information and determine the veracity of the allegations.

Step 3. The department chair, student and faculty advisor, whenever possible, will meet as promptly as possible after the alleged incident. The department chair will report to the student the facts and available information and will seek to authenticate or clarify the allegations where possible. If it is determined that there is no basis for the allegation, no further action will be taken.

Step 4. If it is determined that there is a basis for the allegation and that further investigation is necessary, a preliminary hearing of the departmental Student Progress Committee will be convened to review the allegations and recommend a course of action. The department chair will inform the student and the Dean in writing of the preliminary hearing and the following: a) Date b) Name of student c) Nature of the allegations d) Date of alleged incident/occurrence e) Behaviors or attributes that allegedly violate standards: skill, behavior, judgment, ethical values, or unprofessional conduct. For additional information
regarding professional conduct, see the current departmental student handbook.

Incidents in the Clinical Agency
Any incident affecting patients’ or staff’s well-being or the patient’s prescribed care will be reported to the clinical instructor or preceptor immediately. An institutional incident report will then be completed following the policy of the health care institution or hospital in which the incident occurred. A duplicate of the hospital incident report will be requested. A memorandum of explanation from the clinical instructor or preceptor will be placed in the student’s clinical file and the department chair, program director or clinical director will be notified immediately. Incidents involving gross errors in judgment or practice on the part of the student will constitute grounds for probation, suspension or dismissal from the program.

Drugs and Alcohol
The goals of the School of Health Professions are to provide the highest quality education, research, health care, and service. To achieve these goals students must be able to fulfill their respective roles without impairment produced by intoxication or addiction to alcohol or other drugs. The unauthorized purchase, manufacture, distribution, possession, sale, storage, or use of alcohol, illegal drugs or controlled substances by students while attending classes, or while on Health Science Center property (or any property affiliated with the Health Science Center including clinical affiliates), or sites used to provide community service, will be considered unprofessional conduct which may result in academic probation, suspension or dismissal. A controlled substance is any substance so defined by federal or state statute or regulation.

School of Health Professions students may not report for their clinical assignments and/or classes impaired by the use of alcohol or controlled substances. Such impairment will be considered unprofessional conduct and may result in academic probation, suspension or dismissal.

In cases where impairment is suggested, the student’s instructor or preceptor shall dismiss the student from the class and/or clinical training site, assist the student in obtaining safe transport home or to a medical facility (if indicated) and notify the program director, department chair and associate dean of academic and student affairs for follow-up action.

Consumption of alcoholic beverages on Health Science Center property is permissible only by prior written Presidential approval for specific events as described in the Handbook of Operating Procedures (see Section 8.2.3).

Nothing in this policy will preclude the medical or research use of alcohol or controlled substances. It is the underlying philosophy of the School of Health Professions that addiction to alcohol and/or other drugs represents a disease state, and treatment of such problems is a legitimate part of medical practice. Students with an addiction to drugs or alcohol are encouraged to seek help through the Student Health Center or their personal health care provider. Students who seek help through the Student Health Center will not be punished for seeking such help. However, appropriate disciplinary procedures linked to performance criteria are not precluded.

Hospitals and other health care facilities often have policies requiring drug testing for employees, students, and volunteers. Some facilities provide that students who test positive for drugs are ineligible to complete clinical, practicum or work assignments in that facility. Students should be prepared to comply with the policies and procedures at any assigned facility and may not request facility assignments in an effort to avoid drug screening requirements. Students who fail to report for clinical or practicum assignments or who are terminated from rotations because they violate the drug testing or drug use policies of the facilities will be subject to disciplinary action which may include dismissal from the program.

Student Professional and Community Service Requirements
Participation in service activities is an important attribute of the health science professional. A hallmark of outstanding students and alumni is the desire and ability to make meaningful service contributions. Community service activities may include volunteer activities (health fairs and clinics, health education, provision of health services to at risk or disadvantaged populations and other outreach education or clinical activities) and service on community boards, committees, work groups and other service activities that promote the health and well-being of the community and its members. Professional service may include participation in the provision of state, national or international activities to advance the quality, access and effectiveness of health care services provided by allied health professionals. Achievement of the School of Health Professions Excellence in Community and Professional Service Goal is demonstrated in part through: (1) Student and faculty participation in community service activities; (2) Student satisfaction with and appreciation for community service; (3) Students and faculty who provide leadership and support to professional associations, boards and committees; (4) Provision of community and professional continuing education to local, national and international audiences.

In order to support achievement of these service excellence goals and objectives, the School of Health Professions has developed a professional and community service recommendation for students as a part of their academic programs. As a requirement for program completion, each academic degree granting program may establish a minimum service requirement for each student enrolled in the program. Examples of activities that may be used to meet this requirement include participation in community health fairs; community health screening and/or health services; provision of community health education; participation in approved professional service and/or continuing education activities; and assistance with the delivery of seminars, lectures, workshops and related community or professional continuing education activities. This program requirement may be required for satisfactory course completion for at least one course in the student’s prescribed course of studies. As an alternative, the requirement may be listed as a graduation requirement for the program in the catalog or program handbook.

Student Academic Appeal and Grievance Procedures
The Health Science Center School of Health Professions student appeal and grievance procedures provide a mechanism whereby any student may obtain a review of a complaint of unfair treatment. The student appeals procedures should not be used to question a rule, procedure or policy established by an authorized faculty or administrative body. Rather it may be used to provide due process for those who believe that a rule, procedure or policy has been applied in an unfair or inequitable manner, or that there has been unfair or improper treatment by a person or persons. Students who are appealing an academic decision that could result in a dismissal from the university may be allowed to continue to progress in the program until the issue is resolved. If the academic
The University of Texas Health Science Center at San Antonio

A student wishing to appeal an academic decision should follow the process summarized below, in the sequence indicated.

Step 1. In the academic community, the responsibility for course development, course delivery, and the assessment of student achievement rests primarily with the course instructor. Any student who has a complaint of inappropriate treatment related to a course should first seek to resolve it informally with the course instructor. If the course instructor is the department chairperson, or if the complaint does not pertain to a specific course, the student should seek resolution with the department chairperson at the outset. Furthermore, complaints or appeals regarding decisions made by the student progress committee of the department would initially go to the department chairperson.

- A student with such a complaint must request reconsideration, in writing, of the application of a rule, procedure, or policy or unfair or improper treatment within five (5) working days following the incident that forms the basis for the complaint (e.g., five days after grades are posted).

- The instructor will meet with the student (or speak with the student via telephone for those students who are unable to come to the instructor’s office). The instructor will notify the student in writing of his/her decision regarding the complaint. As noted above, complaints not related to a specific course or instructor should be directed initially to the department chairperson, who will then meet with the student. In such cases, the department chairperson will notify the student in writing of his/her decision regarding the complaint.

Step 2. If resolution is not achieved informally, as described in Step 1, the student should seek resolution with the chairperson of the department in which the course is offered within five (5) working days following notification by the instructor of his/her decision.

- The chairperson will meet with the student (or speak with the student for those students unable to come to the chairperson’s office) following receipt of the student’s request for resolution to discuss the problem or complaint.

- The chairperson will notify the student of his/her decision in writing following the meeting or discussion.

- As noted above, (see Step 1), if the complaint does not pertain to a specific course or relates to a decision made by the Student Progress Committee, the student should seek resolution with the department chairperson at the outset.

Step 3. If the issue was not resolved in Step 2 the student may submit a written appeal, describing the nature of the complaint and reasons for seeking an appeal to the Student Progress Committee of the department within five (5) working days following notification by the department chairperson of his/her decision. This would include complaints or appeals regarding decisions originally made by the Student Progress Committee.

- The student may appear before the committee in person, make an oral statement and answer questions from the committee. The student will not be allowed to be present during committee deliberations.

- The committee may request that the course instructor or faculty member named in the grievance appear before the committee to make an oral statement and answer questions. The instructor or faculty member named in the grievance may not be present during committee deliberations.

- Following review of information provided, the committee will notify the student of its decision.

Step 4. If the issue was not resolved to the student’s satisfaction in Step 3 the student may submit a written request seeking a hearing to the Dean within five (5) working days of receiving the department progress and promotion committee decision. The written request should include a description of the complaint and the reason the student is seeking an appeal.

- The Dean or his/her designee¹ will meet with the student following receipt of the written request.

- Following the meeting with the student, the Dean may render a decision, or choose to appoint a panel to investigate the grievance and make a recommendation to the Dean.

- Following review of the information provided and any recommendations from the panel (should one be appointed), the Dean will then notify the student of his/her decision. The decision of the Dean is final and may not be appealed.

¹The dean may delegate authority to complete this step of the appeals process to the Associate Dean for Academic and Student Affairs.

Attendance

Because of the nature and complexity of the health professions programs, students are expected to attend every class, laboratory, conference, demonstration, meeting, clinical assignment, and other assigned activities included as a component of the curriculum. The once-a-year offering of most courses and step-by-step format of the curriculum allow minimal or no opportunity for make-up sessions. Attendance requirements for classes, laboratories, and clinic are the option and prerogative of the course instructor and specific program. The policy regarding attendance is outlined in each course syllabus and may be found in the department's student manual/handbook; policies are generally reviewed by the course instructor at the first class meeting.

Excused absences may be granted by the course director, program director, or department chair in cases of illness or personal emergency (e.g., extended hospitalization, death in the family). Excused absences are considered on an individual basis and verification of the reason for the absence may be required. Unexcused absences may be considered sufficient cause for course failure. Prolonged absences for any reason may not be remediable. The faculty is not required to provide make-up or additional sessions for classes missed by students, regardless of the reason for the absence. Students are responsible for all material presented when they are absent and are responsible for arranging with the course director to make up missed work, if allowed.

Attendance is a professional attribute that the faculty expects every student to demonstrate. Repeated or multiple absences, unexcused absences, and tardiness will be considered unprofessional conduct and may result in faculty review and penalties, including probation, suspension or dismissal from the program. Course grading requirements may include participation and any absence is considered non-participation. The ability of the graduating health professions student is dependent on the sum of her or his experiences during the educational and training period.
Leave of Absence
Under unusual circumstances, such as prolonged illness or injury, a student may request a leave of absence from a certificate or degree program. The request must be made in writing to the Department Chair. On recommendation from the department’s faculty or Student Progress Committee, the Department Chair may grant a leave of absence for a period not to exceed one year. If a student is granted a leave of absence before the end of the academic term, a grade of “I” (Incomplete) may be recorded for each course that has not been completed. The student will be required to complete these courses under conditions prescribed by the faculty or the Student Progress Committee. Specific procedures for requesting a leave of absence may be established by each department within the above guidelines.

Withdrawal from a Certificate or Degree Program
Permission for withdrawal from a certificate or degree program in the School of Health Professions may be granted by the Dean or Associate Dean with the concurrence of the faculty. The student who wishes to withdraw must complete the Student Clearance Form (see withdrawal procedures on the Office of the University Registrar Web site), submit the form for the required signatures, and obtain authorized signature clearance from each area listed on the lower portion of the form.

Before leaving the program, the student should arrange for an exit interview with the Associate Dean for Academic and Student Affairs. An additional exit interview is also required for students who are receiving financial aid.

In the case of withdrawal before the end of the academic semester or session, a grade of “W” will be recorded for each course not completed. In the case of withdrawal at the end of the academic semester or session, the appropriate grade will be recorded for each completed course.

Readmission
An application for readmission by a student who has previously withdrawn or has been dismissed from a certificate or degree program is subject to certain requirements, procedures, and readmission considerations. Although the university is under no obligation to readmit any student who has withdrawn or been dismissed, a student may seek reentry for further study by petitioning for readmission. Students who have been granted a leave of absence are eligible to return to their program as stipulated in their approved leave of absence. Students who have withdrawn and have not been granted a leave of absence or those who have been dismissed from a program are eligible for readmission consideration as described below.

Students who wish to petition for readmission should submit to the Chair/Program Director a written request to return to the program at least three months prior to the semester in which they wish to reenter. The written request to return should include a self-analysis of the reasons for withdrawal or dismissal, an indication of how the student spent the interim time, steps the student may have taken for remediation, and why the student will be successful when readmitted. Upon receipt of the request, the Chair/Program Director will appoint a committee of the faculty to consider the request. The committee will make a recommendation to the Chair/Program Director and Associate Dean for Academic and Student Affairs who will make the decision regarding whether an individual may return to the program. The Chair/Program Director will outline the conditions of return and notify the student of the decision and conditions for return.

The recommendation will be based on, but not limited to the following criteria:

a. The student’s academic history
b. Consideration of any special circumstances unique to the student that may have generated the withdrawal.
c. Consideration of any remedial steps or professional activities the student may have taken since his or her withdrawal.
d. Availability of space within the program to accommodate a returning student.

Students approved for readmission will be subject to the tuition, fees, and other program and graduation requirements as described in the university catalog and student program handbook in effect at the time of readmission. Readmission may be contingent on the student’s completion of specific additional activities, such as repeating specified coursework, remedial course work, returning on academic probationary status and (in certain cases) re-taking the entire curriculum.

Requirements for return will be stated in the readmission letter provided to the student by the Chair/Program Director. Should the repeat of specific courses be required, these courses will be retaken during the semester in which they are normally offered. Students who are readmitted must meet all program standards of progress to include obtaining a satisfactory grade (as defined by the program) for any courses which must be repeated. Additional return conditions may be required based on specific program policies and procedures.

A student whose petition for reentry is denied may formally reapply to the professional program through the regular program application process; reapplication does not assure acceptance in any subsequent year.

Communication Sciences and Disorders
The Communications Sciences and Disorders (CSD) Department provides academic and professional education for entry-level clinical practice of speech-language pathologists to acquire knowledge and skills in both normal and abnormal speech, language, cognition, swallowing, and hearing.

The CSD Department offers a Master of Science degree in Speech-Language Pathology, which was awarded candidacy accreditation by the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA) of the American Speech-Language-Hearing Association, 2200 Research Boulevard, #310, Rockville, MD 20850, 800-498-2071 or 301-296-5700. This is a “pre-accreditation” status with the CAA, awarded to developing or emerging programs for a maximum period of five years.

The curriculum design of our MS program is interdisciplinary in nature, adopting problem-based learning approaches in teaching, clinical, research and service activities with other university departments and Health Professions programs. The curriculum provides a multifaceted learning environment, including classroom, laboratory, and clinical practicum experiences.
Master of Science in Speech Language Pathology

Speech-language pathologists (SLPs) are licensed professionals who work to assess, diagnose, treat, and help prevent speech, voice, language, cognitive-linguistic, and swallowing disorders across the age-span.

The Master of Science in Speech-Language Pathology (MS-SLP) degree program (http://uthscsa.edu/shp) is a two-year (5 semesters) graduate study grounded on integration of academic coursework with clinical experience. Having the program embedded in the School of Health Professions enables this program to have its emphasis in medical speech-language pathology. Coursework is particularly designed and sequenced to provide students with the scientific and professional education for work as speech-language pathologists in diverse medical settings. The program is unique in its curricular specification and application of knowledge within a community-based clinical education framework. Training in a health science campus environment with direct access and constant exposure to the medical community provides graduates with medically-based training to serve children and adults with health care and educational needs.

Graduates of the MS-SLP degree program will be eligible to apply for ASHA's Certificate of Conical Competence (CCC), and compete effectively for entry-level positions in speech-language pathology, particularly in medical settings. The graduates of the MS-SLP program will be prepared to become productive in complex clinical settings such as acute or rehabilitation hospitals for adult patients or institutions where children with medical challenges are integrated into school settings.

The MS-SLP program is a Candidate for Accreditation by the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA) of the American Speech-Language-Hearing Association. This is a “pre-accreditation” status with the CAA, awarded to developing or emerging programs for a maximum period of five years. This accreditation allows the program to matriculate and graduate students who, upon successful completion of the program, will meet all requirements for national certification and state licensure as Speech-Language Pathologists. For further information about the accreditation process contact:

The Council on Academic Accreditation in Audiology and Speech-Language Pathology American Speech-Language-Hearing Association
2200 Research Boulevard, #310
Rockville, MD 20850
Phone: (800) 498-2071
Email: accreditation@asha.org
Website: http://caa.asha.org/

Admission Requirements

The admission requirements for the MS-SLP degree program align with the general requirements of UTHSCSA for graduate education. All required application information, including official transcripts from all institutions attended, must be submitted for an applicant to be considered by the MS-SLP program Admissions Committee. Specifically, the following prerequisites must be met:

- A baccalaureate degree from an accredited institution in the United States
- Required prerequisite coursework of basic human communication include:
  - Introduction to audiology
  - Phonetics and normal articulation
  - Normal language development
  - Anatomy and physiology of speech and hearing
  - Speech and hearing science
- Required prerequisite coursework of basic science include one course each in behavioral/social sciences, biological sciences, physical sciences (physics or chemistry), and statistics. Students are allowed to co-enroll up to two basic science courses with the exception of statistics while working to complete graduate study requirements. Students must have all requirements completed no later than the end of their fourth semester in the master's program.
- Minimal grade point average (GPA): An overall GPA of 3.0
- Competitive scores on GRE tests up to five years old (no pre-determined minimum score requirement). GRE code for CSDCAS is 2156.
- Letters of recommendation: Three letters of recommendation are required attesting to the applicant’s readiness for graduate level studies.

Application Process

Applicants will submit online applications through the Communication Sciences and Disorders Centralized Application Service (CSDCAS) provided by the Council of Academic Programs in Communication Sciences and Disorders (CAPCSD). CSDCAS is a state-of-the-art, web-based application system that offers applicants a convenient way to apply to any number of participating clinical education programs in the speech-language pathology concentration by completing a single application. It provides a streamlined and user-friendly approach to the application process; it provides faculty with one web-based recommendation protocol; and it provides the MS-SLP program maximum exposure to the applicants anywhere in the country. The CSDCAS operational cycle is from September of year 1–April of year 2 (e.g., September 2016–April 2017).

Degree Requirements

The Master of Science in Speech-Language Pathology curriculum consists of 66 semester credit hours taken over 2 years (5 semesters) of study. Students will be required to complete a minimum of 400 supervised clinical hours obtained from culturally diverse settings to be eligible to apply for ASHA’s Certificate of Conical Competence (CCC).

Sample Plan of Study

The Student Progress Committee of the MS-SLP degree program will ensure that the following schedule is followed by MS-SLP students to make appropriate progress towards their degree. The Student Progress Committee will grant exceptions from this schedule only under extenuating circumstances.

All students in the MS-SLP program must complete the following course of study.

First Year

<table>
<thead>
<tr>
<th>Fall</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSLP 5000 Neurological Bases of Speech, Hearing and Language</td>
<td>3</td>
</tr>
</tbody>
</table>
Objectives/Program Outcomes

The MS-SLP curriculum will achieve three main objectives: 1) to educate and train a diverse student body to become critical thinkers and research-driven clinicians who apply the best practices in the health care setting; 2) to prepare students to serve as strong future leaders in their communities through faculty-guided clinical practica and community outreach activities; and 3) to foster opportunities for student scholarships, and prepare graduates to be competitive candidates for advanced training programs (e.g., Ph.D.) in order to help address the national faculty shortage dilemma. For future program improvement, program outcomes will be evaluated based on several benchmarks. First, the passing scores on the first trial of the ASHA Praxis examination will be tracked. The Praxis examination in speech-language pathology assesses the beginning practitioners’ understanding of essential content and current practices. The examination is also required for the state credentialing and ASHA certification. Second, data pertaining to educational pursuits (e.g., Ph.D.), career opportunities (hiring rates), and the type of employment (e.g., medical setting or public school) will be collected and analyzed.

Emergency Health Sciences

Paramedics and Emergency Medical Technicians (EMTs) have fulfilled prescribed requirements by a credentialing agency to practice the art and science of out-of-hospital medicine in conjunction with medical direction. EMS is most easily recognized when emergency vehicles or helicopters are seen responding to emergency incidents, but EMS is much more than a ride to the hospital. It is a system of coordinated response and emergency medical care, involving multiple people and agencies. A comprehensive EMS system is ready every day for every kind of emergency.

The emerging roles and responsibilities of the Paramedic include disaster management, health promotion, community paramedicine, and advanced practice. As the scope of service and practice continues to expand, the Paramedic will function as a facilitator of access to care and part of a coordinated and seamless system of out-of-hospital medical care.

The Department of Emergency Health Sciences offers certificate programs for EMT-Basic and Paramedic that, at a minimum, prepare graduates for national certification and entry into the EMS profession. The department also offers a Bachelor of Science in Emergency Health Sciences degree program for applicants already holding Paramedic certification. The certificate programs are accredited by the Committee on Accreditation of Educational Programs for the EMS Professions (CoAEMSP) (http://www.coaemsp.org), 4101 W. Green Oaks Blvd., Suite 305-599, Arlington, Texas 76016, and by the Texas Department of State Health Services, Bureau of Emergency Management (http://www.dshs.state.tx.us/emstraumasystems/default.shtm), 1100 W. 49th Street, Austin, Texas 78756-3199.

THE DIVISION OF INITIAL EDUCATION

The Division of Initial Education offers programs primarily for the traditional (civilian) student and include:

- EMT certification
- Paramedic certification
- Bachelor of Science degree in Emergency Health Sciences

Bachelor of Science in Emergency Health Sciences

Paramedics who have earned a paramedic certificate may choose to continue their education to earn a Bachelor of Science degree in Emergency Health Sciences (EHS) offered by the Department of Emergency Health Sciences. This degree is only offered as an online program. The baccalaureate degree offers additional opportunities in the...
field of out-of-hospital emergency health care in administration, teaching, or advanced level practice.

The objective of the baccalaureate program is to broaden the knowledge base and professional skills of emergency medical services (EMS) professionals who wish to pursue a degree that will help enable them to fulfill an advanced leadership role within the community. Additionally it will help provide them with an enhanced capability to facilitate in the delivery of EMS and emergency/community health services. The EHS degree provides graduates an opportunity to gain the knowledge and skills necessary to assume positions of responsibility in the Emergency Medical Services profession to political entities, educational institutions, and private enterprises. Generally, the EHS degree program provides graduates with information on how to manage and direct EMS organizations, deliver educational and regulatory information to varied communities of interest and students. Additionally it may satisfy disaster management/planning requirements for municipalities as emergency managers.

Admissions Requirements

Interested applicants should consult the department website for the most current modifications to these requirements, deadlines, and upcoming programs.

All applicants must meet the basic requirements for admission to the Department of Emergency Health Sciences, including a criminal background check upon acceptance. Admission to any EHS program does not guarantee eligibility for the National Registry of Emergency Medical Technicians or certification by Texas Department of State Health Services.

All application materials must be received by the Office of the University Registrar by the application deadlines listed below. Applicants are encouraged to seek advisement from the School of Health Professions Office of Admissions and Special Programs.

Application Deadlines:

For B.S. in EHS Program:

- June 1 for August enrollment (Fall semester, preferred)
- November 1 for January enrollment (Spring semester)
- April 1 for May enrollment (Summer semester)

Applications for certificate and degree programs are reviewed as they are received.

The B.S. in EHS is a degree completion program and the Health Science Center does not offer general education courses. Texas Core Curriculum courses must be obtained from other regionally accredited institutions.

Students are allowed to co-enroll in the program while working to complete Texas Core requirements but must have 70% of core complete including one English, Math and Science course for acceptance. Students must have all Texas Core courses completed no later than their enrollment for the final semester in the B.S. in EHS program.

- English Composition I & II, 6 semester credit hours
- U.S. History I and U.S. History II, 6 semester credit hours
- Texas State & Local Government & U.S Government, 6 semester credit hours
- Any Philosophy, Humanities, or Literature course, 3 semester credit hours
- Any Creative Arts course in Art, Music, or Drama, 3 semester credit hours
- Any Social/Behavioral Science, 3 semester credit hours
- College Algebra or higher, 3 semester credit hours
- Any 3 Science courses with Lab, 12 semester credit hours

Additional Admission Requirements for the B.S. in EHS:

- Current EMT-Paramedic Certification
- Overall GPA of 2.0 (on a 4.0 scale)
- Completion of the Texas Common Application
- Submission of official transcripts from each college and university currently or previously attended. Applicants who are enrolled in college courses at the time of application should submit an official transcript showing courses in progress. An updated transcript must be submitted upon completion of the courses. Note: Transfer credits indicated on another school's transcript are not accepted in lieu of submitting the original institution record for that coursework. Transcripts from institutions outside the United States must be submitted in the original language and must be accompanied by a NACES Members evaluation agency English translation.
- International Applicants only: Submit Test of English as a Foreign Language (TOEFL) scores

Degree Requirements

The Bachelor of Science in Emergency Health Sciences curriculum consists of 124 semester credit hours, including the Texas Core Curriculum, an EMT-Paramedic certificate (minimum of 30 semester credit hours) and 52 semester credit hours of advanced courses completed online through the Health Science Center (the bachelor's degree program is designed to meet individual students’ educational and career goals). Therefore, in consultation with the program director, the student may create an individualized curriculum of at least 52 semester credit hours in order to graduate.

The Paramedic certificate may be completed at other approved EMS education and training programs/facilities. Texas Core Curriculum courses must be completed at another regionally accredited college or university (see Admission Requirements for specific pre-requisites).

The Bachelor of Science degree is awarded upon the satisfactory completion of prescribed academic programs, recommendation of the Emergency Health Sciences faculty and certification of the candidate by the Dean and President to the Board of Regents. A candidate for graduation must have completed all courses at a satisfactory level and earned a minimum cumulative GPA of 2.0 in the program. Completion of the total unit requirement with passing grades does not necessarily assure candidates a recommendation for graduation.

Plan of Study (online program)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>EMSP 3001</td>
<td>Foundations of Emergency Health Sciences</td>
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<tr>
<td>EMSP 3004</td>
<td>Pharmacology 1 for EMS Providers</td>
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</tbody>
</table>
Program Policies

Credit by Exam/Challenge Exam (BS-EHS)

A student may be eligible to earn credit for a course by passing the examination designated and administered by the department.

The Department of Emergency Health Sciences offers two categories of students the opportunity to obtain academic credit by examination:

- certified/licensed EMS personnel who completed EMT-Basic and/or Paramedic coursework for non-credit through the Department of EHS, and students admitted to the EHS Bachelor of Science degree program.

Previous professional employment can potentially be accepted for EHS clinical course credit. A student’s work experience will be reviewed on an individual basis by the course directors and the department’s academic team. If the student fails a challenge examination/evaluation, he/she may enroll in and attend the corresponding course only during regularly scheduled course offerings in order to receive credit.

Students who wish to obtain credit by examination should contact the Department of Emergency Health Sciences at (210) 567-8760 for further information.

Program Costs

In addition to required tuition and fees, there are costs for textbooks, scrubs, and equipment. There are also costs for criminal background checks, immunization, and drug screens (if required by clinical facilities). The full-time clinical fieldwork experiences included in the curriculum may require that students relocate and/or travel outside of San Antonio for the duration of the rotations. Fieldwork expenses will vary according to individual arrangements depending on the cost of travel, temporary housing, maintenance of local accommodations, etc. Students are encouraged to budget for major expenditures that could be associated with these assignments. Detailed information about program costs can be found on the Department of Emergency Health Sciences website.

EMT Basic

The EMT Basic certificate program consists of 2 courses, EMSP 1501 (classroom and lab) and EMSP 1160 (clinical) for a total of 6 semester credit hours. Classroom instruction covers Basic Life Support knowledge and skills criteria, clinical and field internship. Successful completion of the course requirements prepares the student for the National Registry of EMT certification examination. In some cases, this program is offered for non-college credit but requirements and outcomes remain the same.

Admissions Requirements

Interested applicants should consult the department website for the most current modifications to these requirements, deadlines, and upcoming programs.

All applicants must meet the basic requirements for admission to the Department of Emergency Health Sciences. Admission to any EHS program does not guarantee eligibility for the National Registry of Emergency Medical Technicians or certification by Texas Department of State Health Services.

All application materials must be received by the Office of the University Registrar by the application deadlines listed below. Applicants are...
encouraged to seek advisement from the School of Health Professions Office of Admissions and Special Programs.

Application Deadlines:
See website for availability. (https://www.uthscsa.edu/academics/health-professions/programs/emt-certification)

Degree Requirements
The EMT Basic certificate program consists of 6 semester credit hours. Students are required to complete all didactic, laboratory, EMS, and clinical requirements. See Department website (http://www.uthscsa.edu/academics/health-professions/programs/emt-certification) for availability.

The EMT Basic course completion certificate is awarded upon the satisfactory completion of all courses and earned a minimum cumulative GPA of 2.0 in the program. Upon successful completion of all course work for the certificate, the student is eligible to take the exam for registration as an EMT - Basic through the National Registry of EMT. Upon successful completion of that examination, the student is eligible to apply for certification as an EMT-Basic in the State of Texas.

Plan of Study
First Year
Fall

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<th>Course Code</th>
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</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours:</strong></td>
<td><strong>6.0</strong></td>
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</table>

Objectives/Program Outcomes
Students graduating from a Department of Emergency Health Sciences program must meet the essential function requirements of the academic program and profession. The program consists of academic study and clinical experience. The student will possess the skills and attributes necessary to perform as a professional before graduation from the program.

Students who graduate from the Emergency Health Sciences programs will be able to:

- communicate effectively, think critically, and assimilate into their community successfully
- demonstrate personal behaviors and attitudes consistent with and appropriate to the delivery of pre-hospital emergency medical care
- meet the community’s need for advanced life support personnel in a variety of settings
- work in various occupational settings relating to emergency health services
- understand theoretical foundations of the profession.

Program Policies
Program Costs
In addition to required tuition and fees, there are costs for textbooks, scrubs, and equipment. There are also costs for criminal background checks, immunization, and drug screens. The full-time clinical fieldwork experiences included in the curriculum may require that students relocate and/or travel outside of San Antonio for the duration of the rotations. Fieldwork expenses will vary according to individual arrangements depending on the cost of travel, temporary housing, maintenance of local accommodations, etc. Students are encouraged to budget for major expenditures that could be associated with these assignments. Detailed information about program costs can be found on the Department of Emergency Health Sciences website.

EMT Paramedic
The Paramedic is an allied health professional whose primary focus is to provide advanced emergency medical care for critical and emergent patients who access the emergency medical system. This individual possesses the complex knowledge and skills necessary to provide patient care and transportation. Paramedics function as part of a comprehensive EMS response, under medical oversight. Paramedics perform interventions with the basic and advanced equipment typically found on an ambulance. The Paramedic is a link from the scene into the health care system.

The EMT Paramedic certificate program consists of 16 courses for a total of 41 semester credit hours. This option is a 2 semester program (Fall & Spring), although for some cohorts this could be conducted in 1 or 3 semesters. Classroom instruction covers anatomy, physiology, patient assessment, advanced airway shock/trauma management, cardiovascular disease recognition and management, advanced treatment protocols for trauma, medical/special patient emergencies, clinical and field internship, and a final field practicum. Successful completion of the program requirements prepares a student for the National Registry of EMTs cognitive and psychomotor examinations. The department also offers this program in a condensed, full-time format for fire departments/EMS agencies/military under special arrangements not open to the general public.

Admissions Requirements
Interested applicants should consult the department website for the most current modifications to these requirements, deadlines, and upcoming programs.

All applicants must meet the basic requirements for admission to the Department of Emergency Health Sciences. Admission to any EHS program does not guarantee eligibility for the National Registry of Emergency Medical Technicians or certification by Texas Department of State Health Services.

All application materials must be received by the Office of the University Registrar by the application deadlines listed below. Applicants are encouraged to seek advisement from the School of Health Professions Office of Admissions and Special Programs (https://www.uthscsa.edu/academics/health-professions).

Application Deadlines:
For EMT-Paramedic certificate program:

- June 15 for August enrollment (Fall semester)
- Other dates as advertised or arranged for additional offerings

In addition to non-academic factors that are considered, admission requirements for all EHS programs include:

- Completion of the Texas Common Application.
- Criminal background check.
- Some clinical sites may require students to pass a drug screen or require additional immunizations (e.g., H1N1, annual seasonal flu).
Applicants/students must cover the costs of the background check, drug screen, medical insurance, and immunizations.

- First-time College Students: Submit documentation of high school diploma or GED. Note: The EMT Basic and Paramedic programs are exempt from the Texas Success Initiative requirements.
- Official transcripts from each college and university currently or previously attended.
- Applicants who are enrolled in college courses at the time of application should submit an official transcript showing courses in progress. An updated transcript must be submitted upon completion of the courses. Note: Transfer credits indicated on another school’s transcript are not accepted in lieu of submitting the original institution record for that course work. Transcripts from institutions outside the United States must be submitted in the original language and must be accompanied by a NACES Members evaluation agency English translation.
- Minimum overall GPA of 2.0 (on a 4.0 scale).
- Documentation of EMT certification for Paramedic Program enrollment. Students who currently are enrolled in an EMT course or who have completed EMT course work and are engaged in the credentialing process should provide a statement to this effect.
- International Applicants only: Submit Test of English as a Foreign Language (TOEFL) scores: minimum: 560 (paper), or 68 (internet).

**Degree Requirements**

The EMT Paramedic Certificate program consists of 16 courses for a total of 41 semester credit hours.

Upon successful completion of all course work, the student is eligible to take the exam for registration as a Paramedic through the National Registry of EMT. Upon successful completion of that examination, the student is eligible to apply for certification as a Paramedic in the State of Texas.

**Plan of Study for Paramedic Certificate (can be divided between 1 and 3 semesters based on cohort)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSP 1301</td>
<td>Anatomy and Physiology for Paramedic Practice</td>
<td>3</td>
</tr>
<tr>
<td>EMSP 1338</td>
<td>Introduction to Paramedic Practice</td>
<td>3</td>
</tr>
<tr>
<td>EMSP 1348</td>
<td>Emergency Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>EMSP 1356</td>
<td>Airway and Respiratory Management</td>
<td>3</td>
</tr>
<tr>
<td>EMSP 1444</td>
<td>Cardiology</td>
<td>4</td>
</tr>
<tr>
<td>EMSP 1161</td>
<td>Clinical 1</td>
<td>1</td>
</tr>
<tr>
<td>EMSP 1162</td>
<td>Clinical 2</td>
<td>1</td>
</tr>
<tr>
<td>EMSP 2238</td>
<td>EMS Operations</td>
<td>2</td>
</tr>
<tr>
<td>EMSP 2355</td>
<td>Trauma Management</td>
<td>3</td>
</tr>
<tr>
<td>EMSP 2434</td>
<td>Medical Emergencies</td>
<td>4</td>
</tr>
<tr>
<td>EMSP 2330</td>
<td>Special Populations</td>
<td>3</td>
</tr>
<tr>
<td>EMSP 2443</td>
<td>Assessment-Based Management</td>
<td>4</td>
</tr>
<tr>
<td>EMSP 2164</td>
<td>Paramedic Practicum</td>
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<tr>
<td>EMSP 1137</td>
<td>Emergency Procedures 1</td>
<td>1</td>
</tr>
<tr>
<td>EMSP 2237</td>
<td>Emergency Procedures 2</td>
<td>2</td>
</tr>
</tbody>
</table>

**Objectives/Program Outcomes**

Students graduating from a Department of Emergency Health Sciences program must meet the essential function requirements of the academic program and profession. The program consists of academic study and clinical experience. The student will possess the skills and attributes necessary to perform as a professional before graduation from the program.

Students who graduate from the Emergency Health Sciences programs will be able to:

- communicate effectively, think critically, and assimilate into their community successfully
- demonstrate personal behaviors and attitudes consistent with and appropriate to the delivery of pre-hospital emergency medical care
- meet the community’s need for advanced life support personnel in a variety of settings
- work in various occupational settings relating to emergency health services
- understand theoretical foundations of the profession, and
- synthesize knowledge from the basic sciences, social sciences, humanities, and pre-hospital emergency science to conceptualize and resolve patient and health care delivery problems.

**Program Policies**

**Program Costs**

In addition to required tuition and fees, there are costs for textbooks, scrubs, and equipment. There are also costs for criminal background checks, immunization, and drug screens (if required by clinical facilities). The full-time clinical fieldwork experiences included in the curriculum may require that students relocate and/or travel outside of San Antonio for the duration of the rotations. Fieldwork expenses will vary according to individual arrangements depending on the cost of travel, temporary housing, maintenance of local accommodations, etc. Students are encouraged to budget for major expenditures that could be associated with these assignments. Detailed information about program costs can be found on the Department of Emergency Health Sciences website.

**Ph.D. in Health Sciences**

**Overview**

The Doctor of Philosophy in Health Sciences degree program is designed to prepare allied health professionals to assume major leadership, research, and educational positions within their professions, as well as to provide career advancement opportunities. The PhD in Health Sciences will be a broad-based, interdisciplinary/interprofessional degree that will allow graduates to place their individual health field in the context of the allied health disciplines, the health care delivery system as a whole, and the larger issues of health and wellness across the continuum of the
health care system. Graduates will be well prepared to assume essential roles as faculty and researchers at colleges and universities, as well as assuming leadership roles in clinical agencies, governmental and health care organizations, and industry.

The Doctor of Philosophy in Health Sciences will offer specialization tracks in Emergency Medical Sciences, Medical Laboratory Sciences, Speech-Language Pathology, Occupational Therapy, Physical Therapy, Physician Assistant Studies and Respiratory Care, as well as a generalist concentration in Health Sciences. The program of study for the Doctor of Philosophy degree includes formal courses and electives in research design, statistical methods, health systems management, communications (publications and grant writing), education, leadership, and advanced course work in a health science professional track.

Admission Requirements

General graduate admissions standards and program-specific admissions standards are listed below. Applicants must have completed a bachelor's or graduate degree (master's or professional doctorate) in a relevant allied health discipline such as emergency health sciences, medical laboratory sciences, occupational therapy, physical therapy, physician assistant studies, respiratory care, or speech language pathology. Students entering with a bachelor's degree must take an additional 30 semester hours of graduate level coursework, as approved by the individual student's major advisor and the program director as a part of the student's program plan. These hours may be taken from existing graduate programs offered by UT Health San Antonio as part of one of the existing allied health professional degree programs, or graduate courses offered by the School of Nursing, School of Medicine or School of Biomedical Sciences.

Students entering the program with a master's degree in an allied health related discipline from a regionally accredited college or university will receive credit for up to 30 semester hours of their master's degree professional program. Acceptance of transfer credits from another graduate program must be approved by the Registrar and the student's major advisor and program director.

With permission from their major advisor and the program director, students entering the program with a professional doctorate (e.g. audiology doctorate [AuD], doctor of physical therapy [DPT], or occupational therapy doctorate [OTD]), may apply credit from their professional doctoral degree towards the 30-credit hour requirement. With permission, these students may also apply up to 9 SCH of additional doctoral level professional course work towards the PhD specialization area requirements. A limited number of students may be allowed to enroll concurrently in School of Health Professions professional doctoral programs (e.g. OTD/PhD, DPT/PhD).

Applicants must provide official transcripts from each college or university attended and documentation of appropriate certification and/or licensure (as applicable) in their health profession by a major U.S. certification/licensing agency.

Courses taken outside the United States may be considered for transfer with the approval of the program director, but all such courses must be evaluated by the Education Credentials Evaluators (ECE) and be judged equivalent by U.S. standards.

Students may attend full-time (≥ 9 SCH per semester) or part-time (< 9 SCH per semester) but all students are expected to attend year-round, including summer sessions. Most students will complete at least two courses per session for the fall, spring, and summer sessions for a total (on average) of 18 SCH per year. Students may request a reduced academic load which must be approved by their major adviser and program director.

Applicants must:

1. Possess a minimum overall grade point average (GPA) of 3.0 on a 4.0 scale.
2. Submit official transcripts from all colleges and universities attended.
3. Submit scores from the Graduate Record Examination (GRE). No minimum GRE score is prescribed, however combined verbal and quantitative scores of 297 or above are considered to be competitive.
4. Complete any prerequisite courses (where required) with a grade of 3.0 or better. School of Health Professions professional programs require specific undergraduate prerequisites and these courses must be completed by the time the student begins the professional program. Students entering with a master's degree or higher in an allied health discipline will not be required to complete additional prerequisite courses.
5. Documentation of certification and/or license in an allied health or allied health related discipline (as applicable).
6. Three letters of recommendation from persons who are knowledgeable about the quality of the applicant's scholarly activities and/or work experiences.
7. Acceptable healthcare experience in the professional area of study is required for admission. Prior research experience, especially in a health sciences environment, will also be considered and has the benefit of increasing the candidate's understanding of the biomedical research process.
8. Transcripts from institutions outside the United States must be submitted in the original language and must be accompanied by an acceptable evaluation agency translation for each course (NACES®, WES or ECE).
9. International applicants only: Submit Test of English as a Foreign Language (TOEFL) scores; minimum scores 560 (paper) or 68 (Internet) or iELTS advanced version Band score of ≥ 7.0
10. Specific admission requirements may be waived by the Graduate Faculty Council. Requests for waivers will be addressed on a case-by-case basis.

Degree Requirements

Students must complete 98 semester credit hours (SCH) in order to graduate from the program. Students holding a master's degree (or higher) in an allied health related discipline will be able to transfer up to 30 SCH into the PhD program. Students holding a professional doctorate (e.g. DPT, OTD) may request that up to 21 SCH of additional course work completed in their professional doctoral program be transferred in, and applied toward elective and/or professional track PhD program requirements.

Sample Plan of Study

The PhD program in Health Sciences consists of four major core areas: Education (12 SCH), Research & Statistics (16 SCH), Leadership (10 SCH), and the Professional Track (9 SCH). The nine (9) hours of Professional Track credit provides advanced cognate courses in specific allied health disciplines. Specialization areas may include emergency health sciences, medical laboratory science, occupational therapy, physical therapy, physician assistant, respiratory care, speech-language pathology, and health sciences. The specialization in health sciences may include
additional course work in outcomes research, health sciences education, health systems management, and clinical services.

In addition to the coursework described above, students must complete 12 SCH of elective course work which may include the advanced biomedical sciences, clinical sciences, education, management and supervision, leadership principles, measurement and statistics, and additional research courses that are available at UT Health San Antonio. Elective courses will require approval by the student’s major advisor and the program director and will be individualized based on the student’s interests and career goals. Students may request completion of elective course work at other regionally accredited colleges and universities offering appropriate doctoral level graduate course work. Student learning outcomes for the PhD in Health Sciences have been developed for each major core area and are mapped to individual courses.

Each student will have an individualized Program Plan which will include the prescribed core courses in education, research, statistics, leadership, and the professional tract, as well as a projected timeline for completion. Electives will be included in the student’s program plan, based on the student’s interests and career goals. Each student’s individualized Program Plan (i.e. Plan of Study) must be approved by the program’s Committee on Graduate Studies (COGS).

Students holding a master’s degree (or higher) in an allied health related discipline will be able to transfer up to 30 SCH into the PhD program. For students holding an appropriate master’s degree, the minimum number of additional semester hours required for the PhD degree in Health Sciences will be 68 semester credit hours (not including the master’s degree requirement of 30 SCH). Students entering the program with only a bachelor’s degree will be required to complete a master’s degree in an allied health specialty or complete 30 SCH of acceptable graduate credit for a total of 98 SCH. Students holding a professional doctorate (e.g. DPT, OTD) may request that up to 21 SCH of additional course work completed in their professional doctoral program be transferred in, and applied toward elective and/or professional track PhD program requirements.

Objective/Program Outcomes

The educational objectives of the program are designed to prepare outstanding allied health professionals to assume major educational, leadership, and research positions within their professions, as well as to provide career advancement opportunities. The program will prepare individuals for careers as faculty in colleges and universities, as educators in multiple settings, as outcome and health services researchers and as leaders within allied health, and more broadly, within health care and higher education. The program is unique in Texas, providing an interdisciplinary/ interprofessional health science core and the opportunity to take additional, discipline specific course work and engage in research relevant to allied health. The outcome of the program will be a graduate who can address the larger issues of health and wellness across the health care continuum.

Each course is evaluated by students anonymously using a standardized course and instructor evaluation system (IDEA). The IDEA system (https://www.ideaedu.org) provides each faculty, program director and department chair with a personalized on-line dashboard and a wealth of resources to improve instruction. Summary data is reviewed each semester by personnel in the School of Health Professions Dean’s office and distributed for review to each of the school’s departments. Course evaluations are reviewed by each faculty member and the program director. Suggestions for change and additions are incorporated as appropriate.

Program Outcomes Assessment includes administration and review of annual Graduate Exit Surveys, Graduate Six-Month Follow-Up Surveys, graduate job placement, and monitoring graduate career success in achieving leadership positions.

Program Policies

All students must abide by the School of Health Professions program policies and procedures (p. 224) as well as all general academic policies (p. 32) and institutional policies (p. 58) listed in this catalog.

Background Checks and Drug Screening

Background checks are required prior to matriculation. Any events that occur after the initial background check that might affect the student’s status in the program must be reported to the department immediately. Students are required to comply with additional requests for background checks at any time during their course of study.

Students are responsible for the cost and fees of any/all required background checks and drug screenings.

Medical Laboratory Sciences

Medical laboratory sciences, also known as clinical laboratory sciences, is the allied health profession that directly impacts quality patient care. Using cutting-edge technologies, medical laboratory scientists (MLS) analyze blood and other body fluids to help identify, treat, and prevent hundreds of diseases and conditions - from thyroid problems to diabetes, from leukemia to hepatitis. Although most entry-level MLS practitioners are employed in hospital laboratories others obtain positions in areas such as: reference laboratories, veterinary laboratories, public health laboratories, as well as in facilities that perform paternity testing or evaluation of compatibility for transplant patients. Their skill set, emphasis on accuracy and precision in performing testing and knowledge of method development and validation are readily transferable. This is one reason MLS graduates are also employed in biomedical/biotechnology industry and research laboratories.

The Medical Laboratory Sciences (MLS) programs include:

- Bachelor of Science in Medical Laboratory Sciences (BS in MLS)
- Master of Science in Medical Laboratory Sciences (MS in MLS)

Medical Laboratory Technicians (MLT) who have completed a MLT program accredited by NAACLS, have earned an associate’s degree, and who are certified as a MLT by the Board of Certification (https://www.ascp.org/content/board-of-certification) (BOC) of the American Society for Clinical Pathology (ASCP) can be accepted into the Bachelor of Science degree program at the Health Science Center as an “Advanced Standing” MLS student. Core curriculum and all required science and math courses must be completed before advancing to the second year of the BS in MLS. Some coursework may be offered via distance learning.

The Medical Laboratory Sciences programs (BS in MLS and MS in MLS) are accredited by The National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Road, Suite 720, Rosemont, IL 60018-5119; (773) 714-8880; e-mail info@naacls.org. Web site: https://naacls.org. Graduates of the MLS programs are eligible to take the national certification examination for Medical Laboratory Scientist, MLS(ASCP) given by the Board of Certification (https://www.ascp.org/content/board-of-certification) (BOC) of the American Society for Clinical Pathology (ASCP), 33 West Monroe St., Suite 1600, Chicago, IL, 60603, 1-800-267-2727.
Graduates of the MLS programs may find employment opportunities in hospital laboratories as well as private, reference, research, industrial, biotechnology, veterinary, public health, forensic, and pharmaceutical laboratories. With advanced education and experience, graduates have additional career options, including research and development, teaching, and management.

Bachelor of Science in Medical Laboratory Sciences

Admissions Requirements

The application deadline is June 15. All application materials, the application fee, official transcripts, and all supporting documents must be received by Allied Health Centralized Application System (AHCAS), or the Office of the University Registrar if Apply Texas is used, by the deadline. Applicants who are enrolled in college courses at the time of application should submit an official transcript showing courses in progress. An official, updated transcript must be submitted upon completion of the courses.

Bachelor of Science in MLS applicants must complete the Texas Core Curriculum (42 hours) and prerequisite courses with a grade of "C" or better. Certain prerequisite courses will apply towards meeting the Texas Core requirements:

Texas Core Curriculum Requirement

- English Composition I & II (6 semester credit hours)
- College Algebra or higher (3 semester credit hours)
- Natural Sciences (BIOL, CHEM, PHYS or other natural science) (12 semester credit hours)
- Humanities
  - Any philosophy, language, humanities, or English literature course (3 semester credit hours)
- Visual and Performing Arts
  - Any arts, drama, or music course (3 semester credit hours)
- U.S. History I and U.S. History II (6 semester credit hours)
- Texas State & Local Government & American Government (6 semester credit hours)
- Any psychology or sociology course (3 semester credit hours)

All applicants must complete the program prerequisites listed below and no grade less than "C" will be accepted; **ALL science courses must be designated for science majors.**

Program Prerequisite Requirement

- General Chemistry I with lab (4 semester credit hours)
- General Chemistry II with lab (4 semester credit hours)
- Biology I with lab (4 semester credit hour)
- Biology II (3 semester credit hours)
- Microbiology with lab (for science majors) (4 semester credit hours)
- General Physiology or Human Physiology (upper division) (3 semester credit hours)
- Genetics (3 semester credit hours)
- Organic Chemistry I with lab (4 semester credit hours)
- Precalculus (3 semester credit hours)
- Statistics (math, science or psychology) (3 semester credit hours)

Additional MLS program requirements:

- Minimum overall GPA of 2.5 (on a 4.0 scale)
- Minimum science GPA of 2.5 (on a 4.0 scale)
- Completion of the online Allied Health Centralized Application System (https://ahcas.liaisoncas.com) (AHCAS), or the Apply Texas (https://www.applytexas.org) Application
- Payment of non-refundable $95 application fee if using the AHCAS application or a $60 application fee if using the Apply Texas Application
- Submission of the following documents to the AHCAS or the Office of the University Registrar contingent upon which application system is used
  - Official transcripts from each college and university currently or previously attended. Applicants who are enrolled in college courses at the time of application should submit an official transcript showing courses in progress. An updated transcript must be submitted upon completion of the courses. Note: Transfer credits indicated on another school's transcript are not accepted in lieu of submitting the original institution record for that coursework. Transcripts from institutions outside the United States must be submitted in the original language and must be accompanied by a NACES Members evaluation agency English translation (course by course).
  - Two reference letters completed by former instructors (preferably science instructors) or employers
  - Interview with program faculty
  - International Applicants only: Submit Test of English as a Foreign Language (http://www.ets.org/toefl) (TOEFL) scores; minimum scores 560 (paper) or 80 (Internet).

Required Documents (if you are accepted) to the Bachelor of Science in Medical Laboratory Sciences program:

If you are made an official offer for the Bachelor of Science in Medical Laboratory Sciences (BSMLS) program, all of the following items are required prior to matriculation:

- Non-refundable SHP Tuition Deposit to secure each student's seat for the BSMLS class. Directions for this process will be sent to accepted students.
- Completion of a criminal background check. Directions for this process will be sent to accepted students.
- Completion of student drug testing. Directions for this process will be sent to accepted students.
- Student Immunization Record: Student Immunization Record (http://shc.uthscsa.edu/pdf/immunizationrecord.pdf) and immunization information (http://shc.uthscsa.edu/immunization_info.asp) can be found at the Health Science Center's Student Health & Wellness Center Web Page (http://shc.uthscsa.edu) - see record form for full detailed instructions.
- Final updated transcripts must be submitted upon completion of courses from each college/university to the Office of University Registrar. All Foreign transcripts must be also sent to include the original transcript and the NACES evaluated official transcript (course by course).

Office of University Registrar Mailing Address:

Office of University Registrar - MC 7702
Evidence of current health insurance showing dates of coverage. Unless proof of proper insurance coverage is provided before the first day of class, students will be charged for a health insurance policy through the university. The fee for this policy is non-removable once the payment due date passes and is non-refundable once paid.

Degree Requirements
The Bachelor of Science in Medical Laboratory Sciences degree program is a four-year program that consists of a minimum of 126 semester credit hours. The third and fourth year of the program is comprised of medical laboratory science courses and clinical practicums that are completed at the Health Science Center. The courses listed in the Sample Plan of Study constitute the professional curriculum for the Bachelor of Science degree in Medical Laboratory Sciences.

Individualized degree plans are created for each student admitted to the program in consultation with the program director. It is expected that students will be full-time. However, in special circumstances a student may petition to attend part time. This request for part time status will be reviewed and approved by the Medical Laboratory Sciences Student Progress Committee. Depending on the part time status percentage, selection of this option could delay graduation by at least one year.

Sample Plan of Study
First Year
Fall
Credit Hours
MLSC 3011 Quality Assurance in the Clinical Laboratory 1
MLSC 3051 Hematology 3
MLSC 3052 Hematology Laboratory 2
MLSC 3060 Immunohematology 2
MLSC 3064 Immunohematology Laboratory 2
MLSC 3065 Clinical Immunology 3
MLSC 3071 Diagnostic Immunology Laboratory 1
MLSC 3085 Principles of Biochemistry 3
Total Credit Hours: 17.0

Spring
Credit Hours
MLSC 3010 Body Fluids 2
MLSC 3033 Medical Microbiology 3
MLSC 3034 Medical Microbiology Lab 2
MLSC 3040 Special Topics in Microbiology 3
MLSC 3081 Clinical Chemistry 2
MLSC 3082 Clinical Chemistry Laboratory 2
Total Credit Hours: 14.0

Second Year
Fall
Credit Hours
MLSC 4033 Advanced Medical Microbiology 2
MLSC 4053 Advanced Hematology 2
MLSC 4006 Professional Issues 1
MLSC 4037 Microbiology Practicum 4
MLSC 4055 Advanced Immunohematology 2
MLSC 4083 Advanced Clinical Chemistry 3
MLSC 4087 Chemistry Practicum 5
MLSC 4190 Research 2
Total Credit Hours: 16.0

Second Year
Spring
Credit Hours
MLSC 4057 Hematology Practicum 5
MLSC 4067 Immunohematology Practicum 4
MLSC 4095 Management 2
MLSC 4189 CLS Senior Seminar 1

Total Credit Hours: 17.0

Objectives/Program Outcomes
Students graduating from the Bachelor of Science in Medical Laboratory Sciences program will be able to:

- Demonstrate communication skills sufficient to serve needs of patients, colleagues, members of patient care team and the public.
- Perform laboratory tests using sophisticated instrumentation on body fluids, cells, and other specimens accurately and efficiently.
- Use quality control data and procedures to evaluate the validity and reliability of laboratory test results.
- Correlate laboratory test results, recognize the presence of a problem (e.g., reagents, instrumentation, controls, personnel) and take appropriate corrective action.
- Determine the significance of laboratory test results through an understanding of physiologic functions, principles, techniques, and methods related to clinical laboratory practice.
- Exhibit ethical and professional behavior appropriate for the delivery of patient care.
- Participate in continuing education to enhance personal competency and impart knowledge to others.
- Use the principles of method evaluation in the selection of new test methods and instrumentation.
- Apply educational principles and methodologies to teaching/learning situations involving students, colleagues, patients, members of patient care team, and the public.
- Recognize basic principles of administration and supervision as they relate to clinical laboratory practice.
- Apply principles of safety and governmental regulations and standards related to clinical laboratory practice.

Program Policies and Information
Advancement to the Second Year
A student must have no grade lower than a C in required science and medical laboratory sciences courses to begin the second year and begin clinical practicums. In addition, a MLS student must file an Intent to Enroll in Clinical Practicum form, available from the program director at the end of the semester before practicums begin. Students who are ready for clinical practicums are placed based on availability of positions at the affiliate sites throughout South Texas. All students are expected to
complete at least one practicum at an affiliate located outside of San Antonio. In the unlikely event that there are not enough sites available for the number of students ready to enter practicums, assignments will be made according to program policies. Students who must remediate a practicum will be assigned to an affiliate on a space-available basis.

Advisement and Schedule Planning

Applicants are encouraged to seek advisement from their college counselors or the School of Health Professions Office of Admissions and Special Programs at (866) 802-6288 (toll-free) or (210) 567-6220. Students who complete lower-division course work at another college or university are urged to seek advisement about coursework that will fulfill program requirements well in advance of applying to the Health Science Center. Students must be advised each semester before permission is given to enroll in professional courses. For students in any Medical Laboratory Sciences program, sequencing and completion of specific courses are very important.

Certification

Students who successfully complete the BS in Medical Laboratory Sciences program are eligible to take the national certification examination for Medical Laboratory Scientist, MLS(ASCP) given by the Board of Certification (https://www.ascp.org/content/board-of-certification) (BOC) of the American Society for Clinical Pathology (ASCP). Awarding of the degree is not contingent on passing an external certification or licensing examination.

Credit by Examination

Students enrolled in the BS in Medical Laboratory Sciences program may attempt to earn credit by examination according to the policy and procedures in the School of Health Professions section of this Catalog. Students who have college credit for MLT coursework are eligible to take “challenge examinations.” Students who are certified MLT (ASCP), have completed a MLT program accredited by NAACLS, and have an associate degree are not required to take challenge examinations. Challenge examinations must be passed with a grade of 70% or better for credit to be earned. For detailed information about eligible courses, fees, schedules, and procedures, contact the program director.

Placement Examinations

Individuals who have certification from Board of Certification (https://www.ascp.org/content/board-of-certification) (BOC) as a MLT(ASCP), have graduated from an accredited MLT program with an associate degree and are entering the second year of the BS in MLS may be given placement examinations to determine areas of discipline strengths and weaknesses.

Practicum Assignments

Clinical practicum assignments provide the student with a breadth of experiences that encompass all major content areas and exposure to laboratory technology. Assignment to clinical affiliates for practicum courses is a random process that is based on availability of positions at the affiliate sites. Practicum courses typically begin in the fall semester and are completed during the spring semester.

All students are expected to complete at least one practicum at an affiliate located outside of San Antonio. If a student declines to go to an assigned affiliate, this will result in a loss of the student’s practicum position and possible delay of graduation. Students who have special needs and request specific considerations for practicum assignments must put the request in writing to the program director at least one semester before the practicum begins. The program director will take the request to the faculty who will approve or disapprove the request.

Program Costs

In addition to required tuition and fees, there are costs for textbooks, scrubs, and equipment. Detailed information about program costs can be found on the Bachelor of Science in Medical Laboratory Sciences website.

Transfer of Credits

Agreements for transferable coursework exist with some area colleges and universities. Students should contact the program director of the Health Science Center’s Medical Laboratory Sciences Program or the biology advisor at their institution to determine if such an agreement exists with their school.

For additional information, see the policies and procedures in the School of Health Professions section of this Catalog.

Master of Science in Medical Laboratory Sciences

The Master of Science in Medical Laboratory Sciences is an option for students who hold a bachelor’s degree from a regionally accredited college or university and wish to pursue a rewarding career as a medical laboratory scientist. Medical laboratory scientists use state-of-the art instrumentation to analyze blood and other body fluids providing critical, objective data for disease diagnosis, treatment planning, and preventative health care.

Admission Requirements

The application deadline is June 15th. All application materials, the application fee, official transcripts, and all supporting documents must be received by the Allied Health Centralized Application System (AHCAS), or the Office of the University Registrar if Apply Texas is used, by the deadline. Applicants who are enrolled in college courses at the time of the application should submit an official transcript showing courses in progress. An official, updated transcript must be submitted upon completion of the courses.

Master of Science in MLS applicants must complete a bachelor’s degree from a regionally accredited college or university and all math and science requirements listed below.

All applicants must complete the program prerequisites listed below and no grade less than “C” will be accepted: **ALL science courses must be designated for science majors.**

Program Prerequisite Requirement

- General Chemistry I with lab (4 semester credit hours)
- General Chemistry II with lab (4 semester credit hours)
- Organic Chemistry I with lab (4 semester credit hours)
- Biology I with lab (4 semester credit hours)
- Biology II (3 semester credit hours)
- Genetics (3 semester credit hours)
- General Physiology or Human Physiology (upper division) (3 semester credit hours)
- Microbiology with lab (for science majors) (4 semester credit hours)
- Precalculus (3 semester credit hours)
- Statistics (math, science, or psychology) (3 semester credit hours)
Additional Program Requirements

- Minimum science GPA of 2.75 (on a 4.0 scale)
- Minimum overall GPA of 2.5 (on a 4.0 scale)
- Completion of the online Allied Health Centralized Application System (https://ahcas.liaisoncas.com) (AHCAS) or Apply Texas (https://www.applytexas.org) Application
- Payment of non-refundable $95 application fee if using AHCAS application or a $60 application fee if using Apply Texas application
- Submission of the following documents to AHCAS or the Office of the University Registrar
  - Official transcripts from each college and university currently or previously attended. Applicants who are enrolled in college courses at the time of application should submit an official transcript showing courses in progress. An updated transcript must be submitted upon completion of the courses. Note: Transfer credits indicated on another school’s transcript are not accepted in lieu of submitting the original institution transcript for that coursework. Transcripts from institutions outside the United States must be submitted in the original language and must be accompanied by a NACES Members evaluation agency English translation (course by course).
  - Two reference letters completed by former instructors (preferably science instructors) or employers
  - Interview with program faculty
  - International Applicants only: Submit Test of English as a Foreign Language (http://www.ets.org/toefl) (TOEFL) scores; minimum scores 560 (paper) or 80 (Internet)

Required Documents (if you are accepted) to the Master of Science in Medical Laboratory Sciences program:

If you are made an official offer for the UT Health Science Center at San Antonio Master of Science in Medical Laboratory Sciences (MSMLS) program, all of the following items are required prior to matriculation:

- Non-refundable SHP Tuition Deposit to secure each student’s seat for the MSMLS class. Directions for this process will be sent to accepted students.
- Completion of a criminal background check. Directions for this process will be sent to accepted students.
- Completion of student drug testing. Directions for this process will be sent to accepted students.
- Student Immunization Record: Student Immunization record (http://shc.uthscsa.edu/pdf/immunizationrecord.pdf) and immunization information (http://shc.uthscsa.edu/immunization_info.asp) can be found at the Health Science Center’s Student Health & Wellness Center Web Page (http://shc.uthscsa.edu) – see website for full detailed instructions
- Final updated transcripts must be submitted upon completion of courses from each college/university to the Office of University Registrar. All Foreign transcripts must be also sent to include the original transcript and the NACES evaluated official transcript (course by course).
- Evidence of current health insurance showing dates of coverage. Unless proof of proper insurance coverage is provided before the first day of class, students will be charged for a health insurance policy through the university. The fee for this policy is non-refundable once the payment due date passes and is non-refundable once paid.

Degree Requirements

The Professional Master of Science in Medical Laboratory Sciences degree program is a 23-month program that consists of 74 semester credit hours. The curriculum consists of medical laboratory science courses and clinical practicums. The clinical practicums are completed at clinical affiliates in the San Antonio area and sites throughout South Texas. The courses listed below constitute the curriculum for the Professional Master of Science in Medical Laboratory Sciences.

This is a professional degree program and will not require a thesis for graduation. It is expected that students will be full-time. However, in special circumstances a student may petition to attend part time. This request for part-time status will be reviewed and approved by the Medical Laboratory Sciences Student Progress Committee. Depending on the part-time status percentage, selection of this option could delay graduation by at least one year.

Sample Plan of Study

First Year

**Fall**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLSC 5000</td>
<td>Immunodiagnostics</td>
<td>3</td>
</tr>
<tr>
<td>MLSC 5001</td>
<td>Immunodiagnostics Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>MLSC 5002</td>
<td>Organ System Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>MLSC 5003</td>
<td>Clinical Applications of Quality Assessment</td>
<td>1</td>
</tr>
<tr>
<td>MLSC 5004</td>
<td>Diagnostic Hematology</td>
<td>3</td>
</tr>
<tr>
<td>MLSC 5005</td>
<td>Diagnostic Immunohematology</td>
<td>2</td>
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<tr>
<td>MLSC 5006</td>
<td>Diagnostic Immunohematology Laboratory</td>
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**Total Credit Hours:** 17.0

**Spring**

<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MLSC 5007</td>
<td>Diagnostic Chemistry</td>
<td>2</td>
</tr>
<tr>
<td>MLSC 5008</td>
<td>Diagnostic Chemistry Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>MLSC 5009</td>
<td>Laboratory Analysis of Body Fluids</td>
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<tr>
<td>MLSC 5010</td>
<td>Diagnostic Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>MLSC 5011</td>
<td>Diagnostic Microbiology Laboratory</td>
<td>2</td>
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<tr>
<td>MLSC 5012</td>
<td>Advanced Special Topics in Microbiology</td>
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**Total Credit Hours:** 14.0

**First Year Summer**

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>INTD 5064</td>
<td>Applied Statistics for Health Care Practitioners</td>
<td>3</td>
</tr>
<tr>
<td>MLSC 5013</td>
<td>Medical Toxicology/Therapeutic Drug Monitoring</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 6.0

Office of University Registrar Mailing Address:
Office of University Registrar - MC 7702
7703 Floyd Curl Drive
San Antonio, TX  78229-3900
Second Year

Fall

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>MLSC 6000</td>
<td>Advanced Diagnostic Microbiology</td>
<td>2</td>
</tr>
<tr>
<td>MLSC 6001</td>
<td>Advanced Diagnostic Hematology</td>
<td>2</td>
</tr>
<tr>
<td>MLSC 6002</td>
<td>Principles of Laboratory Management</td>
<td>3</td>
</tr>
<tr>
<td>MLSC 6003</td>
<td>Evidence-based Medicine in Medical Laboratory Science</td>
<td>3</td>
</tr>
<tr>
<td>MLSC 6004</td>
<td>Diagnostic Hematology Practicum</td>
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</table>

Total Credit Hours: 15.0

Spring

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<tbody>
<tr>
<td>MLSC 6005</td>
<td>Advanced Diagnostic Immunohematology</td>
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</tr>
<tr>
<td>MLSC 6006</td>
<td>Advanced Diagnostic Chemistry</td>
<td>3</td>
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<tr>
<td>MLSC 6007</td>
<td>Seminar in Laboratory Medicine</td>
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</tr>
<tr>
<td>MLSC 6008</td>
<td>Professional Issues in Healthcare</td>
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<tr>
<td>MLSC 6010</td>
<td>Diagnostic Microbiology Practicum</td>
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<tr>
<td>MLSC 6009</td>
<td>Diagnostic Immunohematology Practicum</td>
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Total Credit Hours: 17.0

Summer

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<th>Course Code</th>
<th>Course Title</th>
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<td>MLSC 6013</td>
<td>Diagnostic Chemistry Practicum</td>
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</table>

Total Credit Hours: 5.0

Objectives/Program Outcomes

Students graduating from the Master of Science in Medical Laboratory Sciences will be able to:

- Communicate effectively with patients, colleagues, members of patient care team and the public on issues related to clinical laboratory practice.
- Perform laboratory tests using sophisticated instrumentation on body fluids, cells, and other specimens accurately and efficiently.
- Assess quality control data and apply quality control procedures to determine validity and reliability of laboratory test results. If results aren’t reliable, suggest possible causes (e.g., systematic or random) and methods to resolve the inaccurate results.
- Evaluate laboratory test results, determine if results are reportable to patient’s medical record, detect problem if one or more of the test results is not reportable and predict an action for resolution.
- Analyze laboratory test results to predict disease state (e.g., iron deficiency anemia) and select appropriate reflex laboratory test(s) necessary to confirm the diagnosis or identify the appropriate therapeutic intervention.
- Exhibit ethical and professional behavior appropriate for the delivery of patient care.
- Gather and apply evidence-based research in clinical decision-making to include evaluation and implementation of new laboratory test methods and instrumentation and outcome analyses.
- Apply fundamental principles of administration and supervision to clinical laboratory practice.
- Use educational principles and methodologies to teach and/or inform students, colleagues, patients, members of patient care team, and public on clinical laboratory topics or general healthcare topics.
- Comply with all safety regulations impacting practice in the clinical laboratory and monitor for changes in regulations.
- Contribute to the profession through presentations and active involvement in American Society for Clinical Laboratory Science (ASCLS).

Program Policies

Advancement to the Second Year

A student must have no grade lower than a "C" in required science and medical laboratory science courses to begin the second year and clinical practicums. In addition a MLS student must file an Intent to Enroll in Clinical Practicum form, available from the program director at the end of the semester before practicums begin. Students who are ready for clinical practicums are placed based on availability of positions at the affiliate sites throughout South Texas. All students are expected to complete at least one clinical practicum at an affiliate located outside of San Antonio. In the unlikely event that there are not enough sites available for the number of students ready to enter clinical practicums, assignments will be made according to program policies. Students who must remediate a practicum will be assigned to an affiliate on a space-available basis.

Advisement and Schedule Planning

Applicants are encouraged to seek advisement from their college counselors or the School of Health Professions Office of Admissions and Special Programs at (866) 802-6288 (toll-free) or (210) 567-6220. Students who complete program requirement courses at another college or university are urged to seek advisement about coursework that will fulfill the program requirements well in advance of applying to the Health Science Center. Students must be advised each semester before permission is given to enroll in professional courses. For students in the Professional MS in MLS program, sequencing and completion of specific courses are very important.

Certification

Students who successfully complete the Professional MS in MLS program are eligible to take the national certification examination for Medical Laboratory Scientist, MLS(ASCP) given by the Board of Certification (https://www.ascp.org/content/board-of-certification) (BOC) of the American Society for Clinical Pathology (ASCP). Awarding of the degree is not contingent on passing an external certification or licensing examination.

Practicum Assignments

Clinical practicum assignments provide the student with the breadth of experiences that encompass all major content areas and exposure to laboratory technology. Assignment to clinical affiliates for practicum courses is a random process that is based on availability of positions at the affiliate sites. Practicum courses typically begin in the fall semester of the second year and are completed during the following summer semester.

All students are expected to complete at least one practicum at an affiliate located outside of San Antonio. If a student declines to go to an assigned affiliate, this will result in a loss of the students’ practicum position and possible delay of graduation. Students who have special
Occupational Therapy

Welcome to UT Health San Antonio Department of Occupational Therapy! Occupational therapy began in the early 1900s in mental health hospitals with the therapeutic use of purposeful activities to improve the lives of those with mental illness. Therefore, our vibrant profession is grounded in the social sciences and the biological sciences. Today occupational therapy is a vital, evidence-based health profession that meets the needs of individuals, communities, and populations. Occupations include a wide array of daily living activities like self-care skills such as dressing, grooming, eating, or bathing; being able to successfully complete activities such as meal preparation, household tasks, managing finances, driving or accessing transportation; as well as the vital life activities of going to school, work, or leisure activities. Therefore, the ability to participate in occupations is necessary for health and well being.

The practice of occupational therapy involves the assessment and treatment of individuals across the lifespan whose ability to engage in their occupations is threatened or affected by developmental disability, physical disability, psychosocial dysfunction, or sensory impairment. The occupational therapy process involves the assessment and intervention of physical, developmental, or mental health issues that affect a person’s ability to participate in their needed, desired, or expected occupations.

Occupational therapists are leaders in health professions in serving individuals of all ages in a variety of settings including rehabilitation facilities, long-term care facilities, public schools, psychiatric hospitals, day care facilities, homes, community agencies, and industrial sites. Regardless of the age of the client or the practice setting, occupational therapists are always concerned with supporting a person’s ability to participate in their occupations.

Graduates of the OT program are eligible to take the national certification examination administered by the National Board for Certification in Occupational Therapy (http://www.nbctot.org) (NBCOT) and to apply for licensure that is required for practice in most states. A felony conviction may affect a graduate’s ability to sit for the NBCOT examination or attain state licensure. Please be aware that disciplinary actions in your past, either felonies or misdemeanors, should be addressed with the Texas Board of Occupational Therapy Examiners beforehand. Waiting to report it on your application for licensure will cause a delay in issuing a license. It is recommended that applicants use this review before applying to or attending an OT program.

The MOT program is accredited by the Accreditation Council for Occupational Therapy Education (http://www.aota.org/Education-Careers/Find-School/AccreditEntryLevel/OTMasters.aspx) (ACOTE) of the American Occupational Therapy Association (AOTA). However, applications are no longer being accepted for the MOT program.

The OTD program has been granted Candidacy Status by ACOTE (https://www.aota.org/Education-Careers/Find-School/Developing/OTD-Developing.aspx) and accepted the first OTD cohort for Summer 2018.

For further information about the accreditation process contact:
American Occupational Therapy Association
Accreditation Department
4720 Montgomery Lane, Suite 200
Bethesda, MD 20814-3449
Telephone: (301) 652-2682
http://www.acoteonline.org

Doctor of Occupational Therapy

Occupational therapy is a vibrant health profession that involves the assessment and treatment of individuals whose ability to perform their daily occupations is threatened or impaired by developmental disability, physical disability, psychosocial dysfunction, sensory impairment, or the aging process. The occupational therapy process involves the prevention or correction of physical, developmental, or emotional problems that affect occupational performance of the individual. The goal of occupational therapy is to assist the patient in the performance of activities that provide meaning to her or his life.

Occupational therapists serve patients of all ages in a variety of settings including rehabilitation facilities, long-term care facilities, public schools, psychiatric hospitals, day care facilities, sheltered workshops, homes, community agencies, and industrial sites.

The Accreditation Council for Occupational Therapy Education (ACOTE) accreditation process for the OTD program is a multi-step process. We have been granted Candidacy Status by ACOTE (https://www.aota.org/Education-Careers/Find-School/Developing/OTD-Developing.aspx) which allows us to admit students to the OTD program.

Graduates of the entry-level Doctorate of Occupational Therapy (OTD) program are eligible to take the national certification examination administered by the National Board for Certification in Occupational Therapy (http://www.nbctot.org) (NBCOT) and to apply for licensure that is required for practice in most states. A felony conviction may affect a graduate’s ability to sit for the NBCOT examination or attain state licensure. Please be aware that disciplinary actions in your past, either felonies or misdemeanors, should be addressed with the Texas Board of Occupational Therapy Examiners beforehand. Waiting to report it on your application for licensure will cause a delay in issuing a license. It is recommended that applicants use this review before applying to or attending an OT program.

For further information about the accreditation process contact:
American Occupational Therapy Association
Accreditation Department
4720 Montgomery Lane, Suite 200
Bethesda, MD 20814-3449
Admissions Requirements

The OTD program consists of 114 semester credit hours of graduate-level coursework, including 6 months of full-time clinical fieldwork and completion of a doctoral capstone. A baccalaureate degree is required for admission. All program prerequisites must be completed by the end of the fall semester prior to summer admission. Applicants are encouraged to seek advisement from their college counselors or the Health Professions Office of Admissions and Special Programs at (866) 802-6288 (toll-free) or (210) 567-6220.

Applications for the OTD program are accepted between mid-August and mid-October for the entering Summer 2019 class. The OTCAS Application, supplemental application, official transcripts, and all supporting documents must be submitted by the application deadline in mid-October (See School of Health Professions web site for each year’s specific dates). The first semester of OTD coursework typically begins the last week of May.

In addition to non-academic factors that are considered, admission requirements for the OTD program include:

- Official transcripts from each college and university attended (Note: All transcripts from institutions outside the United States must be submitted in the original language and must be accompanied by a course-by-course evaluation through a NACES Members agency)
- Grade point average (GPA) of at least 3.0 on OTD Program prerequisites
- Cumulative grade point average (GPA) of at least 3.0 for bachelor’s degree
- Graduate Record Examination (GRE) is required
- Knowledge and understanding of occupational therapy gained through a minimum of 40 hours volunteer and/or observation under the general supervision of a licensed occupational therapist as documented on Documentation of Experience form
- Two Letters of Reference, preferably from licensed occupational therapists
- Interviews with Occupational Therapy faculty
- Completion of all OTD program prerequisites (26 hours) by the end of the fall semester prior to admission the following summer:
  - Human Anatomy with lab OR Anatomy & Physiology I, 4 semester credit hours
  - Human Physiology with lab OR Anatomy & Physiology II, 4 semester credit hours
  - Physics I Lecture, 3 semester credit hours
  - Kinesiology Lecture (to include principles of human improvement), 3 semester credit hours
  - Abnormal Psychology, 3 semester credit hours
  - Development Psychology, 3 semester credit hours
  - Sociology and/or Anthropology, 3 semester credit hours
  - Statistics, 3 semester credit hours
  - Medical Terminology, 1 semester credit hour or certificate of completion is acceptable
- International Applicants only: Submit Test of English as a Foreign Language (TOEFL) scores; minimum scores 560 (paper) or 68 (Internet).

Degree Requirements

The OTD program consists of 114 semester credit hours of graduate-level coursework, including 6 months of full-time clinical fieldwork, and a Doctoral Capstone. Students must successfully fulfill all program-specific requirements including completion of all coursework while maintaining the performance standards outlined by the program, Level 2 Fieldwork, a competency exam, the Doctoral Capstone, as well as program requirements related to professional behavior and community service in order meet graduation requirements.

Objectives/Program Outcomes

The program outcomes are aligned with the five concentration areas of the Doctoral Capstone Experience (Advanced Clinical Skills, Research/Evidence-based Practice, Leadership/Professional Skills, Teaching, and Program Development/Community Engagement) and reflect the five Curriculum Concentration Areas (Body Structure and Function, OT Theory and Practice, Research/Evidence-based Practice, Leadership/Professional Practice, and OT Practice in Context) that support these outcomes.

1. Apply theoretical and empirical knowledge in the implementation of evidence-based occupational therapy practice through integration of foundational bases of physiological, behavioral, social, and occupational therapy.

2. Design, establish and justify the schemata for a state of the art clinical occupational therapy practice.

3. Implement interventions and evaluate their effectiveness in the context of complex, inter-professional, and changing health care, education, and community environments.

4. Critique and evaluate patient information, literature in the field, and research evidence and data to make clinical decisions

5. Compare existing and new scientific and professional knowledge for discriminate adaptation and integration into practice.

6. Formulate and implement research initiatives and scholarly works while critically analyzing and defending the need for scholarly endeavors in the OT discipline.

7. Conduct and support professional responsibilities within the framework of ethical and professional standards.

8. Structure and integrate leadership skills in professional activities including practice, education, community, and professional service.

9. Implement and advocate for evidence-based interventions for clients, families, and the profession through employment as an occupational therapy practitioner and engagement in professional initiatives.

10. Distinguish and employ cultural competence in meeting the occupational performance needs of diverse client populations, including underserved communities.

11. Assess learning needs of individuals or groups in the context of practice, education, or program development and develop structured instructional delivery options to achieve the established learning outcomes.
12. Integrate and adapt learning theory and frameworks of teaching to
the teaching and learning process and evaluate learning outcomes in
order to meet the learning needs and goals of diverse clients and groups
13. Formulate and express clear and effective communication designs
in professional situations, using appropriate modes of expression,
documentation, teaching approaches, and interpersonal interaction.
14. Adapt, integrate, and facilitate distinguishing and demonstrable
professional competencies including communication, teaching, and
evaluation to meet the program development and evaluation needs of
community organizations.

Laptop Computer Requirement
All OTD students are required to have a laptop computer for various class
and testing activities that are conducted using web based programs
or our university online course management system. Please contact
the Office of Financial Aid if you would like the expense of a laptop
considered into your financial aid offer.

Ethics
Ethical principles reflect the values of a profession and thereby serve
as action-oriented guidelines that are designed to be preventative
rather than disciplinary. Occupational therapists are expected to
abide by the ethics adopted by the profession (AOTA Code of Ethics
(http://www.aota.org), 2015). The Occupational Therapy Department
subscribes to this ethical code and expects the behaviors of students to
be consistent with these principles.

Fieldwork
Fieldwork is an important part of the educational process for becoming
an occupational therapist. It represents the part of the program for the
student to develop clinical skills through observation and experiential
learning and to apply understanding of theory and techniques through
extended, supervised experience.

Fieldwork occurs away from the Health Science Center at affiliated
clinical institutions/sites. The majority of the fieldwork sites are located
within the State of Texas. Students may complete fieldwork only
at assigned facilities. The Department maintains agreements with
approved fieldwork sites, and these have been carefully selected to
assure compatibility with the department philosophy, objectives, and
curriculum design. The Academic Fieldwork Coordinator maintains
contact with the fieldwork facilities to support links between the didactic
and fieldwork aspects of the curriculum. Grades are based on the
student's performance, judgment, and attitude as measured by the on-
site supervisor using the Fieldwork Performance Evaluation for the
Occupational Therapy Student.

Whereas students are given an opportunity to express their preferences
for location of placements, the program cannot grant assurances that
student will be placed in their setting or location of choice. Students may
be assigned a placement based on availability or other factors to ensure
degree completion. Student placements are reserved many months (and
in some cases, up to two years) in advance of a scheduled fieldwork
experience. The Academic Fieldwork Coordinator maintains contact with
the fieldwork facilities to support links between the didactic and fieldwork
aspects of the curriculum. All assigned work including observational/
participatory times, written and oral assignments, and class discussion
participation must be satisfactorily completed in order for the student to
receive a passing grade. Grades are based on the student's performance,
judgment, and attitude as measured by the on-site supervisor using the
Fieldwork Performance Evaluation for the Occupational Therapy Student.

The student is responsible for making any required living arrangements
and should be prepared to incur expenses for transportation, food, and
lodging during required fieldwork assignments. Fieldwork students are
expected to obey policies and procedures of the facility providing the
fieldwork experience (this may include but is not limited to a background
check and drug screen), and should submit all required assignments and
evaluations, and other documentation as requested.

The Accreditation Council for Occupational Therapy Education (ACOTE)
requires completion of all fieldwork within 24 months following
completion of academic preparation. This requirement assures continuity
of academic concepts.

Program Costs
In addition to required tuition and fees, there are costs for textbooks,
professional occupational therapy association dues, and supplies. The
full-time clinical fieldwork experiences included in the curriculum may
require that students locate outside of San Antonio for the duration of the
rotations. Fieldwork expenses are the responsibility of the student and
will vary according to individual arrangements depending on the cost of
travel, temporary housing, maintenance of local accommodations, etc.
Students are encouraged to budget for major expenditures that could be
associated with these assignments. Detailed information about program
costs can be found on the Department of Occupational Therapy website.

Other program requirements
In order to be eligible for graduation, students must meet all academic
degree requirements and successfully complete program requirements
including participation in community service activities, the professional
behavior evaluation, interprofessional education activities, and
membership in professional occupational therapy associations.

Standards of Practice
The American Occupational Therapy Association (AOTA, 2010) (http://
www.aota.org) publishes minimum standards of practice. These
standards are viewed as minimum expectations for therapists as they
conduct their professional activities on a daily basis. Please note
that standards by other agencies, whether voluntary, regulatory, or
institutional, may be more specific or rigorous than those published by
AOTA.

<table>
<thead>
<tr>
<th>First Year</th>
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<tr>
<td><strong>Summer</strong></td>
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<tr>
<td>OCCT 7000</td>
<td>Theoretical and Professional Foundations of Occupational Therapy</td>
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<tr>
<td>OCCT 7001</td>
<td>Gross Anatomy</td>
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<td><strong>Fall</strong></td>
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<tr>
<td>OCCT 7002</td>
<td>Applied Biomechanics of Movement</td>
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<td>OCCT 7003</td>
<td>Environmental Technologies 1</td>
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<td>OCCT 7004</td>
<td>Human Occupation Across the Lifespan</td>
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<td>OCCT 7005</td>
<td>Occupational Therapy Process: Mental Health</td>
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<td>OCCT 7007</td>
<td>Level 1 Fieldwork: Mental Health</td>
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<td>OCCT 7006</td>
<td>Foundations of Research Design</td>
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<tr>
<td>OCCT 7008</td>
<td>Occupational Therapy Process: Pediatric Part 1</td>
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<td>OCCT 7009</td>
<td>Clinical Conditions: Pediatrics</td>
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</table>
OCCT 7010 Application of Neural Systems to Occupation
OCCT 7011 Research Design and Proposal
OCCT 7012 Level I Fieldwork: Pediatrics
OCCT 7013 Assessment Measures

**Second Year**

**Summer**
OCCT 7015 Pediatric Service Delivery
OCCT 7030 Doctoral Capstone Proposal Development 1

**Fall**
OCCT 7014 Occupational Therapy Process: Pediatric Part 2
OCCT 7016 Occupational Therapy Process: Adult Neuromuscular
OCCT 7017 Clinical Conditions: Adult Neuromuscular and Medical
OCCT 7018 Environmental Technology 2
OCCT 7020 Teaching and Leadership
OCCT 7021 Level 1 Fieldwork: Adult

**Spring**
OCCT 7027 Occupational Therapy Process: Adult Biomechanical
OCCT 7024 Adult Service Delivery
OCCT 7028 Clinical Conditions: Adult Biomechanical
OCCT 7025 Management and Leadership in OT
OCCT 7031 Doctoral Capstone Proposal Development 2
OCCT 7019 Inter-professional Seminar
OCCT 7026 Doctoral Seminar

**Third Year**

**Summer**
OCCT 7022 Level II Fieldwork A

**Fall**
OCCT 7023 Level II Fieldwork B

**Spring**
OCCT 7032 Doctoral Capstone

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### Master of Occupational Therapy

Occupational therapy involves the assessment and treatment of individuals whose ability to perform tasks of living is threatened or impaired by developmental disability, physical disability, psychosocial dysfunction, sensory impairment, or the aging process. The occupational therapy process involves the prevention or correction of physical, developmental, or emotional problems that affect functional performance of the individual. The goal of occupational therapy is to assist the patient in the performance of activities that provide meaning to her or his life.

Occupational therapists serve patients of all ages in a variety of settings including rehabilitation facilities, long-term care facilities, public schools, psychiatric hospitals, day care facilities, sheltered workshops, homes, community agencies, and industrial sites. 

Graduates of the Master of Occupational Therapy (MOT) program are eligible to take the national certification examination administered by the National Board for Certification in Occupational Therapy (http://www.nbcot.org) (NBCOT) and to apply for licensure that is required for practice in most states. A felony conviction may affect a graduate’s ability to sit for the NBCOT examination or attain state licensure.

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Please be aware that disciplinary actions in your past, either felonies or misdemeanors, should be addressed with the Texas Board of Occupational Therapy Examiners beforehand. Waiting to report it on your application for licensure will cause a delay in issuing a license. It is recommended that applicants use this review before applying to or attending an OT program.

The MOT program is accredited by the Accreditation Council for Occupational Therapy Education (http://www.aota.org/Education-Careers/Find-School/AccreditEntryLevel/OTMasters.aspx) (ACOTE) of the American Occupational Therapy Association (AOTA). For further information about the accreditation process contact:

American Occupational Therapy Association
Accreditation Department
4720 Montgomery Lane, Suite 200
Bethesda, MD 20814-3449
Telephone: (301) 652-2682
http://www.acoteonline.org

**Admissions Requirements**

The Master of Occupational Therapy (MOT) consists of 101 semester credit hours of graduate-level coursework, including 6 months of full-time clinical fieldwork. A baccalaureate degree, completed by the end of the fall semester prior to summer admission, is required for admission to the program. Applicants are encouraged to seek advisement from their college counselors or the Health Professions Office of Admissions and Special Programs (http://www.uthscsa.edu/academics/health-professions) at (866) 802-6288 (toll-free) or (210) 567-6220.

Applications for the MOT program are accepted between mid August and mid October. The OTCAS Application (https://portal.otcas.org), supplemental application, official transcripts, and all supporting documents must be submitted by the application deadline in mid October (See School of Health Professions web site (http://www.uthscsa.edu/academics/health-professions/admissions) for each year’s specific dates). The first semester of MOT coursework typically begins the last week of May.

In addition to non-academic factors that are considered, admission requirements for the Master of Occupational Therapy program include:

- Official transcripts from each college and university attended (Note: All transcripts from institutions outside the United States must be submitted in the original language and must be accompanied by a course-by-course evaluation through a NACES Member (http://www.naces.org/members.htm) agency)
- Grade point average (GPA) of at least 3.0 on MOT Program prerequisites
- Cumulative grade point average (GPA) of at least 3.0 for bachelor’s degree
- Graduate Record Examination (GRE) is required
- Knowledge and understanding of occupational therapy gained through a minimum of 40 hours volunteer and/or observation under the general supervision of a licensed occupational therapist as documented on Documentation of Experience form
• Two Letters of Reference (http://uthscsa.edu/shp/ot/OT_DocOfExper_Web.pdf), preferably from licensed occupational therapists
• Interviews with Occupational Therapy faculty
• Completion of all M.O.T. Program prerequisites (27 hours) by the end of the fall semester prior to admission the following summer:
  • Human Anatomy with lab OR Anatomy & Physiology I, 4 semester credit hours
  • Human Physiology with lab OR Anatomy & Physiology II, 4 semester credit hours
  • Physics I Lecture (Introductory Physics), 3 semester credit hours
  • Kinesiology Lecture (to include principles of human movement), 3 semester credit hours
  • Abnormal Psychology, 3 semester credit hours
  • Development Psychology, 3 semester credit hours
  • Sociology and/or Anthropology, 3 semester credit hours
  • Statistics, 3 semester credit hours
  • Medical Terminology, 1 semester credit hour (certificate of completion is acceptable)
• International Applicants only: Submit Test of English as a Foreign Language (TOEFL (http://www.ets.org/toefl)) scores; minimum scores 560 (paper) or 68 (Internet).

Degree Requirements
The professional phase of the Master of Occupational Therapy curriculum consists of 101 semester credit hours taken over 30 months of study

Sample Plan of Study
First Year

<table>
<thead>
<tr>
<th>Summer</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCCT 5001 Theoretical Foundations of Occupational Therapy</td>
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<tr>
<td>OCCT 5023 Research 1: Assessment and Research Statistics</td>
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<tr>
<td>OCCT 5014 Professional Communication in Occupational Therapy</td>
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</table>

Fall

| OCCT 5007 Occupational Justice and Participation | 1 |
| OCCT 5012 Application of Neural Systems to Occupation | 4 |
| OCCT 5010 Human Occupation across the Lifespan | 3 |
| OCCT 6026 Psychosocial Components of OT | 4 |
| OCCT 5011 Research 2: Introduction to Research & Design | 3 |
| OCCT 5022 Environmental Technologies 1 | 2 |
| OCCT 6005 Introduction to Anatomy | 1.5 |

Spring

| OCCT 5020 Occupational Therapy Process: Neonate-Preschool | 4 |
| OCCT 5021 Service Delivery Systems 1 | 2 |
| OCCT 5024 Clinical Medicine 1 | 1 |
| OCCT 5071 Level 1 Fieldwork: Neonatal-Preschool | 1 |
| OCCT 5013 Applied Biomechanics of Movement | 3 |
| CSAT 5022 Inter-professional Human Gross Anatomy | 5.5 |

Total Credit Hours: 101.0

Objectives/Program Outcomes
Upon completion of the Master of Occupational Therapy program, the student will demonstrate the attitudes, knowledge and skills necessary for competent practice. The graduating student will:

• Apply theoretical and empirical knowledge from the basic, behavioral, social, and knowledge of occupation in planning and implementing occupational therapy practice.
• Advocate for clients, families, and the profession through employment as an OT.
• Communicate clearly and effectively in professional situations, using appropriate modes of expression, documentation and interpersonal interaction.
• Uses research evidence when making clinical decisions and keeps abreast of current scientific knowledge
• Participate and contribute in the planning, development, and implementation of state of the art clinical practice.
• Demonstrate competencies in the complex, collaborative, and changing health care, educational and community environments.
• Display cultural competence in meeting the occupational performance needs of diverse populations.
• Provide occupational therapy services within the framework of legal, ethical, and professional standards.
• Demonstrates leadership skills in all aspects of professional activities.
Occupational Therapy Program Policies and Information

Ethics
Ethical principles reflect the values of a profession and thereby serve as action-oriented guidelines that are designed to be preventative rather than disciplinary. Occupational therapists are expected to abide by the ethics adopted by the profession (AOTA Code of Ethics [http://www.aota.org], 2015). The Occupational Therapy Department subscribes to this ethical code and expects the behaviors of students to be consistent with these principles.

Fieldwork
Fieldwork is an important part of the educational process for becoming an occupational therapist. It represents the part of the program for the student to develop clinical skills through observation and experiential learning and to apply understanding of theory and techniques through extended, supervised experience.

Fieldwork occurs away from the Health Science Center at affiliated clinical institutions/sites. The majority of the fieldwork sites are located within the State of Texas. Students may complete fieldwork only at assigned facilities. The Department maintains agreements with approved fieldwork sites, and these have been carefully selected to assure compatibility with the department philosophy, objectives, and curriculum design. The Academic Fieldwork Coordinator maintains contact with the fieldwork facilities to support links between the didactic and fieldwork aspects of the curriculum. Grades are based on the student’s performance, judgment, and attitude as measured by the on-site supervisor using the Fieldwork Performance Evaluation for the Occupational Therapy Student.

While students are given an opportunity to express their preferences for location of placements, the program cannot grant assurances that student will be placed in their setting of choice. Student placements are reserved many months (and in some cases, up to two years) in advance of a scheduled fieldwork experience. Students are responsible for observing therapy for the treatment of conditions relating to the concurrent semester’s theory and skills courses and to fulfill assignments of the theory or lab course. The Academic Fieldwork Coordinator maintains contact with the fieldwork facilities to support links between the didactic and fieldwork aspects of the curriculum. Grades are based on the student’s performance, judgment, and attitude as measured by the on-site supervisor using the Fieldwork Performance Evaluation for the Occupational Therapy Student.

The student is responsible for making any required living arrangements and should be prepared to incur expenses for transportation, food, and lodging during required fieldwork assignments. Fieldwork students are expected to obey policies and procedures of the facility providing the fieldwork experience, and should submit all required assignments and evaluations, and other documentation as requested.

The Accreditation Council for Occupational Therapy Education (ACOTE) requires completion of all fieldwork within 24 months following completion of academic preparation. This requirement assures continuity of academic concepts.

Program Costs
In addition to required tuition and fees, there are costs for textbooks, scrubs, and equipment. The full-time clinical fieldwork experiences included in the curriculum may require that students locate outside of San Antonio for the duration of the rotations. Fieldwork expenses will vary according to individual arrangements depending on the cost of travel, temporary housing, maintenance of local accommodations, etc. Students are encouraged to budget for major expenditures that could be associated with these assignments. Detailed information about program costs can be found on the Department of Occupational Therapy website.

Other program requirements
In order to be eligible for graduation, students must meet all academic degree requirements and successfully complete program requirements including participation in community service activities and the professional behavior evaluation.

Standards of Practice
The American Occupational Therapy Association (AOTA, 2010) (http://www.aota.org) publishes minimum standards of practice. These standards are viewed as minimum expectations for therapists as they conduct their professional activities on a daily basis. Please note that standards by other agencies, whether voluntary, regulatory, or institutional, may be more specific or rigorous than those published by AOTA.

Master of Physician Assistant Studies

The mission of the Department of Physician Assistant Studies is to prepare outstanding Physician Assistants to recognize and treat acute and chronic illness and promote health. The Department of Physician Assistant Studies makes lives better by improving the healthcare, health outcomes and well-being of patients and their families through education, practice, service and research.

The vision of the Department of Physician Assistant Studies is to be a recognized leader in health care education, scholarship, and service. This vision includes the education and training of competent and caring health care providers who will meet the needs of society, faculty, staff, and student service to the community and region; and scholarship that will impact, advance, and add to the knowledge of humanity and health.

Students who successfully complete the program receive a Master of Physician Assistant Studies (M.P.A.S.) degree. Graduates are eligible to sit for the Physician Assistant National Certifying Exam (PANCE) (http://www.nccpa.net/BecomingCertified) given by the National Commission for Certification of Physician Assistants. Passing the PANCE is required for licensure in all states.

The Master of Physician Assistant Studies program is accredited by the Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA) (http://www.arc-pa.org), 12000 Findley Road, Suite 150, Johns Creek, GA, 30097; phone (770) 476-1224, fax (770) 476-1738.

Admissions Requirements
Applications for the M.P.A.S. program are accepted for each year starting in mid-April through October 1. **Two separate applications; (1) CASPA application and (2) the PAS Supplemental Application are required.** Both must be submitted through the Central Application Service for Physician Assistants (https://portal.caspaonline.org) (CASPA).
The CASPA application, the PAS Supplemental Application, official transcripts, two reference letters, and all other supporting documents must be submitted and your CASPA status must be listed as completed. Prior-year applicants must submit a new application. Applicants are encouraged to seek advisement from their college counselors or the Health Professions' Office of Admissions and Special Programs. Admission requirements for the Master of Physician Assistant Studies program include:

- Bachelor's degree from a regionally accredited college or university
- Completion of the CASPA application
- Completion of the Supplemental application
- Payment of the non-refundable Supplemental application fee
- Minimum overall GPA of 3.0 on a 4.0 scale
- Minimum science GPA of 3.0 on a 4.0 scale
- A grade of C or better in the individual prerequisite classes
- All required prerequisite courses MUST BE completed within ten years of class matriculation and completed by the application deadline of October 1 (Note: no prerequisites can be in progress after the deadline date):
  - Biology I and II with labs, 8 semester credit hours*
  - Human Anatomy and Physiology I and II with labs, 8 semester credit hours*
  - General Chemistry I and II with labs, 8 semester credit hours*
  - Organic Chemistry I with lab, 4 semester credit hours*
  - Microbiology with lab, 4 semester credit hours*
  - Genetics, 3 semester credit hours
  - Statistics-any discipline-specific course is acceptable, 3 semester credit hours
  - Psychology (general, introductory, abnormal or developmental), 3 semester credit hours

*All required science courses MUST BE for science majors

- Submission of official transcripts from each individual college/university currently or previously attended - must be mailed directly to CASPA only (Do not send transcripts to the Health Science Center)
- Applicants who are enrolled in college courses at the time of application should submit an official transcript showing courses in progress. A late transcript must be submitted upon completion of the courses. Note: Transfer credits indicated on another school's transcript are not accepted in lieu of submitting the original institution record for that coursework.

- International applicants only:
  - Submit Test of English as a Foreign Language (TOEFL) (http://www.ets.org/toefl) scores; minimum scores 560 (paper) or 68 (Internet).
  - Transcripts from institutions outside the United States must be submitted in the original language and must be accompanied by a NACES Members evaluation (http://www.naces.org) agency English translation for each course.

NOTE: Information received by University officials regarding individual applicants outside of the formal admissions process or system will not be considered in the admissions review or selection process.

Admission and enrollment practices that favor specified individuals or groups

As part of the Health Science Center PA program’s holistic process, all applicants are categorized based on multiple performance and experience based data points; these include overall GPA, science GPA, hours of community service, hours of health care experience, hours of PA shadowing, history of military service, and affiliation with a medically underserved region. While none of these items, individually or in combination, guarantee selection, they have the capacity to augment the applicant's overall submission.

Advanced placement, transfer credit, and credit for experiential learning

There is no advanced placement for academic work completed prior to matriculation or for any type of work or health care experience. No prerequisite coursework may be used for credit or substitution for a PA curriculum course.

Transfer of Credit: Individuals are not allowed to transfer credits from other Physician Assistant programs. Such prior study will not be considered as fulfilling any requirement of the UTHSCSA PA program.

Credit for Experiential Learning: No credit for experiential learning will be granted for a course in the curriculum. Credit for Experiential Learning will not be awarded for any Supervised Clinical Practice rotation.

Credit by Examination: No course may be credited by examination.

Technical Standards

Matriculating students for the UTHSCSA PA program must be able to meet these minimum Technical Standards (http://www.uthscsa.edu/sites/default/files/TECHNICAL%20STANDARDS%20FOR%20PHYSICIAN%20ASSISTANT%20STUDENTS%202018.pdf) with or without reasonable accommodation.
Suggestions for overall CASPA submission improvement

- Health care experience - hands-on patient contact
- Shadow hours (PA, MD, DO, and NP)
- Community service
- Completion of Basic Life Support and Advanced Cardiac Life Support courses
- Achieving a grade of B or better in all prerequisite coursework

The above recommendations are application enhancing. Completion does not guarantee selection into the UTHSCSA PA Program.

Future Prerequisite/Admission Changes

The above prerequisites are for the 2019-20 application cycle. For those individuals planning on applying for the 2020-21 application cycle, it is recommended that you check the UTHSCSA Physician Assistant Studies Future Prerequisites/Admission web page (https://www.uthscsa.edu/academics/health-professions/future-prerequisitesadmission-changes) for prerequisite changes.

Degree Requirements

The Master of Physician Assistant Studies (MPAS) program is an intense didactic and clinical program that consists of 126 semester credit hours. The curriculum is designed to prepare outstanding physician assistants to recognize and treat acute and chronic illness and promote health. The program begins in the summer semester and runs continuously for 30 months. The didactic component of the curriculum consists of classroom, laboratory, and clinical preparation. Didactic instruction is designed to prepare the student to successfully complete clinical rotations, and ultimately, for practice as a physician assistant.

The MPAS program is based on traditional semesters. The final months of the program include supervised clinical practice experiences (clinical rotations) and occur in sites throughout Texas. Students must be prepared to travel outside the San Antonio area and assume the cost of travel and any housing associated with all rotations.

- Rotations are full-time clinical experiences (minimum of 40+ hours per week).
- During clinical rotations, the students will have an opportunity to participate in an area of concentration of their choice.
- A pass-fail Summative evaluation is administered during the final four months of the program. Students must pass the Summative examination to qualify for graduation.
- All students are required to complete a capstone project prior to graduation.

Grading and Advancement

Grading standards, symbols, grade point scales, GPA determinations, and other considerations regarding the quality of work of students are the prerogative of the faculty of the program, as are issues of promotion and advancement.

The standing of students in their work is expressed by the following grades:

A = Excellent
B = Above Average
C = Average
F = Failure
P = Pass
I = Incomplete
IP = In progress

All coursework in the PA Studies Program that receives a letter grade must be passed with either a grade of "C" or better. In courses that are Pass/Fail, the student must receive a "P".

If a PA curriculum course is offered by another department and that department allows a grade of "D", the PAS Department views that grade as not meeting the "C" requirement. A grade of "D" will be treated in the same manner as a grade of "F".

To advance each semester, unconditionally, students must meet all of the following:

1. Pass all courses with a minimum grade of "C" or "P"
2. Maintain an overall (cumulative) GPA of 2.75 or greater
3. Have faculty approval for advancement based on:
   - Professionalism
   - Academic performance
   - Attitude
   - Effort
   - Demeanor

To advance unconditionally to the Supervised Clinical Practice year, a student must also be BLS and ACLS certified (students will be provided the opportunity to complete BLS and ACLS during their didactic training).

Graduation Requirements

Masters degrees are awarded by the Board of Regents following the student’s completion of the prescribed course of study, the recommendation of the faculty, and the certification by the Dean of the School of Health Professions and the President of the Health Science Center that the candidate has fulfilled all requirements for the degree and certificate. Graduation from the Department of Physician Assistant Studies professional entry-level graduate physician assistant program requires students to have an overall GPA of 2.75/4.0 scale.

Degrees are conferred only on official dates publicly announced. The Master of Physician Assistant Studies (MPAS) will be conferred upon those students who have successfully completed all program requirements (including successful completion of the Summative evaluation).

It is the responsibility of the student to apply for graduation online using the student portal in the semester prior to anticipated graduation or at registration for the final year. Notices are sent from the Office of the University Registrar.

As in any educational setting, the student has the primary responsibility for acquiring knowledge. In offering courses of study, the Health Science Center and Department of Physician Assistant Studies in no way guarantees that any student accepted for enrollment will achieve any
given level of academic or professional accomplishment. This includes certification and Licensure.

A student must complete all requirements in effect at the time of their enrollment, provided there has been no break in that enrollment. Policies are reviewed annually and updated. Students are responsible for reading and abiding by new policies upon publication. The Program Director and the Dean of the School must approve any changes in a degree plan.

Students who complete training after the expected class graduation date may be required to provide justification to the Texas Medical Board prior to Licensure. License to practice as a physician assistant in the state of Texas is solely at the discretion of the Texas Medical Board.

### Sample Plan of Study

#### First Year

<table>
<thead>
<tr>
<th>Period</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tr>
<td>PHAS 5006</td>
<td>Clinical Physiology</td>
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<td>Pathogenesis of Human Disease</td>
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<td>Principles of Ethics and Professionalism</td>
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<td>PHAS 6010</td>
<td>Pharmacology 1</td>
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<td>PHAS 5001</td>
<td>Patient Evaluation 1</td>
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<td>Laboratory Medicine</td>
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<td>PHAS 6138</td>
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<th>Course Title</th>
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<td>Family Medicine Supervised Clinical Practice Experience</td>
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<td>PHAS 6103</td>
<td>Primary Care Supervised Clinical Practice Experience</td>
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<td>Pediatrics Supervised Clinical Practice Experience</td>
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**Total Credit Hours:** 126.0

### Objectives/Program Outcomes

#### Mission

The Mission of the Department of Physician Assistant Studies at the University of Texas Health Science Center, San Antonio is to prepare outstanding physician assistants to recognize and treat acute and chronic illness and promote health. The Department of Physician Assistant Studies makes lives better by improving the health care, health outcomes and the well being of patients and their families through education, practice, service and research.

#### Vision

By 2020, the Department of Physician Assistant Studies at the University of Texas Health Science Center San Antonio, will be recognized as a world class Physician Assistant program and be amongst the best programs in the United States. We will lead the nation in Physician Assistant education, scholarship and service.
Goals

- Attract a highly qualified and diverse student body. We focus on educating a diverse student body to become excellent health care providers. This table (http://www.uthscsa.edu/academics/health-professions/learn-about-our-educational-objectives-and-goals) demonstrates our continued commitment to diversity and reflects the varied and wide-ranging backgrounds and experiences of our students.

- Sustain a high first time Physician Assistant National Certification Exam pass rate: Over the past three years, our students’ Physician Assistant National Certifying Examination (PANCE) pass rate has been 100 percent for first-time exam takers. Over the past five years, our first time pass rate has exceeded the National average.

- Cultivate graduates who are competitively marketable as health care providers: Over the past five years, 92.4 percent of our graduates were licensed to practice within six months of graduation. In addition, 100 percent of these licensed providers are currently practicing medicine.

For more detailed information about the mission, vision and goals for Physician Assistant Studies, please click here (http://www.uthscsa.edu/academics/health-professions/learn-about-our-educational-objectives-and-goals).

Program Policies and Information

Auditing Courses

Students may be required to audit previously attempted courses as a requirement of remediation. Course instructors, academic or clinical coordinators, department committees, or the department chair set standards of performance.

Computer Requirement

Students are required to purchase a laptop computer from the Health Science Center Computer Store (http://ims.uthscsa.edu/computer_networking/computer_store.aspx) upon matriculation. The cost of the purchase is calculated as a cost of attendance and is included in determination of financial aid eligibility.

Program Costs

In addition to required tuition and fees (http://www.uthscsa.edu/academics/health-professions/physician-assistant-studies-master-physician-assistant-studies tuition), there are costs for digital and hardcopy textbooks, scrubs, and equipment. The full-time clinical fieldwork experiences included in the curriculum may require that students relocate outside of San Antonio for the duration of the rotations. SCPE expenses will vary according to individual arrangements depending on the cost of travel, temporary housing, maintenance of local accommodations, etc. Students are encouraged to budget for major expenditures that could be associated with these assignments. Detailed information about program costs can be found on the Department of Physician Assistant Studies website.

Background Checks and Drug Screening

Background checks are required prior to matriculation. Any events that occur after the initial background check that might affect the student’s status in the program must be reported to the department immediately. Students are required to comply with additional requests for background checks at any time during their course of study.

Students are responsible for the cost of any/all required background checks.

Some medical facilities require students that rotate in their facility to undergo drug screening before being awarded temporary privileges. It is the student’s responsibility to comply with this screening. It is the student’s responsibility to arrange for the screening in a timely fashion so as to not impact their rotation duties.

The student is responsible for any applicable fees associated with drug screening.

Working and Employment While Enrolled as a PA Student

Students are encouraged to devote the maximum time possible to their studies while enrolled in the Physician Assistant Studies Program. The curriculum is intense, demanding, time consuming, and requires long hours of class and study time. Any activity that takes time away from a student’s efforts within the program is discouraged.

Policy on Student Employment while Enrolled in the PA Program (https://www.uthscsa.edu/sites/default/files/STUDENT%20EMPLOYMENT%20WHILE%20ENROLLED%20IN%20THE%20PA%20PROGRAM.pdf)

Doctor of Physical Therapy

Physical therapists (PTs) are healthcare professionals who diagnose and treat individuals of all ages, from newborns to the very oldest, who have medical problems or other health-related conditions, illnesses, or injuries that limit their ability to move and perform functional activities as well as they would like in their daily lives. Physical therapists examine each individual and develop a plan using treatment techniques to promote the ability to move, reduce pain, restore function, and prevent disability. In addition, PTs work with individuals to prevent the loss of mobility before it occurs by developing fitness and wellness-oriented programs for healthier and more active lifestyles.

Graduates of the D.P.T. program are eligible to take the National Physical Therapy Examination, given by The Federation of State Boards of Physical Therapy, and the Jurisprudence Exam, given by the Texas Board of Physical Therapy Examiners (http://www.ptot.texas.gov/page/home). A license to practice physical therapy in Texas is contingent on successful completion of these examinations. The D.P.T. program is accredited by the Commission on Accreditation in Physical Therapy (CAPTE), 1111 N. Fairfax Street, Alexandria, Virginia 22314.

Admission Requirements

Entry-Level Doctor of Physical Therapy

Applications for the Fall (July) entry-level DPT program are accepted beginning July 1 of the year prior to enrollment. For the application cycle, please refer to the Physical Therapy Admission website (http://www.uthscsa.edu/academics/health-professions/doctor-physical-therapy-admissions). Applicants are to submit their application for admission through the Physical Therapy Centralized Application Service (PTCAS) (http://www.ptcas.org/home.aspx) as well as complete the Physical Therapy Supplemental Application. See the PTCAS website (http://www.ptcas.org/home.aspx) for complete application instructions. A completed application, the application fee, supplemental application fee, official transcripts from each college or university attended, test scores and all other supporting documents must be submitted to PTCAS (http://www.ptcas.org/home.aspx) no later than above stated deadlines. It is the applicant's responsibility to verify that all documents have been
received before the application deadline. No incomplete applications will be considered.

A baccalaureate degree is required for admission. A baccalaureate degree can be pending at the time of application but must be earned prior to June 1 of the enrollment year. Note that program prerequisites can be in progress at the time of application but must be completed by June 1 of the enrollment year.

All applicants must complete the program prerequisites (47 semester credit hours) and fulfill the requirements below:

- Human Anatomy Lecture and Laboratory, 4 semester credit hours
- Human or Mammalian Physiology Lecture and Laboratory, 4 semester credit hours
- Biology I Lecture and Laboratory, 4 semester credit hours
- A second Biology Course that is not plant-based (Botany is not accepted) - Lecture and Laboratory, 4 semester credit hours
- Chemistry I Lecture and Laboratory, 4 semester credit hours
- Chemistry II or Organic Chemistry or Biochemistry - Lecture and Laboratory, 4 semester credit hours
- Physics I & II Lecture and Laboratory, 8 semester credit hours
- Intro to Psychology or General Psychology, 3 semester credit hours
- Developmental Psychology, Motor Development, or Human Development (must cover the lifespan), 3 semester credit hours
- Intro to Sociology, Social Psychology, or Cultural Anthropology, 3 semester credit hours
- Speech – Public Speaking, 3 semester credit hours
- Statistics (Math, Sociology, or Psychology), 3 semester credit hours
- ****NOTE: All science courses must be designated for Science majors or pre-allied health majors. Anatomy & Physiology I and II series for a total of 8 semester credit hours is accepted in lieu of separate anatomy and physiology courses.

ADDITIONAL REQUIREMENTS:

- Overall grade point average (GPA) of at least 3.2 on a 4.0 scale and Science/Math prerequisite GPA of at least 3.2 on a 4.0 scale
- Completion of a medical terminology course – this can be completed at a college or university or an online certification course.
- Official transcripts from each college and university currently or previously attended. Applicants who are enrolled in college courses at the time of application should submit an official transcript showing courses in progress. An updated transcript must be submitted upon completion of the courses. Note: Transfer credits indicated on another school’s transcript are not accepted in lieu of submitting the original institution record for that coursework. Transcripts from institutions outside the United States must be submitted in the original language to a NACES Member evaluation agency for English translation and then must be submitted to PTCA. See PTCA (http://www.ptcas.org/home.aspx) for full instructions.
- Completion of the PTCA application and the Physical Therapy Supplemental Application.
- Payment of the non-refundable PTCA application fee and Physical Therapy Supplemental Application fee.
- Submission in PTCA of a minimum of 50 observation hours gained through volunteering or employment in a physical therapy setting with a licensed Physical Therapist that demonstrates knowledge and understanding of physical therapy.
- Two letters of reference (at least one letter from a licensed physical therapist) sent directly to PTCA.
- Personal written statement addressing the applicant’s goal of becoming a physical therapist in PTCA.
- Personal résumé including previous work experience, honors and awards, extracurricular activities, and community service experience in PTCA.
- Graduate Record Examination (GRE) (http://www.ets.org/gre); with a preferred score of 150 or higher in Verbal and 145 or higher in Quantitative.
- Any additional materials required from PTCA (see PTCA website for instructions).
- International Applicants only: Submit Test of English as a Foreign Language (TOEFL) scores; minimum scores 560 (paper) or 68 (Internet).

Degree Requirements

The Doctor of Physical Therapy program (DPT) (http://www.uthscsa.edu/shp/pt) begins in the Fall semester and consists of 100 semester credit hours of professional-level courses taken over 8 semesters (35 months). The program includes 34 weeks of full-time clinical affiliations.

Sample Plan of Study (Class of 2020 and 2021)

### First Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall</strong></td>
<td></td>
</tr>
<tr>
<td>PHYT 7001</td>
<td>Clinical Foundations 1</td>
</tr>
<tr>
<td>PHYT 7005</td>
<td>Exercise and Physiology of Rehabilitation</td>
</tr>
<tr>
<td>PHYT 7009</td>
<td>Neuroscience</td>
</tr>
<tr>
<td>PHYT 7014</td>
<td>Systematic Reasoning and Scientific Investigation 1</td>
</tr>
<tr>
<td>PHYT 7017</td>
<td>Cells, Systems, and Disease</td>
</tr>
<tr>
<td>PHYT 8022</td>
<td>Professional Issues and Clinical Decision-Making 1</td>
</tr>
<tr>
<td><strong>Spring</strong></td>
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</tr>
<tr>
<td>CSAT 5022</td>
<td>Inter-professional Human Gross Anatomy</td>
</tr>
<tr>
<td>PHYT 7011</td>
<td>Clinical Foundations 2</td>
</tr>
<tr>
<td>PHYT 7012</td>
<td>Movement Science 1</td>
</tr>
<tr>
<td>PHYT 7019</td>
<td>Scientific Basis of Neurological Disorders</td>
</tr>
<tr>
<td>PHYT 8122</td>
<td>Professional Issues and Clinical Decision-Making 2</td>
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</tbody>
</table>

### Second Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td><strong>Fall</strong></td>
<td></td>
</tr>
<tr>
<td>PHYT 7018</td>
<td>Pharmacological Principles in Physical Therapy</td>
</tr>
<tr>
<td>PHYT 8002</td>
<td>Management of the Patient with Musculoskeletal Dysfunction 1</td>
</tr>
<tr>
<td>PHYT 8007</td>
<td>Orthotics in Rehabilitation</td>
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<tr>
<td>PHYT 8011</td>
<td>Therapeutic Approaches to Pain and Movement Dysfunction</td>
</tr>
<tr>
<td>PHYT 8108</td>
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<tr>
<td>PHYT 8130</td>
<td>Movement Science 2</td>
</tr>
<tr>
<td><strong>Spring</strong></td>
<td></td>
</tr>
</tbody>
</table>
Sample Plan of Study (Class of 2022)

First Year

Fall

PHYT 7001 Clinical Foundations 1 4
PHYT 7005 Exercise and Physiology of Rehabilitation 4
PHYT 7009 Neuroscience 3
PHYT 7014 Systematic Reasoning and Scientific Investigation 1
PHYT 7017 Cells, Systems, and Disease 3
PHYT 8022 Professional Issues and Clinical Decision-Making 1

Spring

CSAT 5022 Inter-professional Human Gross Anatomy 5.5
PHYT 7011 Clinical Foundations 2 4
PHYT 7012 Movement Science 1 4
PHYT 7019 Scientific Basis of Neurological Disorders 3
PHYT 8122 Professional Issues and Clinical Decision-Making 2

Summer

PHYT 7018 Pharmacological Principles in Physical Therapy 2
PHYT 8011 Therapeutic Approaches to Pain and Movement Dysfunction 3

Third Year

Fall

PHYT 8121 Clinical Experience 3 5
PHYT 8014 Seminar in Physical Therapy Patient Care 1

Spring

PHYT 8075 Human Development across the Lifespan 3
PHYT 8102 Systematic Reasoning and Scientific Investigation 2
PHYT 8112 Management of the Complex Patient 3.5
PHYT 8221 Clinical Experience 4 2

Total Credit Hours: 100.0

Sample Plan of Study (Class of 2023)

First Year

Fall

PHYT 7001 Clinical Foundations 1 4
PHYT 7005 Exercise and Physiology of Rehabilitation 4
PHYT 7009 Neuroscience 3
PHYT 7014 Systematic Reasoning and Scientific Investigation 1
PHYT 7017 Cells, Systems, and Disease 3
PHYT 8022 Professional Issues and Clinical Decision-Making 1

Spring

CSAT 5022 Inter-professional Human Gross Anatomy 5.5
PHYT 7011 Clinical Foundations 2 4
PHYT 7012 Movement Science 1 4
PHYT 7019 Scientific Basis of Neurological Disorders 3
PHYT 8122 Professional Issues and Clinical Decision-Making 2

Summer

PHYT 7018 Pharmacological Principles in Physical Therapy 2
PHYT 8011 Therapeutic Approaches to Pain and Movement Dysfunction 3

Second Year

Fall

PHYT 8002 Management of the Patient with Musculoskeletal Dysfunction 1 5

First Year

Fall

PHYT 7001 Clinical Foundations 1 4
PHYT 7005 Exercise and Physiology of Rehabilitation 4
PHYT 7012 Movement Science 1 4
PHYT 7019 Scientific Basis of Neurological Disorders 3
PHYT 7014 Systematic Reasoning and Scientific Investigation 1
PHYT 8022 Professional Issues and Clinical Decision-Making 1

Total Credit Hours: 16.0
## Objectives/Program Outcomes

Upon completion of the Doctor of Physical Therapy program, the student will demonstrate the attitudes, knowledge and skills necessary for competent practice. The graduating student:

1. will demonstrate the skills necessary for entry-level practice of physical therapy.
2. is an advocate for service to the community and the profession.
3. will develop critical inquiry skills related to clinical practice and research.
4. will develop the skills necessary for lifelong learning.
5. perform evidence-informed PT practice based on foundational knowledge and professional clinical skills.
6. implement principles of ethical and professional behavior in PT practice.
7. is to be an advocate for health and wellness at the individual and societal levels, demonstrate respect for self and others, and a commitment to the professional of physical therapy.
8. interact in a professional manner that demonstrates effective communication for various audiences & purposes.
9. develop skill of autonomy with ability to self-correct & provide critical feedback to peers.

## Program Policies and Information

### Advancement, Probation and Dismissal

Continuation as a Physical Therapy student is dependent on maintenance of a minimum cumulative grade point average of 3.0 (B) while enrolled in the program. A student whose cumulative grade point average falls below 3.0 will be subject to academic probation or consideration for dismissal. While on probation, a student must maintain a B average in those courses for which he or she is registered or be considered for dismissal. A student who receives a grade of D or F in any semester may also be subject to dismissal.
The Department of Physical Therapy Student Progress Committee (SPC) may recommend dismissal, probation, repetition of the course when next offered, repetition of the year, or other actions as deemed appropriate. The student who has been dismissed may be readmitted for further study by petition from the SPC. The request will be approved or disapproved by the Dean. Under no circumstances will a student on probation be awarded a degree.

Attendance for Academic Courses
It is expected that students will attend all scheduled classes, laboratories, and clinical sessions. Absences may be granted in such cases as illness or personal emergency. With verification of an excused absence, required work that has been missed can be submitted. It is the responsibility of the student to notify the department if any absence occurs and to arrange with the faculty to make up work that is missed.

Dropping Courses
It is mandatory that the students adhere to the sequence of courses in the curriculum. Each course in the curriculum is built upon and is dependent upon a foundation established in a prior course. To drop a course, a student must seek permission from the course instructor and the Department Chair.

Grades in Clinical Courses
All clinical courses (i.e.: Clinical I, Clinical II, Clinical III, and Clinical Internship I) are graded S (Satisfactory) or U (Unsatisfactory). Clinical grades are not used in calculating the grade point average.

A grade of S is assigned if the student successfully satisfies the criteria for clinical courses. Failure to successfully satisfy the course criteria may result in one of the following grades:

- I (Incomplete) – Student performance is satisfactory on completed skills but below the minimum number required due to exceptional circumstances beyond student and/or clinic control.
- U (Unsatisfactory) – Student performance is below minimum requirement due to skill deficiency not related to exceptional circumstances or if the clinical is discontinued. A grade of U may also be assigned if the student demonstrates inappropriate behavior in the areas of professionalism or interpersonal skills. A grade of U may result in dismissal from the program.

Criteria and time frame for removal of I or U grades in clinical courses are determined based on clinical documentation and consultation with the clinical supervisor/clinical instructor. An I or U grade may require that the student complete an additional clinical affiliation or other remediation that could extend the professional curriculum beyond the expected graduation date. More than one U grade is not allowed within the total clinical course sequence.

Program Costs
In addition to required tuition and fees, there are costs for textbooks, scrubs, and equipment. The full-time clinical fieldwork experiences included in the curriculum may require that students locate outside of San Antonio for the duration of the rotations. Fieldwork expenses will vary according to individual arrangements depending on the cost of travel, temporary housing, maintenance of local accommodations, etc. Students are encouraged to budget for major expenditures that could be associated with these assignments. Detailed information about program costs can be found on the Department of Physical Therapy website.

Respiratory Care
Overview
The Respiratory Care Program is designed to provide students with a unique education in preparation for a satisfying professional career as advanced respiratory care practitioners. The respiratory care program prepares leaders for respiratory care management, education, research and clinical practice. The Health Science Center offers two degree plans; the Bachelor of Science in Respiratory Care (BSRC) and the Master of Science in Respiratory Care (MSRC). Prospective students have several degree and curriculum options to choose from to achieve their academic goals.

Respiratory Care, also known as respiratory therapy, is an exciting and challenging health profession that specializes in the treatment of patients with cardiopulmonary deficiencies. Respiratory Therapists (RTs) work in cooperation with physicians to care for patients with a wide range of breathing disorders including asthma, chronic obstructive lung disease, cystic fibrosis, and breathing issues due to premature birth.

Most RTs begin their practice in a variety of areas within hospitals, such as the intensive critical care units, neonatal/pediatric intensive care units, flight teams, and cardiopulmonary diagnostics. However with the rapid growth of the profession, many RTs practice in alternate sites such as physician offices, long term acute care hospitals, patients homes, cardiopulmonary rehabilitation clinics, tobacco cessation programs, and in chronic disease management. Thus RTs work across a wide range of clinical settings and across the population spectrum, ranging from newborn and pediatric patients, to adults and the elderly.

Over the last few years, the role of the respiratory therapist has expanded greatly. It is anticipated the need for respiratory therapists will grow faster than average over the next 10 years. Respiratory therapists are needed to serve on multidisciplinary teams in the health care setting. Respiratory therapists may choose to become highly skilled clinicians, supervisors, managers, educators, and researchers.

The Bachelor of Science in Respiratory Care and Master of Science in Respiratory Care programs are accredited by the Commission on Accreditation for Respiratory Care (CoARC) (http://www.coarc.com), 1248 Harwood Rd., Bedford, Texas 76021-4244, phone (817) 283-2835, fax (817) 354-8519

Bachelor of Science in Respiratory Care
Bachelor of Science in Respiratory Care Program
This program provides an excellent career opportunity to join one of the fastest growing professions in healthcare. Prospective students do not need any healthcare experience to be considered. The professional phase includes 1,100 hours of in-hospital clinical practice. Additional elective coursework in management and education may be taken by students interested in these areas.

Upon completion of the program, graduates are eligible to sit for the national board examinations in respiratory care as well as apply for state license. Our graduates are recognized for their clinical excellence and patient advocacy.
Tracks within the Bachelor of Science in Respiratory Care Program

The Bachelor of Science in Respiratory Care offered by UT Health provides two tracks of study: Entry to the Profession and Degree Advancement. The Entry to the Profession Program (p. 258) provides students with any background the necessary knowledge and skills to become Registered Respiratory Therapists (RRTs). The Degree Advancement Program (p. 260) is designed for RRTs with associate degrees to obtain their Bachelor of Science in Respiratory Care degree. The Degree Advancement Program can be taken either entirely Online or in a face to face (In-Person) format.

Bachelor of Science in Respiratory Care Objectives/Program Outcomes

Goals of the Bachelor of Science Respiratory Care Program

The Bachelor of Science in Respiratory Care (BSRC) program is designed to offer the student an environment that fosters learning through planned experiences so that the student develops the knowledge, skills and attitudes for the respiratory care profession. The goals of the BSRC program include preparing graduates with demonstrated competence as an registered respiratory therapist (RRT) and to achieve skills in one of the following areas: leadership, advanced clinical practice or research.

Program Goal for Students

1. The Bachelor of Science in Respiratory Care (BSRC) program will prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practice as performed by registered respiratory therapist (RRT).

2. The Bachelor of Science in Respiratory Care (BSRC) program will prepare leaders for the field of respiratory care by including curricular content that includes objectives related to the acquisition of skills in one or more of the following: management, education, research or advanced clinical practice.

General Respiratory Care Program Policies and Regulations

Computer Requirement

Students are required to purchase a laptop computer from the Health Science Center Computer Store (http://ims.uthscsa.edu/computer_networking/computer_store.aspx) upon matriculation. The cost of the purchase is included in determination of students’ financial aid package.

Program Costs

In addition to required tuition and fees (https://www.uthscsa.edu/academics/health-professions/programs/respiratory-care-bs/tuition-fees), there are costs for textbooks, scrubs, and equipment. Clinical rotations in the curriculum may require that students relocate outside of San Antonio for the duration of the rotations. The expenses associated with these clinical rotations will vary according to individual arrangements for the cost of travel, temporary housing, etc. Students are encouraged to budget for major expenditures that could be associated with these assignments. Detailed information about program costs can be found on the Division of Respiratory Care website.

Background Checks and Drug Screening

Background checks are required prior to matriculation. Any events that occur after the initial background check that might affect the student’s status in the program must be reported to the department immediately. Students are required to comply with additional requests for background checks at any time during their course of study.

Students are responsible for the cost of any/all required background checks.

Some medical facilities require students that rotate in their facility to undergo drug screening prior to being awarded temporary privileges. It is the student’s responsibility to comply with this screening. It is the student’s responsibility to arrange for the screening in a timely fashion so as not to impact their rotation duties.

The student is responsible for any applicable fees associated with drug screening.

Working and Employment While Enrolled as a Respiratory Care Student

Students are encouraged to devote the maximum time possible to their studies while enrolled in the Respiratory Care Program. The curriculum is intense, demanding, time consuming, and requires long hours of class and study time. Any activity that takes time away from a student’s efforts within the program is discouraged.

Bachelor of Science in Respiratory Care - Entry to the Profession

Bachelor of Science in Respiratory Care Overview

This program provides an excellent career opportunity to join one of the fastest growing professions in healthcare. Prospective students do not need any healthcare experience to be considered. The professional phase includes 1,100 hours of in-hospital clinical practice. Additional elective coursework in management and education may be taken by students interested in these areas.

Upon completion of the program, graduates are eligible to sit for the national board examinations in respiratory care as well as apply for state license. Our graduates are recognized for their clinical excellence and patient advocacy.

Bachelor of Science in Respiratory Care Admissions Requirements

Admission to the program is on a competitive basis. Student selection is based on a number of factors including overall grade point average, prerequisite grade point average, consistency of academic performance, coursework completed prior to application and interpersonal abilities. Application deadline is June 15.

Requirements for admission to the professional phase of the program in respiratory care include:

Bachelor of Science in Respiratory Care applicants must complete the Texas Core Curriculum (42 hours) and Professional Prerequisite courses with a grade of a grade of "C" or better. Certain professional prerequisite courses will apply towards meeting the Texas Core requirements as indicated below (*):
In exceptional circumstances students may be allowed to co-enroll in the program while working to complete Professional or Texas Core requirements. Students must have all requirements no later than the fall semester of their second year in the BS in RC program.

Texas Core Curriculum Requirements
- English Composition I & II (6 semester credit hours)
- College Algebra or higher (3 semester credit hours)
- Natural Sciences
  - BIOL, CHEM, PHYS or other natural science (12 semester credit hours)
- Humanities
  - Any Philosophy, Language, Humanities, or English Literature course (3 semester credit hours)
- Visual and Performing Arts
  - Any Arts, Drama, Dance or Music course (3 semester credit hours)
- Anatomy & Physiology I with laboratory
- American History (6 semester credit hours)
- Government-Political Science (6 semester credit hours)
- Any Psychology or Sociology course (3 semester credit hours)

Professional Prerequisites
- College Algebra or higher (3 semester credit hours*)
- Anatomy & Physiology I with laboratory and Anatomy & Physiology II with laboratory OR Anatomy with lab AND Physiology with lab (8 semester credit hours *)
- Microbiology with lab (4 semester credit hours*)
- Any Physics (3 semester credit hours)
- Any Chemistry (3 semester credit hours)
- * Part of the Texas Core Curriculum

Application Requirements
- Completion of 60 or more semester credit hours from an accredited educational institution.
- Completion of all professional prerequisite required courses with a grade of "C" or better
- Ability to complete all general education curriculum and program prerequisite courses by fall enrollment in the program.
- Completion of the online Allied Health Centralized Application System (AHCAS), or Texas Common Application
- Payment of non-refundable $95 application fee when using the AHCAS application or a $60 application fee if using the Texas Common Application
- Submission of the following documents to AHCAS or Office of the University Registrar:
  - All Official Transcripts from each college/university attended. Applicants who are enrolled in college courses at the time of application should submit official transcripts showing courses in progress. An updated transcript must be submitted upon completion of courses.
  - Note: Transcripts from institutions outside the United States must be evaluated by an acceptable NACES Members organization. For additional information – www.naces.org
  - International Applicants only: Submit Test of English as a Foreign Language (TOEFL) scores;
- This requirement may be waived when the applicant is a graduate from a regionally accredited post-secondary institution in the USA.
- Admission is on a competitive basis. In addition to non-academic factors, consideration will be given to the applicant’s academic performance represented by coursework grades, load, trends, and degree of difficulty.

If you are accepted to the Bachelor of Science in Respiratory Care program you will need to complete the following:
- Pay a non-refundable Tuition Deposit of $450.00 to the School of Health Professions.
- Completion of a background check. Directions for this process will be sent to accepted students.
- Provide proof of immunizations: Immunization requirements can be found at the Health Science Center Student Health Center Web Page (http://shc.uthscsa.edu/immunization_info.asp) – see website for full instructions.
- Evidence of current health insurance showing dates of coverage. Unless proof of proper insurance coverage is provided before the first day of classes, students will be charged for a health insurance policy through the university.
- Final updated transcripts must be submitted upon completion of courses from each college/university to the Office of University Registrar. All Foreign transcripts must be also sent to include the original transcript and the NACES evaluated official transcript (course by course).

The University Registrar Mailing Address:
Office of the University Registrar – MC 7702
7703 Floyd Curl Drive
San Antonio, TX 78229-3900

Bachelor of Science in Respiratory Care Degree Requirements
To graduate from the Respiratory Care Bachelor of Science in Respiratory Care program, students must:
- Complete all required respiratory care professional courses with a grade of C (75%) or better.
- Successfully complete the self assessment examinations given by the National Board for Respiratory Care.
- Successfully complete a comprehensive end-of-year and program competency assessment.
- Complete all University requirements for graduation.
Bachelor of Science in Respiratory Care Sample Plan of Study

First Year

Fall

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>RESC 3002</td>
<td>Fundamentals of Respiratory Care</td>
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<td>RESC 3005</td>
<td>Respiratory Care Pharmacology</td>
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<td>RESC 3007</td>
<td>Cardiopulmonary Physiology</td>
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<td>RESC 3011</td>
<td>Introduction to Patient Assessment</td>
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Spring

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<td>RESC 3008</td>
<td>Introduction to Clinical Practice</td>
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<tr>
<td>RESC 3018</td>
<td>Diseases Affecting the Respiratory System</td>
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<td>RESC 3023</td>
<td>Pulmonary Function Testing</td>
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<tr>
<td>RESC 3031</td>
<td>Critical Respiratory Care Management</td>
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</tr>
<tr>
<td>RESC 4003</td>
<td>Pediatric and Neonatal Respiratory Care</td>
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Summer

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<tr>
<td>RESC 3009</td>
<td>Introduction to Critical Care</td>
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</tr>
<tr>
<td>RESC 4017</td>
<td>Introduction to Research</td>
<td>3</td>
</tr>
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</table>

Optional Elective(s) 0-6

Second Year

Fall

<table>
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<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>RESC 4014</td>
<td>Clinical Practice 1 (or RESC 4024 Clinical Practice 2)</td>
<td>9</td>
</tr>
<tr>
<td>RESC 4018</td>
<td>Clinical Practice 1 Seminar</td>
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Spring

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<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>RESC 4024</td>
<td>Clinical Practice 2 (or RESC 4014 Clinical Practice 1)</td>
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</tr>
<tr>
<td>RESC 4028</td>
<td>Clinical Practice 2 Seminar</td>
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</table>

The total credit hours earned in the BSRC program is 65 hours. The total earned with the 2 elective courses is 71 hours

Total Credit Hours: 65.0-71.0

Elective Courses

Students may enroll in elective courses with the permission of the program director or the department chair.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESC 5013</td>
<td>Management &amp; Leadership in Health Profession</td>
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</tr>
<tr>
<td>RESC 5015</td>
<td>Education in Respiratory Care</td>
<td>3</td>
</tr>
<tr>
<td>RESC 6301</td>
<td>Advanced Patient Assessment and Care Plan Development</td>
<td>3</td>
</tr>
<tr>
<td>RESC 6302</td>
<td>Advanced Critical Care and Ventilatory Support</td>
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</table>

Bachelor of Science in Respiratory Care - Degree Advancement

Bachelor of Science in Respiratory Care Degree Advancement Program Overview

The Bachelor of Science in Respiratory Care Degree Advancement Program is designed to assist Registered Respiratory Therapists (RRTs) with an associate degree to attain the baccalaureate level. This assists the RRT is meeting professional expectations of having at least a bachelor degree and opens up career opportunities in clinical and non-clinical leadership positions.

The Bachelor of Science in Respiratory Care Degree Advancement Program may be taken in one of two formats: online or face to face (In-Person) in a traditional manner. Students will complete 32 semester credit hours in this program at UT Health San Antonio. Students must also complete 42 semester credit hours of Texas Core Curriculum and have a total of at least 125 semester credit hours in order to graduate from this program. Additional elective coursework in the Respiratory Care Program such as management and education may be taken by students interested in these areas.

Bachelor of Science in Respiratory Care Degree Advancement Program Admissions Requirements

Admission is on a competitive basis. In addition to non-academic factors, the applicant’s academic performance represented by coursework grades, load, trends, and degree of difficulty will be considered. Application deadline is June 15 for fall enrollment. Requirements for admission to the professional phase of the program in respiratory care include:

Bachelor of Science in Respiratory Care Degree Advancement Program applicants must complete the Texas Core Curriculum (42 hours) and Professional courses with a grade of "C" or better. Certain professional prerequisite courses will apply towards meeting the Texas Core requirements as indicated below (*):

RRT’s admitted to the Degree Advancement program may be allowed to enroll while working to complete program and Texas Core requirements. Students must have all such required courses completed no later than their enrollment for the final semester in the Degree Advancement program.

Texas Core Curriculum Requirements

- English Composition I & II (6 semester credit hour)
- College Algebra or higher (3 semester credit hours)
- Natural Sciences
  - (BIOL, CHEM, PHYS or other natural science) (12 semester credit hours)
- Humanities
  - Any Philosophy, Language, Humanities, or English Literature course (3 semester credit hours)
- Visual and Performing Arts
  - Any Arts, Drama, Dance or Music course (3 semester credit hours)
- American History (6 semester credit hours)
- Government-Political Science (6 semester credit hours)
- Any Psychology or Sociology course (3 semester credit hours)

Application Requirements

- Completion of 60 or more semester credit hours from an accredited educational institution.
- The Registered Respiratory Therapist (RRT) credential must be earned prior to matriculation.
- Completion of all required courses with a grade of "C" or better.
- Ability to complete all general education curriculum and program prerequisite courses by the semester the student is to graduate.
• Completion of the online Allied Health Centralized Application System (https://ahcas.liaisoncas.com) (AHCAS), or Texas Common Application (https://www.applytexas.org)
• Payment of non-refundable $95 application fee when using the AHCAS application or a $60 application fee if using the Texas Common Application
• Submission of the following documents to AHCAS or Office of University Registrar contingent on which application system was used
  • All Official Transcripts from each college/university attended. Applicants who are enrolled in college courses at the time of application should submit official transcripts showing courses in progress. An updated transcript must be submitted upon completion of courses.
  • Note: Transcripts from institutions outside the United States must be evaluated by an acceptable NACES Members organization. For additional information – www.naces.org (http://www.naces.org)
• International Applicants only: Submit Test of English as a Foreign Language (http://www.ets.org/toefl) (TOEFL) scores.
  • This requirement may be waived for graduates from a regionally accredited post-secondary institution in the USA.
• Admission is on a competitive basis. In addition to non-academic factors that may be considered, the basis for inviting an applicant for an interview includes the applicant's academic performance represented by coursework grades, load, trends, and degree of difficulty.

If accepted to the Bachelor of Science in Respiratory Care Degree Advancement program the following are required:
• Pay a non-refundable Tuition Deposit of $450.00 to the School of Health Professions.
• Completion of a background check. Directions for this process will be sent to accepted students.
• Proof of immunization: Immunization requirements can be found at the Health Science Center Student Health Center Web Page (http://shc.uthscsa.edu/immunization_info.asp) – see website for full instructions.
• Evidence of current health insurance showing dates of coverage. Unless proof of proper insurance coverage is provided before the first day of classes, students will be charged for a health insurance policy through the university.
• Final updated transcripts must be submitted upon completion of courses from each college/university to the Office of University Registrar. All Foreign transcripts must be also sent to include the original transcript and the NACES evaluated official transcript (course by course).

Health Science Center Office of the University Registrar Mailing Address:
Office of the University Registrar – MC 7702
7703 Floyd Curl Drive
San Antonio, TX 78229-3900

Bachelor of Science in Respiratory Care Degree Advancement Program Requirements
To graduate from the Respiratory Care Bachelor of Science in Respiratory Care Degree Advancement program, students must:
• Complete all required respiratory care professional courses with a grade of C (75%) or better.
• Complete all general education course work no later than their enrollment for the final semester in the Degree Advancement Program. Otherwise, the student will not be able to enroll in the courses for the final semester.
• Successfully complete a capstone project. Options include:
  • create and implement an educational project
  • create and implement a quality improvement plan
  • create and implement a research project
• Complete all University requirements for graduation.

Bachelor of Respiratory Care Degree Advancement Program for RRT to BSRC Sample Plan of Study

Required Courses

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>RESC 3007</td>
<td>Cardiopulmonary Physiology</td>
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<tr>
<td>RESC 4018</td>
<td>Clinical Practice 1 Seminar</td>
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<td>RESC 3018</td>
<td>Diseases Affecting the Respiratory System</td>
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<td>RESC 4003</td>
<td>Pediatric and Neonatal Respiratory Care</td>
<td>4</td>
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<tr>
<td>RESC 4028</td>
<td>Clinical Practice 2 Seminar</td>
<td>3</td>
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<td>RESC 4017</td>
<td>Introduction to Research</td>
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<tr>
<td>RESC 4091</td>
<td>Independent Study</td>
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<td>RESC 4021</td>
<td>Issues and Trends</td>
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<td>RESC 4040</td>
<td>Capstone Project</td>
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Total Credit Hours 32

Elective Courses

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<td>RESC 5015</td>
<td>Education in Respiratory Care</td>
<td>3</td>
</tr>
<tr>
<td>RESC 6301</td>
<td>Advanced Patient Assessment and Care Plan Development</td>
<td>3</td>
</tr>
<tr>
<td>RESC 6302</td>
<td>Advanced Critical Care and Ventilatory Support</td>
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Credit By Exam

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<td>RESC 3005</td>
<td>Respiratory Care Pharmacology</td>
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<td>RESC 3009</td>
<td>Introduction to Critical Care</td>
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<td>RESC 3008</td>
<td>Introduction to Clinical Practice</td>
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<tr>
<td>RESC 3023</td>
<td>Pulmonary Function Testing</td>
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<tr>
<td>RESC 4014</td>
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<tr>
<td>RESC 4024</td>
<td>Clinical Practice 2</td>
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</table>

Total Credit Hours 33

Master of Science in Respiratory Care

Master of Science in Respiratory Care Program Overview
This program provides an excellent career opportunity to join the first approved entry level to practice Master of Science in Respiratory Care
The Master of Science in Respiratory Care (MSRC) degree program in Texas. Our program is one of six MSRC first-professional degree programs in the country and provides a great opportunity to become a leader in the Respiratory Care profession.

**Options within the Master of Science in Respiratory Care Program**
The Master of Science in Respiratory Care offered by UT Health provides two tracks of study: Entry to the Profession and Degree Advancement. The Entry to the Profession Program (p. 262) provides students with any background the necessary knowledge and skills to become Registered Respiratory Therapists (RRTs). The Degree Advancement Program (p. 264) is designed for RRTs with bachelor degrees in any field to obtain their Master of Science in Respiratory Care degree. The Degree Advancement Program can be taken either entirely Online or in a Face to Face format.

**Master of Science in Respiratory Care Objectives/Program Outcomes**

**Goals of the Master of Science in Respiratory Care Program**
The Respiratory Care Program is designed to offer the student an environment that fosters learning through didactic, laboratory and clinical experiences so that the student will be able to develop the knowledge, skills and attitudes for the profession of respiratory care.

Our minimum goal for the Master of Science in Respiratory Care (MSRC) program is designed to provide graduates with additional knowledge, skills, and attributes in leadership, management, education, research, or advanced clinical practice both to meet their current professional goals and to prepare them for practice as advanced degree respiratory therapists.

In addition the MSRC program will prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practice as performed by registered respiratory therapist (RRT).

Lastly, the MSRC program will prepare leaders for the field of respiratory care by including curricular content that includes courses and objectives related to the acquisition of skills in management, education, research and advanced clinical practice. These will lead to:

- Preparation of strong advanced level respiratory therapists for advanced clinical practice.
- Provide leadership development in the areas of management, education and research.
- Develop clinical specialists in the following areas: adult, pediatric and neonatal critical care, chronic disease management, cardiopulmonary diagnostics, pulmonary rehabilitation and asthma education specialist.
- Prepare future faculty for college and university respiratory care educational programs.
- Develop individuals who are able to formulate appropriate questions, organize and test hypotheses, and apply research results to the practice of respiratory care.

**Program Policies and Regulations**

**Computer Requirement**
Students are required to purchase a laptop computer from the Health Science Center Computer Store (http://ims.uthscsa.edu/computer_networking/computer_store.aspx) upon matriculation. The cost of the purchase is included in determination of students’ financial aid package.

**Program Costs**
In addition to required tuition and fees (https://www.uthscsa.edu/academics/health-professions/programs/respiratory-care-ms/ tuition-fees), there are costs for textbooks, scrubs, and equipment. Clinical rotations in the curriculum may require that students relocate outside of San Antonio for the duration of the rotations. The expenses associated with these clinical rotations will vary according to individual arrangements for the cost of travel, temporary housing, etc. Students are encouraged to budget for major expenditures that could be associated with these assignments. Detailed information about program costs can be found on the Division of Respiratory Care website.

**Background Checks and Drug Screening**
Background checks are required prior to matriculation. Any events that occur after the initial background check that might affect the student’s status in the program must be reported to the department immediately. Students are required to comply with additional requests for background checks at any time during their course of study.

Students are responsible for the cost of any/all required background checks.

Some medical facilities require students that rotate in their facility to undergo drug screening prior to being awarded temporary privileges. It is the student’s responsibility to comply with this screening. It is the student’s responsibility to arrange for the screening in a timely fashion so as not to impact their rotation duties.

The student is responsible for any applicable fees associated with drug screening.

**Working and Employment While Enrolled as a Respiratory Care Student**
Students are encouraged to devote the maximum time possible to their studies while enrolled in the Respiratory Care Program. The curriculum is intense, demanding, time consuming, and requires long hours of class and study time. Any activity that takes time away from a student’s efforts within the program is discouraged.

**Master of Science in Respiratory Care - Entry to the Profession**

**Overview**
This program provides an excellent career opportunity to join the first approved entry level to practice Master of Science in Respiratory Care (MSRC) degree program in Texas. Our program is one of six MSRC first-professional degree programs in the country and provides a great opportunity to become a leader in the Respiratory Care profession.

Prospective students do not need any healthcare experience to be considered. The professional phase includes more than 1200 hours of in-hospital clinical practice. As a leadership program in respiratory care, this course of study aspires to provide graduates with the foundation needed to assume professional leadership roles in clinical practice, research, education and management. Upon completion of the program, graduates are eligible to take the national board examinations in respiratory care as well obtain a state license.
Admissions Requirements

Admission to the program is on a competitive basis. Student selection is based on a number of factors including overall grade point average, prerequisite grade point average, consistency of academic performance, coursework completed prior to application, and interpersonal abilities. Application deadline is June 15.

Requirements for admission to the professional phase of the Master of Science in Respiratory Care (MSRC) program include:

- Completion of a bachelor's degree in any major from a regionally accredited college/university prior to program entry.
- Completion of all required professional prerequisite courses with a "C" or better.
  - Anatomy & Physiology I & II Lectures & Laboratories (8 semester credit hours) OR Anatomy I Lecture & Laboratory AND Physiology I Lecture & Laboratory (8 semester credit hours)
  - Any Chemistry Lecture & Laboratory (4 semester credit hours)
  - Any Physics Lecture & Laboratory (4 semester credit hours)
  - Microbiology Lecture & Laboratory (4 semester credit hours)
- Senior standing at the time of application and the ability to complete all preprofessional coursework prior to program entry.
- Completed application to the program and submission of official transcripts for all college coursework completed.
- Payment of non-refundable $95 application fee when using the AHCAS application or a $60 application fee if using the Texas Common Application.
- Recommended that two letters of reference be provided that attest to the applicant's readiness for graduate level studies.

International Applicants only:

- Each foreign transcript will be evaluated to ascertain that courses are equivalent in content and rigor to prerequisite courses offered by regionally accredited higher education institutions in the United States.
- Submit Test of English as a Foreign Language (TOEFL) scores.
  - This requirement may be waived if the applicant is a graduate from a regionally accredited post secondary institution in the USA.

Application Requirements

- Payment of non-refundable $95 application fee when using the AHCAS application or a $60 application fee if using the Texas Common Application.
- Submission of the following documents to AHCAS or Office of University Registrar contingent on which application system was used.
  - All Official Transcripts from each college/university attended. Applicants who are enrolled in college courses at the time of application should submit official transcripts showing courses in progress. An updated transcript must be submitted upon completion of courses.

- Note: Transcripts from institutions outside the United States must be evaluated by an acceptable NACES Members organization. For additional information – www.naces.org (http://www.naces.org)

If you are accepted to the Master of Science in Respiratory Care Entry to the Profession program you will need to complete the following:

- Pay a non-refundable Tuition Deposit of $450.00 to the School of Health Professions.
- Completion of a background check. Directions for this process will be sent to accepted students.
- Proof of completion of required immunizations: Immunization requirements can be found at the Health Science Center Student Health Center Web Page (http://shc.uthscsa.edu/immunization_info.asp) – see website for full detailed instructions. Be advised all immunizations must be completed 30 days before registration and some immunizations take 3 - 6 weeks to be effective.
- Evidence of current health insurance showing dates of coverage. Unless proof of proper insurance coverage is provided before the first day of classes, students will be charged for a health insurance policy through the university.
- Final updated transcripts must be submitted upon completion of courses from each college/university to the Office of University Registrar. All Foreign transcripts must be also sent to include the original transcript and the NACES evaluated official transcript (course by course).

The University Registrar Mailing Address:
Office of the University Registrar – MC 7702
7703 Floyd Curl Drive
San Antonio, TX 78229-3900

Degree Requirements

To graduate from the Respiratory Care Master of Science in Respiratory Care program, students must:

- Complete all required respiratory care professional courses with a grade of C (75%) or better.
- Must have an overall GPA 3.0 to graduate.
- Successfully complete the self assessment examinations given by the National Board for Respiratory Care.
- Successfully complete a comprehensive end-of-year and program competency assessment.
- Successfully complete a research project (create and implement an educational project, create and implement a quality improvement plan, or create and implement a research project).
- Complete all University requirements for graduation.
Master of Science in Respiratory Care Sample Plan of Study

<table>
<thead>
<tr>
<th>First Year</th>
<th>Fall</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESC 5002</td>
<td>Introduction to Respiratory Care</td>
<td>5</td>
</tr>
<tr>
<td>RESC 5005</td>
<td>Pharmacology</td>
<td>4</td>
</tr>
<tr>
<td>RESC 5010</td>
<td>Cardiopulmonary Physiology</td>
<td>5</td>
</tr>
<tr>
<td>RESC 5011</td>
<td>Patient Assessment</td>
<td>5</td>
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<tr>
<td><strong>Spring</strong></td>
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<tr>
<td>RESC 5020</td>
<td>Diseases Affecting the Cardiopulmonary System</td>
<td>4</td>
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<td>RESC 5023</td>
<td>Cardiopulmonary Diagnostics and Pulmonary Function Testing</td>
<td>3</td>
</tr>
<tr>
<td>RESC 5030</td>
<td>Pediatric &amp; Neonatal Respiratory Care</td>
<td>4</td>
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<tr>
<td>RESC 5031</td>
<td>Critical Care &amp; Mechanical Ventilation</td>
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<td>RESC 5041</td>
<td>Clinical Practice Introduction</td>
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<tr>
<td>RESC 5013</td>
<td>Management &amp; Leadership in Health Profession</td>
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<td>Critical Care Introduction</td>
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<td>RESC 6011</td>
<td>Clinical Seminar 1</td>
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<td>RESC 6019</td>
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<td>RESC 6030</td>
<td>Research Project 1</td>
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<tr>
<td><strong>Spring</strong></td>
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<td></td>
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<tr>
<td>RESC 6029</td>
<td>Clinical Practice 2</td>
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<td>RESC 6031</td>
<td>Research Project 2</td>
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<td>RESC 6033</td>
<td>Clinical Seminar 2</td>
<td>2</td>
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<td><strong>Summer</strong></td>
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<td>RESC 6032</td>
<td>Clinical Practice 3</td>
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<td>RESC 6035</td>
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<td><strong>Total Credit Hours:</strong></td>
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<td><strong>92.0</strong></td>
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**Elective Courses**

Students may enroll in elective courses with the approval of their division director or department chair.

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>RESC 6150</td>
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<tr>
<td>RESC 6301</td>
<td>Advanced Patient Assessment and Care Plan Development</td>
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<td>RESC 6302</td>
<td>Advanced Critical Care and Ventilatory Support</td>
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<tr>
<td>INTD 5064</td>
<td>Applied Statistics for Health Care Practitioners</td>
<td>3</td>
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**Master of Science in Respiratory Care - Degree Advancement**

**Overview**

The Master of Science in Respiratory Care Degree Advancement Program is for: (1) the Registered Respiratory Therapist (RRT) who has earned a Bachelor of Science in respiratory therapy/respiratory care or (2) the Registered Respiratory Therapist (RRT) who has an earned Bachelor degree in any field and meets the admission requirements. The graduates of this program have many career options including leadership positions in clinical practice, management, education, research, or further graduate education.

The Master of Science in Respiratory Care Degree Advancement Program may be taken in one of two formats: online or face to face in a traditional manner. Students will complete at least 34 semester credit hours of coursework while enrolled in this program. Students may substitute course requirements with appropriate elective courses as approved by their division director or department chair.

**Master of Science in Respiratory Care Degree Advancement Program Admissions Requirements**

Admission to the program is on a competitive basis. Student selection is based on a number of factors including overall grade point average, prerequisite grade point average, consistency of academic performance, coursework completed prior to application, and interpersonal abilities. Application deadline is June 15 for fall enrollment.

Requirements for admission to the the Master of Science in Respiratory Care (MSRC) Degree Advancement Program include:

- Holds the Registered Respiratory Therapist (RRT) or equivalent credential.
- Completion of a bachelor's degree in Respiratory Care/Respiratory Therapy OR completion of a bachelor's degree in any major from a regionally accredited college/university prior to program entry.
- At least senior standing in a Baccalaureate degree program at the time of application.
- Completed application to the program and submission of official transcripts for all college coursework completed.

**International Applicants only:**

- Each foreign transcript will be evaluated to ascertain that courses are equivalent in content and rigor to prerequisite courses offered by regionally accredited higher education institutions in the United States.
- Submit Test of English as a Foreign Language (TOEFL) scores. This requirement may be waived if the applicant is a graduate from a regionally accredited post-secondary educational institution in the USA.

**Application Requirements**

- Hold the Registered Respiratory Therapist (RRT) or equivalent credential
• Payment of non-refundable $95 application fee when using the AHCAS application or a $60 application fee if using the Texas Common Application.
• Submission of the following documents to AHCAS or Office of University Registrar contingent on which application system was used.
  • All Official Transcripts from each college/university attended. Applicants who are enrolled in college courses at the time of application should submit official transcripts showing courses in progress. An updated transcript must be submitted upon completion of courses.
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If you are accepted into the Master of Science in Respiratory Care Degree Advancement program you will be required to:

• Pay a non-refundable Tuition Deposit of $450.00 to the School of Health Professions. Directions for this process will be sent to accepted students.
• Completion of a background check. Directions for this process will be sent to accepted students.
• Provide proof of immunization: Immunization requirements can be found at the Health Science Center Student Health Center Web Page (http://shc.uthscsa.edu/immunization_info.asp) – see website for full detailed instructions.
• Evidence of current health insurance showing dates of coverage. Unless proof of proper insurance coverage is provided before the first day of classes, students will be charged for a health insurance policy through the university.

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Office of the University Registrar – MC 7702
7703 Floyd Curl Drive
San Antonio, TX 78229-3900

Degree Advancement Program Requirements

To graduate from the Respiratory Care Master of Science in Respiratory Care Degree Advancement program, students must:

• Complete all required respiratory care professional courses with a grade of C (75%) or better.
• Must have an overall GPA of 3.0 to graduate.
• Complete all University requirements for graduation.

Master of Science in Respiratory Care Degree Advancement Program for RRT with BSRC OR RRT with Bachelor’s degree in any field:

<table>
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<tr>
<th>First Year</th>
<th>Credit Hours</th>
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<tr>
<td>Summer</td>
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<tr>
<td>RESC 5013</td>
<td>Management &amp; Leadership in Health Profession 3</td>
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<td>RESC 5015</td>
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<td>RESC 5017</td>
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<td>RESC 6034</td>
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<td>RESC 6035</td>
<td>Clinical Seminar 3 2</td>
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Total Credit Hours: 34.0

Elective Courses
Students may substitute course requirements with appropriate elective courses as approved by their division director or department chair.

| RESC 6150  | Independent Study 1-6 |
| RESC 6301  | Advanced Patient Assessment and Care Plan Development 3 |
| RESC 6302  | Advanced Critical Care and Ventilatory Support 3 |
| INTD 5064  | Applied Statistics for Health Care Practitioners 3 |

Credit By Exam

| RESC 5002  | Introduction to Respiratory Care 5 |
| RESC 5005  | Pharmacology 4 |
| RESC 5011  | Patient Assessment 5 |
| RESC 5023  | Cardiopulmonary Diagnostics and Pulmonary Function Testing 3 |
| RESC 5031  | Critical Care & Mechanical Ventilation 5 |
| RESC 5041  | Clinical Practice Introduction 1 |
| RESC 5042  | Critical Care Introduction 3 |
| RESC 6019  | Clinical Practice 1 12 |
| RESC 6029  | Clinical Practice 2 12 |
| RESC 6032  | Clinical Practice 3 8 |

Total Credit Hours: 58
SCHOOL OF NURSING

History
The Health Science Center School of Nursing was established in 1969. The School of Nursing (http://nursing.uthscsa.edu) was originally part of The University of Texas System School of Nursing with campuses in Galveston, Austin, Houston, San Antonio, El Paso and Tyler. All five schools followed the same curriculum. In 1976 the System School of Nursing was dissolved and each School of Nursing has since been independent and governed by the university on the campus where the school is located.

The School of Nursing (http://nursing.uthscsa.edu) offers four degree programs, a Bachelor of Science in Nursing (B.S.N.), Master of Science in Nursing (M.S.N.), Doctor of Nursing Practice (D.N.P.), and Doctor of Philosophy (Ph.D.).

The School of Nursing (http://nursing.uthscsa.edu) has a unique role in nursing education related to its placement in the South Texas Region. The region has large underserved populations with different health care needs. Cardiovascular disease, diabetes, teen pregnancy, mental illness and other chronic conditions are prevalent. We have been designated by the United States Department of Education as a Hispanic Serving Institution.

Mission
We develop diverse nurse leaders to improve health and health care, through education, research, practice, and community engagement.

Vision
We make lives better by promoting health as an act of social justice.

Values
1. **Innovation:** We, the faculty, staff, and students of the UT Health School of Nursing, believe in delivering leading edge health care, education, research, and community service.
2. **Diversity and Inclusion:** We believe in fostering an inclusive environment as a foundation to make health care available to all.
3. **Ethics & Accountability:** We believe in honoring the dignity of others through the accountability of our actions.
4. **Advocacy:** We believe in promoting healthy lifestyles and access to health care for all populations.
5. **Synergy:** We believe in inter-professional cooperation to improve health outcomes for all.

Goals
- **Education:** Be the School of Nursing that students and faculty choose for its mission and vision, vibrant academic culture, innovative programs and service to community, state, and region.
- **Culture of Excellence:** Enhance the culture of excellence in the School of Nursing through innovative mentorship and meaningful recognition of the faculty, staff, and students.
- **Research:** Expand research programs of excellence and distinction in advancing promotion of human health and transformation of health care.
- **Health Care:** To be a health care provider of choice for Central and South Texas with a focus on patient centered care.
- **Community Engagement:** Foster a UT Health San Antonio community partnership that benefits the diverse communities we serve through education, practice and research to meet mutually identified health and health education needs.

The School of Nursing (http://catalog.uthscsa.edu/schoolofnursing/ %20http://nursing.uthscsa.edu) mission, values, and vision are published on the School of Nursing web site (http://nursing.uthscsa.edu/about/mission.aspx) and relates to all programs. The School of Nursing goals are incorporated into the strategic plan (http://nursing.uthscsa.edu/about/strategicPlan.aspx). Both are accessible to current and prospective students. The mission, vision and goals are each congruent with those of the Health Science Center (http://strategicplanning.uthscsa.edu). They are consistent with relevant professional standards and nursing guidelines to prepare students for beginning and advanced nursing practice.

Accreditation
The Health Science Center School of Nursing (http://nursing.uthscsa.edu)’s baccalaureate program is approved by the Texas Board of Nursing, P.O. Box 430, Austin, Texas 78767-0430, (512) 305-6818. The baccalaureate, master’s and DNP programs at the Health Science Center are accredited by the Commission on Collegiate Nursing Education, 655 K Street, NW, Suite 750, Washington, DC 20001. (202) 887-6791. The School of Nursing last on-site evaluation was April 2018 and was granted full accreditation through December 31, 2028 for its baccalaureate, master’s and DNP degree programs.

Commission on Collegiate Nursing Education (http:// www.aacn.nche.edu/Accreditation)
655 K Street, NW, Suite 750
Washington, D.C. 20001
(202) 887-6791

http://www.aacnnursing.org/CCNE

School of Nursing Policies and Procedures

School of Nursing Policies and Procedures

Policy on Criminal Background Checks
Applicants must submit and satisfactorily complete a designated criminal background check as a condition of admission. An offer of admission will not be final until the criminal background check(s) is received and deemed favorable. Admission may be denied or rescinded based on results of the background check. In addition selected agencies where students pursue clinical experiences, may require that students placed in their agencies pass an additional criminal background check before being allowed to practice in their facilities. Additional expenses incurred will be at the student’s expense.

Undergraduate Criminal Background Check
The Texas Board of Nursing (TBON) (http://www.bne.state.tx.us) conducts the background checks and has legally granted power to deny permission for a candidate to take the NCLEX-RN (https:// www.ncsbn.org/nclex.htm) examination if it is demonstrated that the individual has not demonstrated “good professional character.” The Board may refuse to:
- Approve persons to take the licensure examination.
- Issue or renew a license or certificate of registration to any individual who has been convicted of a felony, a misdemeanor involving moral turpitude, or engaged in conduct resulting in revocation of probation imposed pursuant to such conviction.

All nursing students must continue to show evidence of good professional character while enrolled in a nursing program.

Candidates with a positive background check will also be notified by TBON and asked to submit a petition for a "Declaratory Order." The petition will be reviewed by the TBON. Please contact the Office of Admissions and Student Services.

Continuing students who are charged or convicted of an offense while enrolled in the nursing program will be required to notify the Associate Dean for Undergraduate Studies at the time of the offense and to petition TBON for a declaratory order. The student will be removed from clinical courses while obtaining the Declaratory Order, and may need to take a Leave of Absence. Failure to report any new incidents following the initial background check to the School may potentially cause the student to be dismissed from the program. The Board investigates each incident based on its own information. Many of the factors used by the Board can be viewed online (http://www.bon.texas.gov/disciplinaryaction/discp-guide.html).

**Graduate Criminal Background Check**

The School of Nursing (http://nursing.uthscsa.edu) Office of Admissions and Student Services will designate an approved company to conduct the background checks for graduate students who are already licensed as a Registered Nurse. Results from a company other than those designated will not be accepted. Students and applicants must contact this designated company and comply with its instructions in authorizing and obtaining a background check. Applicants are responsible for payment of any fees charged for the certified criminal background check.

**Non-Degree Students Criminal Background Check**

Non-Degree students who wish to take a non-clinical course(s) offered at the School of Nursing (http://nursing.uthscsa.edu) must satisfy the Health Science Center criminal background check requirements. The School of Nursing (http://nursing.uthscsa.edu) Associate Dean for Admissions and Student Services will verify with appropriate entities on behalf of the student for the acceptable background checks.

**Urine Drug Screens**

Urine drug screens may be required by certain clinical agencies. Students will be notified by the Office for Academic Affairs if a urine drug screen is required. Any additional expenses that the clinical agency may incur will be at the student’s expense.

**Immunization and Health Insurance**

Prior to matriculation, all students are required to complete the immunizations requirements and submit evidence to the Student Health Clinic. All students must remain in compliance while enrolled. Students are not allowed in clinical settings if immunization documentation is not within compliance and the student may be withdrawn from clinical courses. For more information on immunizations see Health Science Center Student Health Clinic. See Student Services - Health Insurance (http://students.uthscsa.edu/studentlife/2013/03/health-insurance).

**Professional Liability Insurance**

Students enrolled in programs that involve direct patient care activities are required to purchase professional liability insurance through the university. Liability insurance purchased through the Health Science Center is applicable to the student role only. Nurse practitioner students are required to pay an additional insurance fee.

**Computer Requirement**

All courses in the School of Nursing have an online component or other requirements that necessitate the use of a computer. Students are required to have certain minimum computer competencies. Minimum competencies include basic familiarity with computers, use of Internet, word processing, email and presentation software. The official method of communication is via students’ Health Science Center “livemail” account.

All students admitted into the School of Nursing (http://nursing.uthscsa.edu) undergraduate program will be required to purchase a laptop computer with a privacy screen from the Health Science Center when entering the program. Windows-based and Apple platforms are available. The computer will be formatted with standard programs and online learning resources.

Graduate students are expected to have a computer that meets specifications for the School of Nursing.

Specifications can be found online (http://ims.uthscsa.edu/computer_networking/SOM_Flyer_0319AppleApproved.pdf).

The Microsoft Office Suite, which includes Word, Excel, PowerPoint, and Outlook, is available to students through the bookstore at a significant savings. The most up-to-date version of the suite is available for Windows and Mac. This software is required for all students.

**Financial Aid**

To determine eligibility for federal, state and private sources of financial aid, please visit The Office of Veterans' Services and Financial Aid (http://students.uthscsa.edu/financialaid).

**Scholarship and Stipends**

For School of Nursing (http://nursing.uthscsa.edu) Scholarships, undergraduate and graduate nursing students are encouraged to 1) submit a Free Application for Federal Student Aid Form (FAFSA) and 2) a School of Nursing Scholarship application (https://students.uthscsa.edu/financialaid/2013/04/scholarships), which must be completed every semester. Students can access scholarship applications by logging into My Student Center (https://students.uthscsa.edu) during March for summer and fall awards and October for spring awards. New students submit scholarship applications with their admission paperwork. The School of Nursing Scholarship Advisory Group reviews all applications and selects recipients based on criteria for each scholarship. Scholarship recipients are required to provide a thank you note for the donor and to attend a yearly reception.

The School of Nursing Office of Admissions and Student Services works collaboratively with The Office of Veterans’ Services and Financial Aid (VSFA) to facilitate identification of federal, state and private funding sources. Click here (http://students.uthscsa.edu/financialaid) to view...
services available through VSFA and the process for applying for financial aid.

Please be aware that a Free Application for Federal Student Aid (FAFSA) must be completed annually. Click here (http://www.fafsa.ed.gov) to apply for all federal/state grants and student loans. The Renewal FAFSA is available for those who applied the previous year. The school code for the FAFSA is 003659.

**Tuition**

For details about tuition and fees, please contact the Bursar’s Office (http://uthscsa.edu/business/bursar4students).

**Independent Study**

Students may design their own Independent Study course for one to three semester hours of credit. Guidelines for design and approval of Independent Study are available from the Academic Coordinator for the undergraduate or the graduate program in the Office for Academic Affairs in the School of Nursing (http://nursing.uthscsa.edu). The Committee on Undergraduate Studies or Committee on Graduate Studies must approve the Independent Study before a student can register for the course. Requests for approval of Independent Studies are due to the appropriate committee by April 15 for summer and fall semesters and October 15 for spring semesters.

**Full time/ Part Time Statuses**

Undergraduate students enrolled for a minimum of 12 semester credit hours (SCH) in the fall and spring semesters or 6 SCH in the summer are considered full-time students. Students enrolled in less than 12 SCH are classified as part-time.

Graduate students enrolled for a minimum of 9 semester credit hours (SCH) in the fall and spring semesters and 6 SCH in the summer, are considered full-time students. Students enrolled in less than 9 SCH in fall and spring or less than 6 SCH in the summer are classified as part-time.

Students may not change their program plan from part-time to full-time or vice versa without consultation with the Office for Academic Affairs. All requests for change will be based upon space available in the requested course(s), and availability of courses.

**Course Numbering**

Each course consists of a prefix that represents the discipline (NURS for Nursing) and a 4-digit number. The School of Nursing uses the following numbering system:

The first digit is the Level of course: 1=Freshman, 2=Sophomore, 3=Junior, 4=Senior, 5=Introductory Graduate, 6=Advanced Graduate, 7=Doctoral. The second digit is number of semester credit hours (0=variable semester credit hours). The third and fourth digits distinguish one course from another within the discipline.

**The Semester Credit Hour**

The unit measure for credit purposes is the semester credit hour (SCH). One semester credit hour of credit is given for each 15 clock hours of lecture and 45 clock hours of clinical/laboratory in the undergraduate program and 15 clock hours of lecture and 60 clock hours of clinical/laboratory in the graduate program.

**Adding and Dropping Courses**

Students are expected to pre-register for all course work. After the first day of classes and prior to census day student may add classes with the approval of the appropriate Associate Dean.

Dropping refers to the procedure by which students remove themselves from one or more of the courses in which they are enrolled while continuing in the remainder of their courses. A student who is enrolled in only one course must either withdraw or apply for a leave of absence if he/she intends to drop the course. Please refer to the Office of the University Registrar’s section of this catalog (p. 53).

**Repeating a Course**

Students cannot enroll in nursing courses for a grade, if the course has already been completed with a passing grade.

**Voluntary Withdrawal**

Withdrawal refers to the procedure by which students voluntarily remove themselves from all courses in which they are enrolled. Withdrawal from all courses constitutes withdrawal from the nursing program and university unless the student is granted a leave of absence. A student wishing to withdraw from one or all courses in the School of Nursing initiates the process through consultation with the Associate Dean for Undergraduate Studies or the Associate Dean for Graduate Studies. When approved, the student must obtain a drop slip for said course(s), and, if withdrawing from the program, complete the Student Clearance Form from the Office of the University Registrar (https://students.uthscsa.edu/registrar). Failure to clear campus appropriately will affect the students’ ability to obtain transcripts, be readmitted to the program in the future, or obtain financial support.

A student who completes a semester, but does not plan to continue in the School of Nursing during the next semester, must withdraw or apply for a leave of absence.

A student who discontinues class attendance in any course without completing the formal drop or withdrawal process will receive the grade they have earned for the course. See policies for administrative Leave of Absence (LOA) in the Health Science Center catalog. A student who has previously withdrawn is subject to the same admission requirements, procedures, and acceptance considerations that apply to first-time applicants.

**Procedures for Dropping a Course or Withdrawal**

All students who complete the formal withdrawal process through the Office of the University Registrar will be awarded the grade of W. Students who do not complete the formal withdrawal process will receive the letter grade which they earned.

The student discusses dropping with the clinical/course faculty. The student makes an appointment with the appropriate Associate Dean for Undergraduate or Graduate Studies through the Office for Academic Affairs to discuss the decision, explore options, and make necessary changes to the degree plan. The student will have to have an official drop form signed by the course coordinator/course faculty after the form has been provided and signed by the appropriate Associate Dean.

The Office for Academic Affairs will submit the completed official drop form to the Office of the University Registrar and will notify the Registrar.
and Financial Aid office of the change in status and change in the student’s graduation date.

**Leave of Absence**

Any student who is in good standing (passing all required courses with a 2.0 or above GPA in undergraduate program or 3.0 in the graduate program; no incomplete grades in a course, and no failures) may, under special circumstances, take a leave of absence. A leave of absence may be granted for a maximum period of one year.

Students who are experiencing special circumstances that hinder their studies or students who receive an “F” or a “W” in a required undergraduate course that is offered only once a year should make an appointment through the Office for Academic Affairs to discuss their issues with the appropriate Associate Dean.

If together the student and the academic administrator agree that a leave of absence is appropriate, the student will be sent to The Office of the University Registrar to obtain the required Student Clearance Form. The student will “clear campus.” Failure to clear campus appropriately will affect the students’ ability to obtain transcripts, be readmitted to the program in the future, or obtain financial support.

The student may return to school at any time during the year, but no later than one year from the time when the leave started. The student must notify the Office for Academic Affairs at least three months prior to returning to campus. Return to school will coincide with the beginning of a semester. Courses that had not been completed at the time of initiating the leave will have to be repeated in total. Students who do not return from leave within the one-year limit will be withdrawn from the nursing program and will have to apply for admission as a new student.

**Attendance**

The School of Nursing (http://nursing.uthscsa.edu) faculty believes that attendance at scheduled classes, examinations, clinical experiences, and clinical learning laboratory is crucial to meeting course and program objectives. Excused absences may be granted by the instructor in such cases as illness or personal emergency and are considered on an individual basis. Please see course syllabus for attendance requirement. Refer to the excused absence policy below for further clarification.

**Clinical Attendance**

The School of Nursing faculty expects that its students will recognize that they have entered a profession in which commitment to full participation in clinical experiences is an essential component as students are considered to be part of the nursing team. Therefore, regular attendance in clinical, laboratory and simulation experiences is mandatory.

Missed hours can prevent adequate development and assessment of the required knowledge, skills, attitudes and clinical judgment. Absence from clinical/lab/simulation jeopardizes the student’s ability to successfully meet the required clinical course outcomes and competencies.

Punctuality is expected in professional workplaces. Students are expected to arrive on time for clinical/lab/simulation experiences and stay for the entire time allotted for that clinical/lab/simulation experience. Important information affecting patient care is communicated to students at the start of clinical experiences. Therefore, tardiness for clinical/lab/simulation experiences jeopardizes the student’s ability to give safe nursing care.

**Learning Laboratory Attendance**

Learning Laboratory is considered clinical time. Attendance is essential and students are expected to review course syllabus regarding attendance requirement. Students arriving late for Learning Laboratory are not given extra time for skill practice or performance.

**Clinical Absences**

Absences from clinical experience are closely monitored by faculty and should occur only in rare circumstances. Clinical absences will be evaluated on an individual basis. If the student has any clinical absences during the semester, clinical may be made up through a plan developed by the clinical/lab instructor. However, the opportunity to make up absences may not be possible, depending on the length of the clinical rotation, the availability of the faculty and/or the agency to which the student is assigned and may result in inability of the student to meet course outcomes.

If it is determined by the faculty team that a student will be unable to meet course objectives due to clinical absences or if a pattern of absence develops or excessive absences exist, the appropriate course coordinator will refer the student to the appropriate Associate Dean to determine progression in the program.

**Excused Absences**

The student is responsible for providing satisfactory evidence to the instructor to substantiate the reason for absence. Among the reasons absences are considered excused by the School of Nursing are the following:

- Death or major illness in a student’s immediate family. Immediate family may include: mother, father, sister, brother, grandparents, spouse, child, spouse’s child, spouse’s parents, spouse’s grandparents, step-mother, step-father, step-sister, step-brother, step-grandparents, grandchild, step-grandchild, legal guardian, and others as deemed appropriate by the Dean or Dean’s designee.
- Illness of a dependent family member.
- Participation in legal proceedings or administrative procedures that require a student’s presence.
- Injury or illness that is too severe or contagious for the student to attend class or clinical. Immediate notification to the Associate Dean for Admissions and Student Services should be attempted via email as quickly as the student’s health condition allows.
- Injury or illness of three or more days. For injury or illness that requires a student to be absent from classes for three or more business days (to include classes on weekends), the student should obtain a medical confirmation note from her or his healthcare provider. The Student Health Clinic or an off-campus healthcare provider can provide a medical confirmation note only if those providers are directly involved in the care of the student. The medical confirmation note must contain the date and time of the illness and the provider’s confirmation of needed absence.
- Injury or illness less than three days. Faculty members may require confirmation of student injury or illness that is serious enough for a
student to be absent from class for a period less than three business days (to include classes on weekends). At the discretion of the faculty member and/or Associate Dean(s) standard, as outlined in the course syllabus, illness confirmation may be obtained by confirmation of a visit to a healthcare provider affirming date and time of visit.

- Students required to miss clinical experiences due to injury or illness may be required to receive clearance from a healthcare provider to perform the essential functions of the clinical if patient safety might be jeopardized or if it is perceived that participation in clinical might cause further harm to the student.
- Required Military Duties (http://catalog.uthscsa.edu/generalinformation/generalacademicpolicies/studentabsences/).
- Mandatory admission interviews for professional or graduate school which cannot be rescheduled.
- In accordance with Title IX of the Educational Amendments of 1972, the School of Nursing shall treat pregnancy (childbirth, false pregnancy, termination of pregnancy and recovery therefrom) and related conditions as a justification for an excused absence for so long a period as is deemed medically necessary by the student's healthcare provider. Requests for excused absence related to pregnancy should be directed to the Associate Dean for Admissions and Student Services; questions about Title IX should be directed to the University's Senior Director of Student Success and Title IX Director.

In addition to the above, there may also be extenuating circumstances where the dean or designee may provide a letter for the student to take to the instructor stating that the dean has verified the student’s absence as excused.

If the absence is excused, the instructor must either provide the student an opportunity to make up any quiz, exam or other work that contributes to the final grade or provide a satisfactory alternative by a date agreed upon by the student and instructor. If an instructor has a regularly scheduled make up exam, students are expected to attend unless they have a School approved excuse. The make-up work must be completed in a timeframe not to exceed 30 calendar days from the last day of the initial absence. Clinical experiences may not have the opportunity to be made up, but students will not be penalized for missed clinical time due to an excused absence.

The instructor is under no obligation to provide an opportunity for the student to make up work missed because of an unexcused absence. If the student is absent for excused reasons for an unreasonable amount of time during the semester, the dean or designee may consider giving the student a grade of W during the semester enrolled.

Whenever a student is absent for unknown reasons for an extended period of time, the instructor should initiate a check on the welfare of the student by reporting to the Associate Dean for Admissions and Student Services.

**Military Absences**

Under certain circumstances, a student who is required to participate in active military services is excused from scheduled classes or other required activities and will be allowed to complete an assignment or exam within a reasonable time after the absence. The excused absence is permitted only if the student will not miss more than 25% of the total number of class meetings or the contact hour equivalent (not including the final examination period) for the specific course or courses in which the student is enrolled at the beginning of the period of active military service.

Students expected to be absent from classes for active duty must obtain approval from the appropriate Associate Dean in order to take a Leave of Absence. All related procedures, including completion of a Student Clearance Form, must be followed.

**Incomplete Grades**

A student may be granted a grade of Incomplete, I, for a course when the student is unable to complete all course work within allotted semester time under certain special circumstances. The student wishing to petition for extended time to complete course requirements must request the extension, incomplete grade, from the faculty.

An Agreement for a Grade of Incomplete form must be signed by both the student and the course instructor and/or course coordinator. Forms are available in the Office for Academic Affairs. The faculty may consult with the appropriate Associate Dean regarding the effect of granting a grade of "I" on the student’s progression in the nursing program. Students have up to one calendar year to complete course work that is incomplete. However, if the incomplete course is a prerequisite to another course, progression in the program will be delayed. If the course is a required course, the student will not be allowed to progress in the program until the incomplete grade has been removed and a letter grade substituted. Once the coursework is completed, the faculty member must complete a Change of Grade Report Form. If coursework is not completed by the designated date, the course grade of I will be converted to an F.

**Intra-semester Report**

At the middle of each semester, the faculty reports the names of students doing work below the passing grade to the appropriate Associate Dean. Students may be referred to the Student Success Center and/or the Associate Dean for Admissions and Student Services for advising. Students who are failing will receive a midterm fail notice.

**Conduct and Discipline**

Students are responsible for knowing and observing the University’s procedures and regulations governing Student Conduct and Discipline and the Rules and Regulations of the Board of Regents. In addition to these regulations, standards of professional conduct may be set by each school of the Health Science Center.

Recognizing that professionalism is a critical nursing competency, the faculty member shall have the authority to administer appropriate consequences within the course if there is a perceived violation of the Code of Professional Conduct within the academic experience (e.g., lowered grade, course failure, suspension from clinical, etc.). If the violation occurs outside of the course, the alleged Code of Professional Conduct violation will be adjudicated by the Office of Admissions and Student Services.

The Associate Dean for Admissions & Student Services of each school shall have the responsibility for the administration of discipline in cases concerning scholastic dishonesty and student misconduct. The processes afforded a student subject to disciplinary sanctions are governed by Series 50101 of the Rules and Regulations of the Board of Regents of The University of Texas System and the Health Science Center’s Student Conduct and Discipline Policy.
Professional Conduct Guidelines
The goal of the School of Nursing (http://nursing.uthscsa.edu) is to create nursing professionals who can access and critically examine a reliable and extensive body of knowledge and apply it consistently to maximize the clinical benefit of patients. School of Nursing (http://nursing.uthscsa.edu) students are expected to demonstrate academic professionalism and honesty, and to maintain the highest standards of integrity according to the Board of Regents (http://www.utsystem.edu/sites/utsfiles/offices/board-of-regents/rules-regulations/50101.pdf) that embodies a spirit of mutual trust and intellectual honesty. The Health Science Center School of Nursing Code of Conduct Document has established that nursing students have certain rights and responsibilities, and serves as an affirmation that students are a party to the social trust shared by all in the university community.

The School of Nursing (http://nursing.uthscsa.edu) follows the recommendations of the American Nurses Association Code of Ethics for Nurses as well as the Texas Board of Nursing, Nurse Practice Act. Professional behaviors include application of the nursing process, providing care and counsel, or health teaching to persons experiencing alterations in health based on synthesis of knowledge and understanding of basic scientific principles (Texas Board of Nursing, Rules and Regulations Relating to Nurse Education Licensure and Practice, February, 2012).

A code of professional behavior cannot encompass all potential issues of conduct which may arise. Therefore, it is impossible to specify all behaviors deemed to be unprofessional. Students are expected to hold themselves and their peers to professional standards of behavior throughout their course of study. Included among these standards are five fundamental values of academic integrity including honesty, trust, fairness, respect and personal accountability. The principles in the code of professional conduct as outlined in the School of Nursing (http://nursing.uthscsa.edu) document signed by all students upon enrollment in the School of Nursing (http://nursing.uthscsa.edu) should be reinforced throughout the curriculum.

Professionalism
Principles of professionalism are not rules that specify behaviors, but guidelines to provide direction in identifying appropriate conduct. These principles include the safety and welfare of patients, competence in knowledge and skills, responsibility for consequences of actions, professional communication, confidentiality, and lifelong learning for maintenance of professional skills and judgments. Professionalism and professional ethics are terms that signify certain scholastic, interpersonal and behavioral expectations. Among the characteristics included in this context are the knowledge, competence, demeanor, attitude, appearance, mannerisms, integrity and morals displayed by the student to faculty, peers, patients, clients and colleagues in other health care professions. Students are expected to conduct themselves at all times in a professional manner and to exhibit characteristics of a professional student.

The American Nurses Association Code of Ethics for Nurses is offered online (http://nursingworld.org). The Rules and Regulations of the Texas State Board of Nursing are also provided online (https://www.bon.texas.gov/laws_and_rules_rules_and_regulations.asp), and the Regents Rules 50101 (http://www.utsystem.edu/sites/utsfiles/offices/board-of-regents/rules-regulations/50101.pdf) are all available online as well.

Students Rights and Responsibilities
Each individual student is responsible for their behavior and is expected to maintain standards of academic honesty. Students share the responsibility with faculty for creating an environment that supports academic honesty and principles of professionalism. Proper relationships between faculty and students are fundamental to the School of Nursing (http://nursing.uthscsa.edu) function and this relationship should be built on mutual respect and understanding together with shared dedication to the education process. It is a fundamental belief that each student is worthy of trust and each student has the right to live in an academic environment free of injustice caused by dishonesty. While students have an obligation to assist their fellow students in meeting the common goals of their education, students have an equal obligation to maintain the highest standards of personal integrity.


Faculty Responsibilities
It is the responsibility of the faculty to specify in their syllabi the limits of acceptable resources that may be used for the purposes of the course. It is the responsibility of students to honor and adhere to those limits. The faculty should establish with the students what is considered to be academic dishonesty. Encouragement of group work varies greatly. Faculty shall convey to their students the acceptable level of individual versus collaborative work. Faculty, students, and administrators share the responsibility for creating an environment that encourages academic honesty.

Social Media Guidelines
The purpose of this policy is to promote the safety and privacy of students, faculty, staff, patients, and visitors. Students and faculty members must comply with the Health Insurance Portability and Accountability Act (HIPAA) and the Family Educational Rights and Privacy Act (FERPA) when using social media. These guidelines are informed by the American Nurses Association (http://www.nursingworld.org) Principles for Social Networking and the Nurse.

No student may post, release, or otherwise disclose photos, identifiable case descriptions, images, or records related to the educational, clinical, or research activities of the school via social networking sites (e.g., MySpace, Facebook, Twitter, YouTube, etc.), non-educational blogs, message boards, Internet websites, personal e-mail, or anything other than standard professional means of query and/or dissemination.

No student may post statements about the School of Nursing community (employees, staff, students, and visitors) that are defamatory, obscene, threatening or harassing.

Failure to comply with this policy may be a violation of legal, professional, and/or ethical obligations. Violation will result in disciplinary action by
the School of Nursing up to and including dismissal from the professional nursing program.

The School of Nursing (http://nursing.uthscsa.edu) assumes no duty to monitor Internet activity but reserves the right to take appropriate action in accordance with this policy.

Netiquette
The School of Nursing has developed Netiquette Guidelines for on-line courses which align with the social media policy. Please see the student handbook for the School of Nursing Netiquette Guidelines.

- Think twice before posting
  - Privacy does not exist in the world of social media. Before each posting, students are encouraged to consider how the item may reflect both on the author of the post and the School of Nursing. Something that would not be said in person should not be posted in social media. Imagine your posting on the front page of the local newspaper.
- Strive for accuracy
  - Students should be certain that anything they post on a social media site is factual. The posting should be reviewed for grammatical and spelling errors, especially when posting on behalf of the School of Nursing.
- Be respectful
  - Posted responses and comments should be respectful and considerate.
- Photography
  - Students should be aware that photographs posted on social media sites can easily be accessed by visitors to those sites. Posting unauthorized photos on a website or social media network site can result in disciplinary action.
- Rules
  - It is important to review the terms of service, privacy settings, and other policies of the social media network before use.

Scholastic Dishonesty
Nursing students are expected to maintain an environment of academic integrity. Actions involving scholastic dishonesty violate the professional code of ethics and are disruptive to the academic environment. Students found guilty of scholastic dishonesty including but not limited to plagiarism, falsification, sharing exam items, and misrepresentation violate the professional code of ethics and are subject to disciplinary action, including dismissal from the school.

Both professional misconduct and scholastic dishonesty are governed by the guidelines contained in the procedures and regulations governing Student Conduct and Discipline (http://catalog.uthscsa.edu/generalinformation/institutionalpolicies/studentconductanddisciplinepolicy) of the Health Science Center (http://www.uthscsa.edu) contained in this Catalog. Any nursing student who fails to demonstrate to the faculty the intellectual, ethical, or behavioral attributes necessary for a member of the nursing profession is subject to disciplinary action, including dismissal.

Graduation
Official commencement ceremonies are held each year in December and May. Graduates may not participate in commencement prior to completion of their program. Official School of Nursing (http://nursing.uthscsa.edu) graduation invitations are ordered at the Bookstore (http://uthscsa.bncollege.com/webapp/wcs/stores/servlet) on the Health Science Center’s (http://www.uthscsa.edu) Long campus.

Graduates of the Ph.D. program are hooded at the Graduate School of Biomedical Sciences commencement in May. Students are invited by the School of Nursing to attend and be recognized at the School of Nursing commencement.

Commencement is considered an important event which is steeped in tradition; therefore, we request graduates to adhere to the academic ceremonies protocol.

Student Concerns

Academic Appeals and Grievances
Student academic appeals and grievances are handled through established policies and procedures for the School of Nursing (http://nursing.uthscsa.edu) as outlined in the General Academic Policies (http://catalog.uthscsa.edu/generalinformation/generalacademicpolicies/grievances) section of this Catalog.

The Associate Dean for Admissions and Student Services is available to explain, discuss, and facilitate this process with students and refer as appropriate to the appropriate Associate Dean. This office also deals with issues directly related to other student life concerns, including, governance, mentoring, counseling and resource needs, Americans with Disabilities Act (ADA), Equal Employment Opportunity Coordinator (EEOC) and concerns related to harassment, threat, or violence.

Procedure for Academic Review

Section I: Purpose of Procedure
The purpose of Academic Review is to provide the student who has a concern about grades with the opportunity to pursue the concern through administrative channels if initial discussions with the faculty member/s who assign the grades are not perceived as fair or equitable. A grievance is an accusation or complaint about a grade or unfair action regarding academic achievement in the nursing program. The student has the right to grieve a grade or unfair action if the student's perception is that the grade received was awarded capriciously, arbitrarily, or prejudicially. The student is required to provide a rationale explaining his or her perception at this time.

A student may only grieve the final grade for the course. For individual assignments, students may review the procedure for requesting a second reviewer on graded assignments.

The student may appeal the same grade only once. From the time the grade is released, the student has 10 business days to initiate Step 1 of the grievance procedures. A grievance is not the same as a request for a second reader of a graded paper. Confidentiality is essential for all academic review/grievance procedures. Students may seek counsel or advice concerning the academic review process from the Associate Dean for Admissions and Student Services.

Section II: Procedure to be followed
Prior to initiation of an academic review or grievance, the student must contact the faculty involved to discuss the concern. If resolution is not achieved, the student may pursue an academic review or grievance.
Grade Appeal Process

Step 1
1. A written petition must be submitted by the student to the faculty of the class. This petition should contain:
   a. name of student
   b. course
   c. grade which is being challenged
   d. dates student received grade
   e. name of faculty member(s) involved
   f. dates student met with the faculty
   g. student's reason for grieving the grade and a brief statement of the student's concerns
   h. evidence of how the grade was awarded arbitrarily, capriciously, or prejudicially.
2. Within seven business days (unless there are special circumstances, such as progression in the program, that require more rapid action), the faculty will respond to the student in writing with a decision. For the purpose of this grades appeals process, business days are established by the Health Science Center.
3. The student should retain a copy of the documents submitted for his or her records.
4. If the student concern is not resolved by the faculty in charge of the course then the grievance moves on to Step 2.

Step 2
1. A written petition will be submitted by the student to the Associate Dean for Admissions and Student Services who will engage the appropriate Associate Dean (Undergraduate Studies or Graduate Studies).
2. The petition should contain the same information included in Step 1.
3. The appropriate Associate Dean will review the grievance.
4. An informal hearing with the student filing the grievance may be established by the Health Science Center.
5. Within seven business days (unless there are special circumstances, such as progression in the program, that require more rapid action), the appropriate Associate Dean will assign a faculty member who is familiar with the course to serve as second reader.
6. If the student is not satisfied with the decision, the grievance may proceed to Step 3.

Step 3
1. The written petition, including the same information as listed in Step 1, will be submitted by the student to the Associate Dean for Admissions and Student Services who will brief and forward the petition to the Dean of the School of Nursing.
2. Information supporting the decision in Step 2 should also be forwarded to the Dean by the Associate Dean for Admissions and Student Services. This petition should contain the nature of the problem as stated in Step 1. A statement that an attempt was made to resolve the issue directly with both the faculty and/or the appropriate Associate Dean must be included.
3. The student should keep a copy of the documents submitted for his or her record.
4. The Dean may convene an impartial (e.g.: faculty who are outside the course or the department and a student) Grades Appeals Committee (GAC), which shall serve in an advisory capacity to the Dean. The manner of appointments and the number of members on the GAC shall be determined within the School of Nursing. The Chairperson of the GAC shall be appointed by the Dean. A decision will be made within seven business days unless there are special circumstances, such as progression in the program, that require more rapid action. The Chairperson of the GAC will make a recommendation to the Dean. The Dean will respond to the student in writing with a decision. A copy of the document stating the recommended decision will be sent to the faculty in charge of the course and the appropriate Office of Academic Affairs staff member(s).
   • The decision of the GAC will be directed specifically to the charge (grade is indicative of the student's achievement or the grade is not indicative of the student's achievement). A rationale will be provided. If the GAC recommends reconsideration of the grade, the faculty member will implement the overturned decision within seven business days unless there are special circumstances, such as progression in the program, that require more rapid action.
   • A written report of the review is provided to the Associate Dean for Admissions and Student Services following the recommendation. The written record will be maintained in compliance with the records retention policy.
   • The timeline for meetings of the GAC will be conducted under the Health Science Center regular hours of operations. Under unusual circumstances deadlines may be extended.

Procedure for Second Readers of Papers and/or Projects
If a student disagrees with the grade given on a paper or project, he/she must discuss this with the faculty member who graded the paper. If an agreement is not reached, the following procedure will be followed to request a second reader.

1. The student must submit a written petition for a second reader to the faculty member in charge of the course no later than seven business days after receiving the grade. The petition should state which portions of the criteria are being challenged.
2. The student must also submit, to the faculty member in charge of the course, an unmarked and unaltered copy of the original paper. The student's name will be removed from the paper to allow for a blind review.
3. Through an impartial process, the faculty member in charge of the course will assign a faculty member, who is familiar with the course level and content, to serve as second reader.
4. The second reader's evaluation will be returned to the original instructor for her/his consideration. The grade is reviewed by the second reader and faculty responsible for the course with the original faculty member assigning a final grade.
5. A request for a second reading may result in a final grade that is the same, higher, or lower than the first grade.

Non Academic Appeals and Grievances
Student appeals and grievances are handled through established policies and procedures for the School of Nursing (http://nursing.uthscsa.edu) as outlined in the General Information section of this Catalog. The Associate Dean of Admissions and Student Services is available to explain, discuss,
and facilitate this process with students at any point in the process as well as to deal directly with any other student issues, including student life, governance, mentoring, counseling and resource needs, ADA, EEOC, and concerns related to harassment, threat, or violence.

**Patient Safety**

The nature of clinical nursing courses is such that students are involved in the direct or indirect delivery of patient care services. The primary purpose of any course is to provide education for students. However, when direct patient care is involved in the learning experience, the safety and well-being of patients are of paramount concern. Within the structure of nursing clinical courses, students are given the opportunity to demonstrate increasing independence and competence in providing nursing care as they progress through the program.

Students are expected to demonstrate achievement of clinical objectives by the end of a clinical course. If, in the instructor's professional judgment, a student is consistently unable to provide safe nursing care to patients and cannot remedy the deficit in the given clinical time, the student will receive a grade of F for the course. Faculty, or staff in the clinical agency, has the right to remove a student from the clinical area at any time for cause.

**CPR Requirements**

Students are required to maintain American Heart Association Health Care Provider Basic Life Support certification in order to participate in clinical experiences. Students who do not have a current American Heart Association Health Care Provider Basic Life Support certification will not be allowed to participate in clinical experiences.

**Clinical Sites**

All students are expected to be prepared to provide nursing care for the patient(s) to whom they are assigned in each clinical activity. Students are expected to complete any other assignments that constitute preparation for activities in the clinical environment. The faculty has the right and an obligation to remove a student from a clinical setting/agency if the student is not prepared. Students assume responsibility and are liable for their own actions. Students also are responsible for maintaining the confidentiality of all forms of patient information.

Students should be in the clinical agency only during scheduled times. The student's faculty and the agency personnel must consent to all other visits. Students must obtain prior approval from their clinical instructor if they plan to contact any agency personnel. If the student is already assigned to an agency, and the purpose for the contact differs from the clinical assignment, clearance must also be obtained from the clinical instructor. Faculty assumes responsibility for the assignment in the clinical agency or setting.

Students are expected to achieve the clinical objectives within the allotted time. In order to accomplish objectives, students are expected to attend every clinical session in its entirety. Failure to do this will jeopardize the student's progression in the course. Classes and clinical practicum experiences may be held during the day or evening hours or on weekends. The time of day for class and clinical offerings varies from semester to semester and from course to course. Thus, a student may expect to attend a class or clinical practicum during the evening hours or weekend at some point during their program of study.

Any additional expenses that the clinical agency may incur to include but not limited to drug screening, background checks, ID badges, etc., will be at the student's expense.

**Clinical Passport**

Undergraduate Students are required to maintain a clinical passport and have this on their person at all times while in the clinical setting.

**Transportation**

Students must provide their own transportation to the various agencies for clinical experience. Parking fees associated with clinical practice are the responsibility of the student.

**Learning Laboratory and Center for Simulation Innovation**

The Nursing Learning Laboratory and Center for Simulation Innovation was designed as a specific area where clinical competence and associated psychomotor skills are developed within the curriculum. Varied low, medium and high fidelity manikins are programmed to mimic human reactions to health care interventions; task trainers and health care equipment are used by students to begin to learn how nurses care for patients and to develop confidence that will facilitate learning in the authentic clinical environment. Attendances in Learning Laboratory or Center for Simulation Innovation activities are considered clinical time. Learning is facilitated when students actively participate in the activities that have been carefully constructed for each laboratory period to promote acquisition of new competencies and continued advancement of competence. There are typically readings, study guides or other activities that students are expected to complete prior to arriving in the lab so that they are fully prepared to extract maximum value from the learning experience.

Students may gain extra practice in the laboratory outside of assigned laboratory periods. The course faculty, Simulation Specialist and graduate assistants are available to help students. They will monitor practice activities and demonstrate skills. They all collaborate to develop learning activities that are best suited to amplify student learning in the simulated environment.

The following requirements are designed to help students maximize the benefits of using this environment.

1. Students may only practice those nursing procedures that they have previously been taught during regular Learning Lab classes.
2. Graduate students, undergraduate students, and faculty may schedule practice labs with the Manager of the Learning Laboratory and Center for Simulation Innovation or her/his designees.
3. Scheduling of sessions is dependent upon availability of space and supplies.
4. In the interest of safety for all students, practice of invasive procedures requiring needles, syringes, and intravenous supplies must be supervised by a faculty member or one of the Simulation Specialists. Arrangements for such supervision are the student’s responsibility.
5. Practice sessions not requiring supervision must also be scheduled with Learning Laboratory and Center for Simulation Innovation personnel.
6. In light of the high volume of student activities scheduled in this environment, make-up labs for scheduled lab sessions are not
offered, unless specifically scheduled by the faculty who will teach extra labs. Therefore, attendance is crucial.

Equipment, literature, audiovisual, and practice materials may be used in the Learning Lab, and many of these items may be checked out for use in other areas. Items to be checked out should be reserved in advance with the staff. The borrower is responsible for items on loan. The Learning Lab staff should be consulted for instructions on use, and they should be made aware of equipment not operating properly. Extra books and other nonessential items should be stored before the student enters the Lab. Lockers are available in the laboratory area. If equipment or supplies are damaged or lost the student is responsible for replacement cost.

My Student Center

My Student Center (https://students.uthscsa.edu) is a one stop center to provide services and information to assist students in achieving their academic goals. My Student Center allows students to review policies, procedures, and student handbooks, enroll in classes, view their bill, check financial aid status, make payments, view their holds, change address, enrollment verification and more all from a single anchor page.

Non-degree/Special Student Status

Non-degree/special student status may be considered under special circumstances and on a space available basis to an individual who wishes to enroll in a course(s) in the School of Nursing (http://nursing.uthscsa.edu) without entering a degree program. Students must communicate in writing their desire to enroll as a non-degree seeking student to the School of Nursing Associate Dean for Admissions and Student Services.

- Students must receive approval of the Associate Dean for Admissions and Student Services. If approval is granted, a non-degree seeking application must be submitted.
- Availability for non-degree seeking status enrollment is provided only on a space-available circumstance as determined by current enrollment targets.
- A student may register as a non-degree student for a specified number of credit hours at the discretion of the Associate Dean for Admissions and Student Services.
- Non-degree seeking students who wish to pursue degree seeking status must formally apply for admission through NursingCAS.
- The application deadline for fall is March 1 and for spring is August 1.
- Non-degree applicants are not guaranteed admissions as degree seeking students have priority for enrollment in courses.

Courses taken as a non-degree seeking student will be evaluated by the appropriate Associate Dean for transfer credit. Please contact the Office of Admissions and Student Services (http://nursing.uthscsa.edu/students) for further details about the process. The School of Nursing (http://nursing.uthscsa.edu) and the Office of the University Registrar work collaboratively to process non-degree/special student applications. Students do not have to register consecutively for classes each semester and may skip a semester without penalty. The grading policies for non-degree students are the same as those for degree students and will be included in the student’s transcript. Courses and grades taken as a non-degree student will be included in the computation of the cumulative GPA of the student admitted to a School of Nursing (http://nursing.uthscsa.edu) undergraduate or graduate program.

International non-degree seeking students should follow the Health Science Center international visitor policy.

Bachelor of Science in Nursing (B.S.N.)

The Baccalaureate Nursing program is an upper division program leading to a Bachelor of Science in Nursing (B.S.N.) degree. Candidates for the program take their first two (i.e. freshman and sophomore) years of general education credits at any accredited college of their choice.

There are two tracks of study in the B.S.N. program:

1. Accelerated B.S.N. Track (http://nursing.uthscsa.edu/programs/ugrad/Tracks/accelerated.aspx) - designed to meet the learning needs of the individual who has completed a prior BS or higher degree in a field other than nursing. The Accelerated Track will require 15 months of continuous full time intensive study. The faculty recommends that students in this track do not work while in the program. Candidates will be admitted to this track once per year in May.

2. Traditional B.S.N. Track (http://nursing.uthscsa.edu/programs/ugrad/Tracks/traditional.aspx) - an upper division completion track for individuals completing their first baccalaureate degree and who are not registered nurses. Students will complete this program in 2 years of full-time during fall and spring semesters with summers off. Candidates are admitted in both the fall and spring semester of each year.

Transfer between tracks is not permitted.

B.S.N. Admissions Requirements

Degree: Bachelor of Science in Nursing (B.S.N.):

Traditional

Track. Length: Completion of the track generally requires two years (four semesters) of full-time study.

General Admission Requirements

To be considered for admission to the Traditional Bachelor of Science (B.S.N.) Track the following factors are required:

- Online application submitted via NursingCAS (http://nursingcas.org).
- View a video overview (http://www.screencast.com/t/TYbelPyAD) on completing NursingCAS application.
- NursingCAS application service fee
- Complete at least 51 of the 60 semester credit hours of required prerequisite courses. Students must complete all required math and science prerequisite courses at the time of application. For a list of required courses, click here (http://nursing.uthscsa.edu/students/eqvTables.asp). If accepted, the remaining 9 hours of non-math/science required courses (example: Introduction to Psychology, Growth & Development, and Introduction to Sociology) must be completed prior to the first day of new student orientation.
- Submit official transcript(s) from each post-secondary institution attended to NursingCAS. International transcripts must be evaluated by an accredited foreign credential service. *For more information regarding international applicant requirements, click here (http://nursing.uthscsa.edu/students/intApplicants.asp).
- Minimum 2.5 cumulative GPA
- Minimum 3.0 math/science GPA
• Take the TEAs Exam with a minimum cut-off score of 65% to be eligible for admission. A reading score of 69% or below is used to identify students at risk. Students at risk will be required to complete the Weaver intensive reading program. (For information regarding the TEAs exam content, click here (http://www.atitesting.com).)
• Undergraduate applicants who meet minimum admission requirements will be reviewed through a holistic process, in which additional factors will be taken into consideration. A broad range of factors reflecting the applicant’s academic readiness, contribution to the incoming class, and potential for success both in school and later as a professional will be considered. Selected applicants will be invited to interview and submit a writing sample.
• Official copy of Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) score, if international applicant. TOEFL and IELTS scores can be no more than two (2) years old. A minimum TOEFL score of 550 is required on the paper examination; minimum 250 on the computer-based examination; or, minimum 68 on the internet based examination. A minimum IELTS score of 6.5 is required. TOEFL school code: 3383
• CPR certification — BLS for Healthcare Providers through American Heart Association
• Current Required Immunizations (http://nursing.uthscsa.edu/shc/hc_immunization.asp)
• Proof of Current Health Insurance Coverage (http://students.uthscsa.edu/studentlife/2013/03/health-insurance)
• Clear Criminal Background Check
• Basic Computer Skills
• School of Nursing application fee effective Spring 2017

Application Deadline: Deadline for fall entrance is February 1. Deadline for spring entrance is August 1.

Pre-Matriculation Seat Fee Deposit: Once offered admission payment of $500 pre-matriculation seat fee deposit is required to reserve a seat in the class. $250 of the seat fee will be credited to tuition following the official census date of the beginning semester. $250 of the seat fee is a School of Nursing processing fee and is non-refundable. Failure to enroll will result in forfeiture of the entire fee.

Start Term: Fall or Spring

Contact:
Office of Admissions
School of Nursing
UT Health Science Center San Antonio
Floyd Curl Drive, MSC 7945
San Antonio, Texas 78229-3900
Phone: 210-567-0341
Toll Free: 877-235-0341
FAX 210-567-6189
http://nursing.uthscsa.edu/

Degree: Bachelor of Science in Nursing (B.S.N.): Accelerated
Track Length: Completion of the track requires fifteen months of full-time study.

General Admission Requirements
To be considered for admission to the Accelerated Bachelor of Science (B.S.N.) Track the following factors are required:
• Online application submitted via NursingCAS (http://nursingcas.org). View a video overview (http://www.screencast.com/t/TYbelPyAD) on completing NursingCAS application.
• NursingCAS application service fee
• Hold or attain a non-nursing baccalaureate degree from an accredited institution prior to the start of the nursing program
• Complete at least 51 of the 60 semester credit hours of required prerequisite courses. Students must complete all required math and science prerequisite courses at the time of application. For a list of required courses, click here (http://nursing.uthscsa.edu/students/eqvTables.asp). If accepted, the remaining non-math/science required courses (example: Introduction to Psychology, Growth & Development, and Introduction to Sociology) must be completed prior to the first day of new student orientation.
• Submit official transcript(s) from each post-secondary institution attended to NursingCAS. International transcripts must be evaluated by an accredited foreign credential service. *For more information regarding international applicant requirements, click here (http://nursing.uthscsa.edu/students/intApplicants.asp).
• Minimum 2.5 cumulative GPA
• Minimum 3.0 math/science GPA
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• Take the TEAs Exam with a minimum cut-off score of 65% to be eligible for admission. A reading score of 69% or below is used to identify students at risk. Students at risk will be required to complete the Weaver intensive reading program. (For information regarding the TEAs exam content, click here (http://www.atitesting.com).)
• Undergraduate applicants who meet minimum admission requirements will be reviewed through a holistic process, in which additional factors will be taken into consideration. A broad range of factors reflecting the applicant’s academic readiness, contribution to the incoming class, and potential for success both in school and later as a professional will be considered. Selected applicants will be invited to interview and submit a writing sample.
• Official copy of Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) score, if international applicant. TOEFL and IELTS scores can be no more than two (2) years old. A minimum TOEFL score of 550 is required on the paper examination; minimum 250 on the computer-based examination; or, minimum 68 on the internet based examination. A minimum IELTS score of 6.5 is required. TOEFL school code: 3383
• CPR certification — BLS for Healthcare Providers through American Heart Association
• Current Required Immunizations (http://nursing.uthscsa.edu/shc/hc_immunization.asp)
• Proof of Current Health Insurance Coverage (http://students.uthscsa.edu/studentlife/2013/03/health-insurance)
• Clear Criminal Background Check
• Basic Computer Skills
• School of Nursing application fee

Application Deadline: Deadline for May entrance is December 15. (Accelerated B.S.N. applications are accepted only once each year)

Pre-Matriculation Seat Fee Deposit: Once offered admission payment of $500 pre-matriculation seat fee deposit is required to reserve a seat in the class. $250 of the seat fee will be credited to tuition following the official census date of the beginning semester. $250 of the seat fee is a School of Nursing processing fee and is non-refundable. Failure to enroll will result in forfeiture of the entire fee.
Contact:
Office of Admissions
School of Nursing
UT Health Science Center San Antonio
7703 Floyd Curl Drive, MSC 7945
San Antonio, Texas 78229-3900
Phone: 210-567-0341
Toll Free: 877-235-0341
FAX 210-567-6189

http://nursing.uthscsa.edu/

B.S.N. Degree Requirements and Graduation

Requirements
To be eligible for graduation, a student must have a 2.0 grade point average for the required 60 semester hours of upper-division course work. At least 30 of the last 33 semester hours of the nursing major must be completed at the School of Nursing (http://nursing.uthscsa.edu). All coursework must be completed within a four year time limit.

Procedures for Degree Candidates
A candidate for a degree must (1) register in the semester in which the degree is to be received and (2) file an Application for Graduation Form degree with the Office of the University Registrar (http://students.uthscsa.edu/registrar) during the semester prior to the term in which the degree is to be granted.

Degrees will be conferred only on official dates publicly announced. Commencement ceremonies are held in December and May of each year.

Graduation with Honors
Students whose upper-division grade point average is above 3.5 will be awarded the degree with honors. The honors designation is noted on the diploma and the transcript, and honors students receive special recognition at graduation ceremonies. To receive these honors, students must complete at least 30 semester credit hours in residence.

Honors designations are based on the following scale:

- 3.5–3.69 Cum Laude
- 3.7–3.89 Magna Cum Laude
- 3.9–4.0 Summa Cum Laude

Registration as a Professional Nurse
A student seeking registration as a professional nurse must take and pass the National Council Licensure Examination for Registered Nurses (NCLEX-RN) (http://www.ncsbn.org/nclex.htm) administered by the Board of Nursing for the State of Texas (http://www.bne.state.tx.us). The Board may refuse to approve persons to take the licensure examination, may refuse to issue or renew a license or certificate of registration, or may refuse to issue a temporary permit to any individual who has been arrested for anything other than a minor traffic violation.

As of 1996, an individual applying for the NCLEX-RN (http://www.ncsbn.org/nclex.htm) examination must answer the questions listed below.

1. Have you ever been denied licensure by a licensing/certifying authority in any country, state, or province?
2. Have you ever had disciplinary action taken against you by any licensing/certifying authority in any country, state, or province?
3. Have you ever been convicted of a crime other than minor traffic violations?
4. Have you been diagnosed with or treated or hospitalized in the past five (5) years for schizophrenia or other psychotic disorders, bipolar disorder, paranoid personality disorder, antisocial personality disorder, or borderline personality disorder? (You may answer “no” if you have completed and/or are in compliance with TPAPN, Texas Peer Assistance Program for Nurses (http://www.texasnurses.org/?page=TPAPN), for mental illness.)
5. Have you been addicted to or treated for the use of alcohol or any other drug within the past five (5) years? (You may answer “no” if you have completed and/or are in compliance with TPAPN for substance abuse.)
6. Have you ever been issued any order concerning your eligibility for examination or licensure by this Board?
7. If the answer to any of these questions is “yes,” the student must contact the Texas Board of Nursing (http://bon.texas.gov).

The student will receive information about Initial Licensure and instructions about FBI background checks through the School of Nursing.

All 120 hours for the degree must be completed before the student is eligible to take the NCLEX-RN (http://www.ncsbn.org/nclex.htm).

A student planning to take the NCLEX-RN in another state must obtain information regarding procedure from the agency responsible for professional nurse registration in that state.

Registration

Entering students must register and pay tuition and fees by the official dates listed in the Academic Calendar (http://students.uthscsa.edu/registrar/2013/04/academic-calendar) provided by the Office of the University Registrar. All students must register for courses every semester, excluding summer, to be considered continuously enrolled. Students are expected to pre-register during stated Health Science Center required times. Students may register up to the Official first class day without late fees or penalties. Please refer to General Admission Requirements for the list of materials (and related policies) that must be received prior to registration. Those who do not register in the School of Nursing for three consecutive terms are considered to have withdrawn and their School of Nursing records are deactivated. Deactivated students may not register for courses, take examinations, submit Application for Degree or Degree Plan forms, or otherwise participate in the University community and the School of Nursing. Students must re-apply for admission.

The procedure for registration can be found on the Office of the University Registrar (http://students.uthscsa.edu/registrar) website.

Degree Requirements

Students are responsible for knowing degree requirements and for enrolling in courses that fit their degree programs. Students are likewise responsible for knowing the School of Nursing (http://nursing.uthscsa.edu) program regulations with regard to the standard of work required for continuance and eligibility for graduation.
B.S.N. Curriculum and Plans of Study

The undergraduate nursing curriculum is completed in two phases, the first of which is the 60 semester hours of basic liberal arts required for admission to the School of Nursing (http://nursing.uthscsa.edu) (Pre-nursing Course Requirements).

The second phase encompasses the major in nursing and is presented in the junior and senior years. The curriculum includes 60 semester hours of upper-division nursing courses at the School of Nursing. Taken in either the Traditional Track or Accelerated Track, these courses are designed to prepare the baccalaureate nurse for practice in a variety of settings and specialties.

Students may complete the 60 hours of required nursing courses through the Traditional Track or the Accelerated Track. The Traditional Track is designed to be completed in 2 years of full-time study fall and spring term. All coursework must be completed within a four year time limit. The Accelerated track is designed to be completed in 15 months full-time. The School of Nursing reserves the right to revise curriculum to remain current with national nursing practice standards.

Traditional B.S.N.

The Traditional B.S.N. track is designed for individuals entering the School of Nursing without prior nursing knowledge, experience, or skills. Completion of the track generally requires two years (four semesters) of full-time study.

*Please note that the contact hours for each course are notated by Cont in each plan of study.

Traditional B.S.N. Track Plan -(Full-Time Study) Semester 5

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Total Credit Hours: 11.0  3.0  1.0  345.0  15.0

Semester 6 Traditional

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### Semester 7 Traditional

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Total Credit Hours: 8.0 8.0 0.0 480.0 16.0

### Semester 8 Traditional

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Total Credit Hours: 6.0 9.0 0.0 495.0 15.0

### Accelerated B.S.N.

The Accelerated B.S.N. track is designed for individuals who hold a baccalaureate degree in a field other than nursing. Completion of the track requires 15 months of full-time study. The program may only be undertaken on a full-time basis. The SON faculty recommends that students not attempt outside employment during their studies due to the intensive nature of studies.

#### Accelerated B.S.N. Track Plan (Full-Time Study)

#### Semester 5 Accelerated

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<tr>
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### Semester 7 Accelerated

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### Semester 8 Accelerated
Time Limit
Undergraduate students must successfully complete all coursework toward the degree within four years of the date of initial enrollment in the program.

B.S.N. Program Outcomes
At the completion of the baccalaureate program the student will demonstrate the following:

1. Incorporate knowledge, skills, and attitudes from the liberal arts and sciences in professional nursing education and practice.
2. Apply knowledge and skills of organizational and systems leadership, quality improvement and patient safety in promoting safe, high-quality care for diverse patients across healthcare systems and environments.
3. Analyze and apply evidence from research and other information sources as a basis for nursing practice.
4. Incorporate knowledge and skills in using information systems and a range of patient-care technologies to facilitate delivery of quality patient care.
5. Advocate for financial and regulatory healthcare policies, processes, and environments that improve the nature and functioning of the healthcare delivery system and nursing practice.
6. Collaborate and communicate effectively with healthcare professionals to promote positive working relationships, improve patient health outcomes, and deliver quality, safe patient care.
7. Promote individual and population health by assessing factors that influence individual and population health and apply principles and culturally appropriate health promotion and disease-prevention strategies. Demonstrate consistent application of the core values of the discipline of nursing and the professional standards of moral, ethical, and legal conduct.
8. Demonstrate consistent application of the core values of the discipline of nursing and the professional standards of moral, ethical, and legal conduct.
9. Integrate the knowledge, skills, and attitudes expected of baccalaureate prepared nurses by providing professional nursing care to diverse patients and populations across the lifespan, healthcare settings, and healthcare environments.

B.S.N. Program Policies
Assessment Technologies Institute (ATI)
The faculty of the School of Nursing has adopted the comprehensive program developed by Assessment Technologies Institute, LLC (ATI) (http://www.atitesting.com) as an assessment of student learning and preparation for success on the NCLEX-RN (https://www.ncsbn.org/nclex.htm) licensing examination. The ATI program is initiated during the application process for incoming students when the TEAS (Test of Essential Academic Skills (https://www.atitesting.com/teas/teas-exam)) is administered and continues with learning assessments used throughout the program. Purchase of the ATI materials at the beginning of the program is mandatory. Completion of all ATI materials/exams, as designated in each course syllabus falling within a given semester, is required. In addition, students are required to purchase supplemental resource products during the senior year. The learning materials are designed to increase student confidence in computer-based testing, and to improve application of nursing process, critical thinking skills, and competencies required of new graduates in nursing to pass the NCLEX-RN (https://www.ncsbn.org/nclex.htm). Our goal is to ensure that students are well prepared academically and experientially for the licensing examination and practice in the rapidly changing healthcare environment.

Transfer Students
Individuals who wish to transfer into the B.S.N. program of the School of Nursing (http://nursing.uthscsa.edu) must have completed the 60 hours of pre-nursing coursework required by this institution and accumulated a minimum grade point average of 3.0 in required courses and an overall grade point average of 2.50. Applicants must also be in good standing and eligible for readmission at their current/former school of nursing. At least 30 of the final 33 hours of work in the nursing major must be completed at the Health Science Center (http://www.uthscsa.edu) School of Nursing. Application deadlines are February 1 (fall), August 1 (spring) and December 15 (summer). The GPA of transfer students must be competitive for the current incoming class.

Please note any applicant who previously attended a school of nursing must be in good standing and eligible for readmission at their current/former school of nursing.
Grades and Progression

The standing of students in their work is expressed by five grades: A (excellent), B (above average), C (average), D (below average), F (failure). Students may also register in certain courses on a pass/fail basis, in which case the grade is recorded as either Pass (P) or Fail (F) and no letter grade is assigned. All required nursing theory courses in the Bachelor of Science in Nursing program Traditional and Accelerated tracks must be taken for a letter grade. A grade may not be changed after it has been reported to the Registrar unless an error has been made by the instructor. Clinical courses are graded as P or F.

Although a grade of D can be earned in a required nursing course, it is a failing grade and a grade of C or higher is necessary for progression to the next required course in the sequence or for graduation. In elective nursing courses, credit may be earned for a grade of D.

In computing the grade point average, the following scale of points per semester credit hour is used:

- A = 4 points (90-100)
- B = 3 points (80-89)
- C = 2 points (75-79)
- D = 1 point (66-74)
- F= 0 points (65 or below)
- W = withdraw

Note: Final numeric grades are calculated to two decimal places and rounded mathematically as follows:

- Less than 0.50 – Round down to next whole number – (i.e. “89.49” would be rounded to “89”)
- 0.50 or greater – Round up to next whole number – “90.50” would be rounded to “91”

Students must make a “C” (75) or higher in all nursing courses to progress in the program.

Satisfactory Progress

To be considered as making satisfactory progress, a student must maintain a cumulative grade point average of 2.0 or above with no grade lower than C in required upper-division nursing courses.

Students will be required to take the nationally normed ATI tests throughout the program.

Repetition of a Course

Students cannot retake nursing courses for a grade in which they have already received a passing grade.

Dean's List

The GPA for full-time students for Dean's List is 3.5. Fall and spring students should be enrolled at least 12 hours, and 6 hours for summer.

Progression in the Program

Students must earn a C or above in each required course of the undergraduate program in order to progress in the program. An undergraduate student who earns a D, F or W, in a required nursing course must repeat the course in question during the semester immediately following receipt of the grade or during the next semester in which the course is offered following receipt of the grade based on space availability. Newly admitted students, and enrolled students, have priority over other students seeking to repeat a course.

Students who receive a F or W in a clinical course must request permission to repeat a clinical course. Requests to repeat the course will be reviewed by the Admission Progression and Graduation (APG), a subcommittee of the Committee on Undergraduate Studies (Cous). Course and clinical faculty will review the performance of the failing student and will make recommendations to the APG based on the student's overall performance in the course in question. Students who have a documented pattern of unsafe or unprofessional clinical performance during the semester and have not improved following remediation will be rated as low priority for repeating the course and may not be permitted to repeat the course. Therefore, the student who is not granted permission to repeat a failed course in the semester immediately following a failure or during the next semester in which the course is offered due to a documented pattern of significant unprofessional or unsafe performance will be dismissed from the nursing program.

Unsafe clinical performance is defined as “an act that is harmful or potentially detrimental to the patient, self, or other health personnel (Luhanga, Yonge, and Mrylic, 2008, p1).” Unprofessional conduct is defined as the rules set forth in the Texas State Board of Nursing Rules and Regulation § 217.12. Unprofessional Conduct. The purpose of these rules is to identify unprofessional or dishonest behaviors of a nurse which the board believes are likely to deceive, defraud, or injure clients or the public. Actual injury to a client need not be established.

Students who earn a D or F in a required course, or whose average falls below C (GPA falls below 2.0), will be placed on academic probation for one semester/term. If at the end of the semester/term, the student has achieved a GPA of 2.0 or above with no grade lower than C in required nursing courses, he or she will be removed from academic probation.

Students who earn a D or F in two required nursing course (or from the same course twice) will be dismissed academically from the undergraduate nursing program and will be ineligible for readmission. Dismissed students will have the opportunity to petition for reinstatement in the program at the conclusion of the semester in which they receive a failure in a clinical or a 2nd D or F in a required course. The student will be provided ten minutes to present to the voting members of the Committee on Undergraduate Studies the extenuating circumstance that caused their low performance and the plan for success if provided the opportunity to continue in the program. Students will only be allowed to continue if the faculty perceive there to be conditions beyond the students control that caused their unacceptable academic performance and the student is able to demonstrate that those issues have been resolved.

Advisement Program for Students on Academic Probation

A student who is allowed to repeat a course, or who is on academic probation will be required to participate in an advisement program. The student will be required to sign a contract with the Associate Dean for Undergraduate Studies agreeing to participate in the advisement program. The student will also be required to meet regularly for the advisement program with an Academic Coach within in the Student Success Center. Failure to comply with the contract constitutes cause for dismissal.

Requests to repeat the course

The student will be required to sign a contract with the Associate Dean for Undergraduate Studies agreeing to participate in the advisement program. The student will also be required to meet regularly for the advisement program with an Academic Coach within in the Student Success Center. Failure to comply with the contract constitutes cause for dismissal.
Scholastic Probation
A student whose GPA falls below 2.0 but has no grade lower than C in required upper-division nursing courses will be placed on scholastic probation for one semester/term. If at the end of the semester/term, the student has achieved a GPA of 2.0 or above with no grade lower than C in required nursing courses, he or she will be removed from scholastic probation.

A student who fails to remediate her or his probationary status in one semester/term will be dismissed and will be ineligible for readmission.

Examinations
Examinations must be taken on the date and time scheduled. Policies regarding missed examinations are stated in course syllabi.

Graduate Credit
Undergraduate students may be eligible to take graduate courses in nursing. These credit hours taken by undergraduate students may be applied toward the graduate degree as long as these credits are not used toward the undergraduate degree. Credit hours may be applied toward the graduate degree only after the student has been admitted to and is enrolled in the graduate program.

Clinical or Research Distinction
Students in the Undergraduate program may earn clinical or research distinction through extracurricular activities. The Bachelor of Science in Nursing with Clinical Volunteer Distinction (BSN-CVD) acknowledges nursing students who demonstrate a dedicated commitment to enriching their nursing education with voluntary, faculty mentored clinical activities while maintaining high academic standards. The goal of this experiential learning is to identify scholarly areas of interest that apply interprofessional clinical practice and may lead to future research endeavors. Students are strongly encouraged to consider applying for the distinction early in their UT Health SON career as the distinction may support a competitive application for graduate school and nurse residency programs. Requirements for achieving the distinction are outlined to ensure objective evaluation of merit for the distinction. The Bachelor of Science in Nursing Research Distinction recognizes the significant work undergraduate nursing students are contributing to their academic and professional careers by advancing nursing science. Spearheaded by the Dept. of Education funded Summer Undergraduate Nursing Research Immersion Experience (SUNRISE) program, the BSN with Research Distinction provides an added advantage to graduating BSN students in the job market and application to graduate programs. The distinction acknowledges nursing students who demonstrate a dedicated commitment to enriching their nursing education with independent research while maintaining high academic standards during nursing school.

Outside Employment
The nursing program expects students to be enrolled full-time. Full-time students are encouraged not to plan full-time employment while enrolled in the program. A student's combined employment and semester-hour load should not exceed 40 hours per week.

Students may be employed as unlicensed care givers such as patient care assistants and certified nursing assistants, performing functions for which they have received training in the institution and for which the institution has a clearly discernible policy either in writing or by precedent defining the scope of these functions. Any individual not licensed in the State of Texas, or a Compact State with multi-state privileges, to practice professional nursing who engages in such practice is doing so illegally and may be prosecuted accordingly. Supervision by the professional, licensed nurse does not provide protection to the student or make the student's actions legal.

Students should be aware that: (1) the School of Nursing (http://nursing.uthscsa.edu) assumes no responsibility for their activities as an employee of an agency; (2) the students are personally responsible and liable for any activity they participate in while employed; (3) professional liability insurance purchased by students through the School of Nursing is only valid in their student roles, not their employment roles; (4) individuals who practice illegally may jeopardize their future. Persons who are convicted of violation of the Nurse Practice Act may not be eligible to take the NCLEX-RN (http://www.ncsbn.org/nclex.htm) and subsequently receive licensure.

Students employed in an agency have the responsibility, personally and professionally, to engage only in those activities which fall within their job description as nonprofessional workers (i.e., aides). They have a responsibility to refuse to participate in activities that they have not been legally licensed to perform (i.e., giving medication, assuming total responsibility for a division, etc.).

Students may not wear their school uniform, patch or student name badge at their place of employment.

Master of Science in Nursing (M.S.N.)
The Master of Science in Nursing (MSN) program (http://nursing.uthscsa.edu/programs/grad/msn_majors.aspx) is comprised of seven majors: (1) Administrative Management, (2) Clinical Nurse Leader (CNL), (3) Family Nurse Practitioner, (4) Psychiatric Mental Health Nurse Practitioner, (5) Pediatric Nurse Practitioner Primary Care, (6) Adult-Gerontology Acute Care Nurse Practitioner, and 7) Nursing Education. Students can enter the program as traditional Post-Baccalaureates in Nursing, completing 40-50 semester credit hours of graduate level coursework. ** Admission to the Master of Science in Nursing (MSN) program is suspended.

Students without a B.S.N. can enter the Alternate Entry Masters Degree for ADN/Diploma RNs program (http://nursing.uthscsa.edu/programs/grad/msn_majors.aspx) and select from the following majors: (1) Clinical Nurse Leader, (2) Administrative Management, (3) Family Nurse Practitioner, (4) Psychiatric Mental Health Nurse Practitioner, (5) Pediatric Nurse Practitioner Primary Care, (6) Adult-Gerontology Acute Care Nurse Practitioner, and 7) Nursing Education. Students complete 21 semester credit hours of undergraduate level coursework while beginning their graduate level courses to earn the Master’s degree. ** Admission to the Alternate Entry Masters Degree for ADN/Diploma RNs program is suspended.

Admissions Requirements
Degree: M.S.N.
Specialization, Program of Study: Administrative Management, Clinical Nurse Leader, Nursing Education, Nurse Practitioner (Family Nurse Practitioner, Pediatric Nurse Practitioner Primary Care, Psychiatric Mental Health Nurse Practitioner, Adult-Gerontology Acute Care Nurse Practitioner).

Program Length: 2 - 3 Years
Admissions Requirements

To be considered for admission to the Master of Science in Nursing (M.S.N.) Program the following factors are required:

- NursingCAS application service fee
- Bachelor's in Nursing
- Submit official transcript(s) from each post-secondary institution attended, even if no degree awarded, to NursingCAS. International transcripts must be evaluated by an accredited foreign credential service. *For more information regarding international applicant requirements, click here (http://nursing.uthscsa.edu/students/intApplicants.asp).
- Grade Point Average of "B" (3.0 on a 4.0 scale) or higher on the student's last 60 hours of credit
- Official copy of Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) score, if international applicant. TOEFL and IELTS scores can be no more than two (2) years old. A minimum TOEFL score of 550 is required on the paper examination; minimum 250 on the computer-based examination; or, minimum 68 on the internet based examination. A minimum IELTS score of 6.5 for graduate admission is required. TOEFL school code: 3383
- Licensure as a Registered Nurse in Texas or compact state with multistate privileges
- Current BLS for Healthcare Providers Certification through the American Heart Association. Adult Gerontology Acute Care Nurse Practitioner majors will need to possess Advanced Cardiovascular Life Support (ACLS) certification through the American Heart Association.
- Current Required Immunizations (http://nursing.uthscsa.edu/shc/hc_immunization.asp)
- Proof of Current Health Insurance Coverage (http://students.uthscsa.edu/studentlife/2013/03/health-insurance)
- Clear Criminal Background Check
- Three Professional References (Submit via NursingCAS application)
- Professional Goal Statement/Essay (Submit via Supplemental Application, not via NursingCAS application)
- Current resume or curriculum vita
- School of Nursing application fee
- Interview and Admission Essay

Application Deadline: Deadline for fall entrance is February 1

Start Term: Fall

Contact:
Office of Admissions
School of Nursing
UT Health Science Center at San Antonio
7703 Floyd Curl Drive, MSC 7945
San Antonio, Texas 78229-3900
Phone: 210-567-0341
Toll Free: 877-235-0341
FAX 210-567-6189
http://nursing.uthscsa.edu/

Degree: M.S.N.: Alternate-Entry (Suspended)

Specialization, Program of Study: Administrative Management, Clinical Nurse Leader, Nursing Education, Nurse Practitioner (Family Nurse Practitioner, Pediatric Nurse Practitioner Primary Care, Psychiatric Mental Health Nurse Practitioner, Adult-Gerontology Acute Care Nurse Practitioner).

Program Length: 3 - 4 Years

General Admission Requirements

To be considered for admission to the Alternate Entry Master of Science in Nursing (M.S.N.) Program the following factors are required:

- NursingCAS application service fee
- Associate's Degree or Diploma in Nursing from an NLNAC or ACENaccredited program
- Submit official transcript(s) from each post-secondary institution attended to NursingCAS. International transcripts must be evaluated by an accredited foreign credential service. *For more information regarding international applicant requirements, click here (http://nursing.uthscsa.edu/students/intApplicants.asp).
- Grade Point Average of "B" (3.0 on a 4.0 scale) or higher is required
- Complete all 60 hours of required prerequisites courses. For a list of required courses, click here (http://nursing.uthscsa.edu/students/eqvTables.asp)
- Official copy of Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) score, if international applicant. TOEFL and IELTS scores can be no more than two (2) years old. A minimum TOEFL score of 550 is required on the paper examination; minimum 250 on the computer-based examination; or, minimum 68 on the internet based examination. A minimum IELTS score of 6.5 for graduate admission is required. TOEFL school code: 3383
- Licensure as a Registered Nurse in Texas or Compact State with multistate privileges.
- Current BLS for Healthcare Providers Certification through the American Heart Association. Adult Gerontology Acute Care Nurse Practitioner majors will need to possess Advanced Cardiovascular Life Support (ACLS) certification through the American Heart Association.
- Current Required Immunizations (http://nursing.uthscsa.edu/shc/hc_immunization.asp)
- Proof of Current Health Insurance Coverage (http://students.uthscsa.edu/studentlife/2013/03/health-insurance)
- Clear Criminal Background Check
- Basic Computer Skills
- Three Professional References (Submit via NursingCAS application)
- School of Nursing application fee
- Interview and Admission Essay

Application Deadline: Suspended

Start Term: Fall

Contact:
Office of Admissions
Degree: BSN to DNP - Coming in Fall 2019
Applications will open Fall 2018

Contact:
Office of Admissions
School of Nursing
UT Health Science Center at San Antonio
7703 Floyd Curl Drive, MSC 7945
San Antonio, Texas 78229-3900
Phone: 210-567-5805
Toll Free: 877-235-0341
FAX 210-567-6189
http://nursing.uthscsa.edu/

Degree Requirements and Graduation

For the Master of Science in Nursing degree, a minimum of 36 semester credit hours of upper-division and graduate courses is required. All coursework must be completed within five years of enrollment in the program. A student must achieve no less than the total number of semester credit hours for the specific major/degree program, which may exceed 36 semester credit hours, in order to graduate.

The program of study includes required core courses and major courses.

To graduate, a student must have an overall minimum GPA of 3.0, at least a 3.0 average in nursing courses, no more than one C in a required course, and no incomplete grades.

The program is designed to be completed in 24 months of full-time study for entering in the fall, however, part-time enrollment is feasible within the program plan. Selected courses may be offered during summer sessions, but students should not anticipate completing the program by attending summer sessions only or by attending less than four regular semesters. A clinical preceptorship also may be required. Students have six years to complete a graduate or professional program under the catalog in effect when they initially registered.

Curriculum and Plans of Study

M.S.N. Semester Credit Hour Requirements

Graduate courses required for the M.S.N. vary per major. All master’s students are required to take 24 hours of coursework in residence. The program is completed through full-time or part-time enrollment.

M.S.N. Required Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Theory</th>
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Total Credit Hours: 0.0

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<th>Major</th>
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<tr>
<td>Clinical Nurse Leader</td>
<td>660&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>Family Nurse Practitioner</td>
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<td>Nursing Education</td>
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<td>Pediatric Nurse Practitioner Primary Care</td>
<td>660&lt;sup&gt;1&lt;/sup&gt;</td>
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<tr>
<td>Psychiatric Mental Health Nurse Practitioner</td>
<td>660&lt;sup&gt;1&lt;/sup&gt;</td>
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</table>

<sup>1</sup> 60 clinical hours in health assessment for each nurse practitioner major are not applicable for certification.
Alternate Entry - Master of Science in Nursing Option - Suspended

The Alternate Entry M.S.N. for ADN/Diploma RNs requires completion of 21 semester credit hours of undergraduate nursing courses at the School of Nursing (http://nursing.uthscsa.edu) with a grade point average of 3.0 or higher. Of the minimum 40 semester credit hours of upper-division and graduate courses required for the M.S.N., 24 credit hours of coursework must be taken in residence. Full or Part-time enrollment is available.

Alternate Entry Courses

Undergraduate Required Courses

<table>
<thead>
<tr>
<th>NURS 3321</th>
<th>Transitions In Professional Nursing (Alternate Entry)</th>
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<td>Nursing Leadership: Theoretical Foundations</td>
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Total Credit Hours: 21.0

Theoretical Core Courses for All Graduate Students

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<th>Theoretical Foundations for Advanced Nursing Practice</th>
<th>Theory</th>
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<th>Lab</th>
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<td>NURS 5356</td>
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</tr>
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<td>NURS 5339</td>
<td>Leadership and Health Policy for Quality and Safety</td>
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<td>NURS 6315</td>
<td>Informatics &amp; Health Care Technologies</td>
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<td>3</td>
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</table>

Total Credit Hours: 15.0

Major Clinical Hours SCH

| Administrative Management | 540 | 22 |

| Administrative Management | Adult-Gerontology Acute Care Nurse Practitioner | 660² | 35 |
Clinical Nurse Leader Alternate Entry option requires a total of 58 semester credit hours and 720 clinical hours (includes BSN and MSN requirements).

Clinical Nurse Leader Alternate Entry option requires a total of 61 semester credit hours and 840 clinical hours (includes BSN and MSN requirements).

Nurse Practitioner option requires a total of 71 semester credit hours and 840 clinical hours (includes BSN and MSN requirements).

1 Administrative Management Alternate Entry option requires a total of 60 clinical hours in health assessment for each nurse practitioner major are not applicable for certification.

2 Adult-Gerontology Acute Care Nurse Practitioner (AG-ACNP)

The role of the Adult-Gerontology Acute Care Nurse Practitioner (AG-ACNP) is to provide advanced nursing care across the continuum of health care services to meet the specialized physiologic and psychological needs of patients with complex acute, critical, and chronic health conditions.

AG-ACNP Courses - taken in addition to core courses

### Theoretical Core Courses for All Graduate Students

<table>
<thead>
<tr>
<th>Course Code</th>
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<td>NURS 5356</td>
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<td>Informatics &amp; Health Care Technologies</td>
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Total Credit Hours: 15.0

### Adult-Gerontology Acute Care Nurse Practitioner Major Courses

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<tr>
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<tr>
<td>NURS 6210</td>
<td>Advanced Health Assessment and Clinical Reasoning</td>
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<td>NURS 6110</td>
<td>Advanced Health Assessment: Clinical Application</td>
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<td>NURS 6250</td>
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</table>

1 600 clinical hours apply to certification requirements.

The Theoretical Core Courses for All Graduate Students courses and the Adult-Gerontology Acute Care Nurse Practitioner Major Courses are required for a total of 50 semester credit hours. In the post-graduate option, each applicant is evaluated individually.

**Family Nurse Practitioner (FNP)**

This major addresses populations from newborns to the aging in primary care settings. Applicants for the FNP clinical major are encouraged to make a commitment to work with medically underserved populations, as defined by federal guidelines, upon completion of the program.

**FNP Courses - taken in addition to core courses**

**Theoretical Core Courses for All Graduate Students**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>SCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 5306</td>
<td>Theoretical Foundations for Advanced Nursing Practice</td>
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<tr>
<td>NURS 5307</td>
<td>Translational Research for Advanced Nursing Practice</td>
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<tr>
<td>NURS 5356</td>
<td>Financial and Economic Evidence In Health Care</td>
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<td>NURS 5339</td>
<td>Leadership and Health Policy for Quality and Safety</td>
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Family Nurse Practitioner Major Courses

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>NURS 5338</td>
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Total Credit Hours: 15.0

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1 600 clinical hours apply to certification requirements

50 semester credit hours. In the post-graduate option, each applicant is evaluated individually.
Psychiatric Mental Health Nurse Practitioner (PMHNP)
This major addresses primary care of patients or persons with mental health or psychiatric problems.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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PMHNP Courses - taken in addition to core courses

Theoretical Core Courses for All Graduate Students

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<th>Course Title</th>
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### NURS 6416
Psychiatric Mental Health Nurse Practitioner (PMHNP) Diagnosis And Mgmt: Concepts & Theory 2

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### NURS 6623
Psychiatric Mental Health Nurse Practitioner (PMHNP) Diagnosis & Management 1: Clinical Application

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### NURS 6624
Psychiatric Mental Health Nurse Practitioner (PMHNP) Diagnosis & Management 2: Clinical Application

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</table>

Total Credit Hours: 0.0 660.0 0.0 0.0 35.0

1 600 clinical hours apply to certification requirements

#### Pediatric Nurse Practitioner Primary Care (PNPPC)
This major focuses on primary care for newborns through adolescents.

PNP Courses - taken in addition to core courses

Theoretical Core Courses for All Graduate Students courses and the Psychiatric Mental Health Nurse Practitioner Major Courses are required for a total of 50 semester credit hours. In the post-graduate option, each applicant is evaluated individually.

<table>
<thead>
<tr>
<th>Theory</th>
<th>Clinical</th>
<th>Lab</th>
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</thead>
<tbody>
<tr>
<td>NURS 5306</td>
<td>Theoretical Foundations for Advanced Nursing Practice</td>
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</tr>
<tr>
<td>NURS 5307</td>
<td>Translational Research for Advanced Nursing Practice</td>
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<tr>
<td>NURS 5356</td>
<td>Financial and Economic Evidence In Health Care</td>
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<tr>
<td>NURS 5339</td>
<td>Leadership and Health Policy for Quality and Safety</td>
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<tr>
<td>NURS 6315</td>
<td>Informatics &amp; Health Care Technologies</td>
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Total Credit Hours: 0.0 0.0 0.0 0.0 15.0

#### Pediatric Nurse Practitioner Primary Care Major Courses

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<tbody>
<tr>
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<td>NURS 6210</td>
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<td>NURS 6110</td>
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<td>NURS 6312</td>
<td>Advanced Mental Health Concepts</td>
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<td>NURS 6250</td>
<td>Advanced Health Promotion, Health Protection, and Disease Prevention</td>
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<td>Nurse Practitioner Conceptual Basis For Advanced Practice Nursing</td>
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<td>NURS 6423</td>
<td>Pediatric Nurse Practitioner (PNP) Primary Care Diagnosis And Management: Concepts And Theory 1</td>
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<td>NURS 6428</td>
<td>Pediatric Nurse Practitioner (PNP) Primary Care Diagnosis And Management: Concepts And Theory 2</td>
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<td>NURS 6615</td>
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<td>NURS 6616</td>
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Total Credit Hours: 0.0 | 660.0 | 0.0 | 0.0 | 35.0

1 600 clinical hours apply to certification requirements

The Theoretical Core Courses for All Graduate Students courses and the Pediatric Nurse Practitioner Primary Care Major Courses are required for a total of 50 semester credit hours. In the post-graduate option, each applicant is evaluated individually.

Clinical Nurse Leader (CNL)
The Clinical Nurse Leader is prepared to be a direct care provider accountable for the care outcomes of a clinical population or a specified group of patients/clients in a health care system. Clinical Nurse Leader graduates must complete a total of 40 semester credit hours.

Standards for the Clinical Nurse Leader M.S.N. program are established by The American Association of the Colleges of Nursing (AACN). Graduates are eligible for certification as a CNL.

CNL Courses - taken in addition to core courses

Theoretical Core Courses for All Graduate Students

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Theory</th>
<th>Clinical</th>
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<tbody>
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<td>Financial and Economic Evidence In Health Care</td>
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<tr>
<td>NURS 5339</td>
<td>Leadership and Health Policy for Quality and Safety</td>
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**Clinical Nurse Leader Major Courses**

<table>
<thead>
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<th>Course Code</th>
<th>Course Title</th>
<th>Theory</th>
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</tr>
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<tbody>
<tr>
<td>NURS 5338</td>
<td>Advanced Pathophysiology</td>
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<td>NURS 6302</td>
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<td>NURS 6210</td>
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<td>NURS 6230</td>
<td>Clinical Nurse Leader 1: Role of The Adv. Generalist in Healthcare Microsystems</td>
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</table>

1 450 clinical hours apply to certification requirements

The Theoretical Core Courses for All Graduate Students courses and the Clinical Nurse Leader Major Courses are required for a total of 40 semester credit hours.

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**Administrative Management**

The Administrative Manager is prepared to lead and manage nursing care departments and service lines across the continuum of care.

Administrative Management graduates must complete 43 semester credit hours.

Standards for nursing administrative M.S.N. programs are established by the specialty organization, The American Organization of Nurse...
Executives (AONE) (http://www.aone.org). Graduates are eligible for certification as a Certified Nurse Manager Leader for the credential, CNML; and from the American Nurses Credentialing Center (http://www.nursecredentialing.org) as a Nurse Executive for the credential, NE-BC.

### Theoretical Core Courses for All Graduate Students

<table>
<thead>
<tr>
<th>Course</th>
<th>Theory</th>
<th>Clinical</th>
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<tr>
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<td>Translational Research for Advanced Nursing Practice</td>
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<tr>
<td>NURS 5356</td>
<td>Financial and Economic Evidence In Health Care</td>
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<tr>
<td>NURS 5339</td>
<td>Leadership and Health Policy for Quality and Safety</td>
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<tr>
<td>NURS 6315</td>
<td>Informatics &amp; Health Care Technologies</td>
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### Administrative Management Major Courses

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<tr>
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<td>NURS 6108</td>
<td>Nursing Administration Practicum 1</td>
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<td>NURS 6202</td>
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<td>NURS 5219</td>
<td>Maximizing System and Human Resources to Improve Health</td>
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<td>NURS 6405</td>
<td>Transforming Complex Healthcare Systems for Quality and Safety</td>
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<td>Program Planning and Evaluation for Transitions, Transformation and Integration</td>
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<td>Economics and Advanced Financial Management</td>
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<td>NURS 6104</td>
<td>Integration and Transition Seminar</td>
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</table>
The Theoretical Core Courses for All Graduate Students courses and the Administrative Management Major Courses are required for a total of 37 semester credit hours.

### Nursing Education Courses

**Nursing Education Courses - taken in addition to core courses**

**Theoretical Core Courses for All Graduate Students**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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**Nursing Education Major Courses**

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<td>NURS 6260</td>
<td>Intro: Nursing Education Theories &amp; Trends</td>
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<td>NURS 6132</td>
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<td>NURS 6134</td>
<td>Clinical Application 1: Facilitation of Learning in an Academic Setting</td>
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<td>NURS 6264</td>
<td>Strategies that Facilitate Learning Across Delivery Modalities and Systems</td>
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</table>
Program Outcomes
At the completion of the program Masters of Science in Nursing (M.S.N.) graduates will demonstrate the following:

1. Integrate scientific findings from nursing and related sciences, including genetics and genomics, into the delivery of advanced nursing care to populations in diverse settings.
2. Demonstrate organizational and systems leadership to assure ethical and critical decision making at all systems’ levels for quality and patient safety.
3. Incorporate performance improvement technologies for quality, safety, and patient-centered care delivery.
4. Use improvement science to achieve optimal patient care and care environmental outcomes.
5. Integrate meaningful and usable information systems and healthcare technologies to support and improve safe, quality patient care and healthcare systems effectiveness.
6. Advocate for policy changes that influence health care at appropriate levels.
7. Lead interprofessional teams using collaborative strategies to effect quality patient care and population health outcomes.
8. Analyze and incorporate broad ecological and social health determinants to design and deliver evidence-based clinical prevention and population health care and services to individuals, families, and aggregates/identified populations.
9. Integrate the advanced competencies expected of a master’s-prepared nurse to design, deliver, and evaluate outcomes of systems of care for individuals, families, and diverse populations.

Graduate Program Policies
General Information
Information about academic progression, policies, or procedures, as well as curriculum information, may be obtained from the Office for Academic Affairs.

Current Licensure as a Registered Nurse
Each graduate nursing student is required to maintain current licensure in good standing as a registered nurse in Texas, or a Compact State with multistate privileges, throughout the graduate program. Students must provide a copy of the license verification to the Office for Academic Affairs. Failure to maintain a current license in good standing or to produce proof of current licensure in good standing is grounds for dismissal from the program.

Advisement
Each student enrolled in the graduate program is assigned an advisor in the Office for Academic Affairs.

Transfer of Credit
Students may, with the approval of the Committee on Graduate Studies (COGS), transfer from another accredited institution a maximum of six semester credit hours (9 quarter hours) of graduate credit applicable to their course of study leading toward the Master of Science in Nursing.

Approval of any course for transfer, prior to registration for the course, is strongly recommended.

Approval of transfer credit requires that the student be enrolled in the graduate program. The student must complete a Request for Transfer of Credit form and submit it to the Office for Academic Affairs with an official course description from the Catalog and must make certain that an official transcript, sent directly from the college or university attended, is in her/his file or request that a transcript be sent as soon as the course is completed. All courses must have been completed not more than five years before the degree is awarded. Courses in which a grade of C or less has been earned will not be accepted for transfer (see exception for students enrolled in the DNP Public Health Nurse Leader). The student may obtain additional information about materials that must be submitted with the petition from the Office for Academic Affairs.

Teaching Assistants
Opportunities are available for graduate nursing students enrolled part-time to work as teaching assistants in the School of Nursing. Interested applicants should contact the Office for Academic Affairs in the School of Nursing for additional information.

Honors
A graduate nursing student whose grade point average is 4.0 is awarded her/his degree with High Honors.

Grades and Grade Point Average
The standing of students in their work is expressed by five grades: A (above average graduate work), B (average graduate work), C (below average graduate work), D (failing graduate work), and F (failing graduate work). D and F grades are not acceptable for graduate credit. Students may also register in certain courses on a pass/fail basis, in which case the grade is recorded as either Pass (P) or Fail (F) and no letter grade is assigned.

Other symbols used in reporting the standing of students in their classes are: W=withdrawal from course; I=incomplete; IP=in progress (for
selected courses); S = satisfactory; U = unsatisfactory; P = pass; F = fail; AU records an audited course. U is equivalent to a grade of F.

Courses in which a student receives a D, F, or U will not be counted toward the total number of courses and/or hours required for a graduate degree in the School of Nursing or the Graduate School of Biomedical Sciences. However, all grades (A to F) are included in the computation of the grade point average. In computing the grade point average, the following scale of points per semester credit hour is used:

- A = 4 points (90-100)
- B = 3 points (80-89)
- C = 2 points (75-79)
- D = 1 point (66-74)
- F = 0 points (65 or below)

Note: Final numeric grades are calculated to two decimal places and rounded mathematically as follows:

- Less than 0.50 – Round down to next whole number (i.e. “0.49” would be rounded to “0”)
- 0.50 or greater – Round up to next whole number (i.e. “90.50” would be rounded to “91”)

Progression in the Graduate Program

To continue in the graduate program, a student must:

- absolve any contingencies related to admission to the program within the time period stated in the letter of admission, or within the first semester if not stated;
- maintain satisfactory progress (B average in first 9 hours);
- receive no more than one C in any course;
- maintain a minimum cumulative grade point average of B (3.0) for all courses taken while enrolled in the graduate program.

Scholastic Probation

A student whose cumulative grade point average falls below 3.0 will be placed on scholastic probation and warned that continuation in the graduate program is in jeopardy.

The progress of students on scholastic probation will be reviewed by the Committee on Graduate Studies (COGS) each semester. A student on scholastic probation will not be admitted to candidacy nor awarded a degree. Satisfactory progress toward the degree is required throughout the student’s enrollment. The Committee on Graduate Studies (COGS) may terminate a student’s enrollment at any time if the student does not meet the criteria for continuance in the program.

Probation Policy and Procedure

1. Definition: Probation is the status of the student whose progression in the program may be delayed, interrupted or conditional due to the criteria listed below.

2. Criteria for Probation in the Nursing Program includes any one of the following:
   a. Earning a grade of C in a graduate course
      i. The student will be on probation the remainder of their program
   b. Earning a grade in a graduate course that drops the GPA below 3.0
   c. Failure to meet any of the School of Nursing Policies related to academic or professional conduct
   d. Failure to meet the terms of professional integrity standards defined in the current University Catalog, the Texas State Board of Nursing Nurse Practice Act (http://www.bon.texas.gov/laws_and_rules_nursing_practice_act.asp), the Texas State Board of Nursing Rules and Regulations (http://www.bon.texas.gov/laws_and_rules_rules_and_regulations.asp) and the American Nurses Association Code of Ethics (http://www.nursingworld.org/MainMenuCategories/EthicsStandards/CodeofEthicsforNurses).

3. Probation Procedure
   a. Initial Review of Recommendation for Probation
      i. A student whom receives a final grade of C in a course will be notified of his/her probation status by the Office for Academic Affairs
      ii. The student may present his/her case to the Associate Dean for Graduate Studies, if requested in writing, within 3 business days of notification of the probation recommendation. If the student wishes to bring a person outside of the School of Nursing to the hearing, he/she must indicate this in the request to the Associate Dean for Graduate Studies. If the person attending the meeting with the student is an attorney, the meeting will be held with the University attorney present.
   b. If a student is in validation of the criteria for probation one or more of the following actions will occur:
      i. Earning a Grade of C or a grade that drops the GPA below 3.0
         1. A written “Probation Letter of Expectation” that determines the length and conditions of the probation period which may include, but are not limited, any one of the following:
            • Referral of the student to resources and support services for academic success
            • Referral of the student to the faculty to devise a written plan for academic success
            • Referral of the student to the Associate Dean for Admissions and Student Services for non-academic support
      ii. Failure to meet School of Nursing Policies or failure to meet the terms of professional integrity standards defined in the current University Catalog, the Texas State Board of Nursing Nurse Practice Act (http://www.bon.texas.gov/laws_and_rules_nursing_practice_act.asp), the Texas State Board of Nursing Rules and Regulations (http://www.bon.texas.gov/laws_and_rules_rules_and_regulations.asp) and the American Nurses Association Code of Ethics (http://www.nursingworld.org/MainMenuCategories/EthicsStandards/CodeofEthicsforNurses)
Dismissal Policy and Procedure

1. Definition: Dismissal is the removal of a student from the School of Nursing Graduate Program. A student who is dismissed from the graduate program may not continue in the graduate nursing program and is not eligible for readmission.

2. Criteria for Dismissal from the Graduate Nursing Program includes any one of the following:
   a. Earning a grade of D, F, or U in any graduate course
   b. Earning a grade of C in 6 or more credit hours of graduate coursework regardless of cumulative GPA or in two required graduate courses regardless of the number of credit hours and cumulative GPA
   c. Failure to meet the conditions of the School of Nursing “Probation Letter of Expectation”
   d. Failure to meet the terms of professional integrity and ethical standards defined in the current University Catalog, the Texas State Board of Nursing Nurse Practice Act, the Texas State Board of Nursing Rules and Regulations and the American Nurses Association Code of Ethics. When indicated, the incident will be reported to the local law enforcement agency and/or other appropriate agencies, institutions, and/or regulatory bodies.
   e. Failure to notify the school of non-matriculation for two consecutive semesters (excluding summers)

3. Dismissal Procedure
   a. A student whom receives a grade of D, F, or U in a course will be notified of his/her dismissal status by the Office for Academic Affairs
   b. When a student meets criteria in provision 2 above, he or she will be dismissed from his or her program. The student will receive notification of dismissal via a certified letter from the Associate Dean of Graduate Studies also sent to the Dean of the School of Nursing, the student’s file in the Graduate Office and to the Registrar for the student’s permanent record. The Associate Dean for Graduate Studies has full authority to proceed autonomously according to policy, but may choose to seek input from the Committee on Graduate Studies (COGS).
   c. A student who is dismissed from his or her program is not eligible to register for additional courses. If the student has already registered for subsequent courses, the student will be required to unenroll.

4. Student Appeal of Dismissal
   a. In the event of extenuating circumstances, a student may choose to appeal dismissal from his or her program. All appeals are presented to and reviewed by the Committee on Graduate Studies (COGS).
      i. A request for appeal of dismissal and presentation to COGS must be sent by the student in writing to the Associate Dean for Graduate Studies within 3 business days of receiving the certified letter of dismissal. The student must indicate in the request if he or she wishes to bring a person outside of the School of Nursing to the meeting. If the person attending the meeting with the student is an attorney, the meeting will be held with the University attorney present. The student may also request to bring other appropriate faculty to the meeting with COGS. The Committee on Graduate Studies may request University employees or supervising clinical agency personnel attend the appeal or meet with them prior to deliberating. A review of the student’s records may also be conducted.
      ii. The Associate Dean for Graduate Studies will notify the student, in writing via email, that his or her case will be presented to the Committee on Graduate Studies. The written communication will include the date and time of the presentation. Student presentations are limited to a maximum of 15 minutes.
   b. After the student presentation is concluded, and any additional information deemed appropriate to the situation is obtained, the Committee on Graduate Studies will review all information related to the criteria set forth in provision 2 for adherence to process and outcome actions. The faculty voting members of the Committee on Graduate Studies, in closed deliberation with the Associate Dean for Graduate Studies can recommend one or more of the following actions:
      i. Uphold the decision to dismiss the student from the School of Nursing Graduate Program
      ii. Amend the dismissal decision to probation in the Graduate Nursing Program per explicit terms and expectations deemed appropriate by COGS and the Associate Dean for Graduate Studies
      iii. Reconsideration of dismissal due to adherence concerns with process; including next steps
   c. A written recommendation from the Chairperson of the Committee on Graduate Studies will be made to the Dean of the School of Nursing.
   d. The final decision will be made by the Dean and will be delivered to the student in writing by certified letter to the student’s address of record. A student who receives probation in the Graduate Nursing Program is not eligible to re-enroll in courses the semester immediately following the semester in which the student originally met criteria for dismissal. A student who is dismissed from the School of Nursing may not continue in the Graduate Nursing Program and is not eligible for readmission.

Petition

Students may petition the Committee on Graduate Studies (COGS) for the consideration of relevant issues influencing program progression and/or completion. Students who wish to petition COGS should consult with the Associate Dean for Graduate Studies, and then complete the Student Petition Form that is available from the Office for Academic Affairs. Decisions regarding the petition will be communicated in writing to the students.

Petitions for reconsideration of the decision of COGS are reviewed by the Dean of the School of Nursing (http://nursing.uthscsa.edu). The Dean’s decisions are final.

Repetition of a Course

Students cannot retake nursing courses for a grade in which they have already received a passing grade.

The Semester Credit Hour

The unit of measure for credit purposes is the semester credit hour. One semester credit hour is given for each one clock hour of class or one clock hour of seminar for didactic courses. Four clock hours per one semester credit hour of laboratory/practicum/computer lab experience per week, per semester is given in the Nurse Practitioner majors, Nursing Education major, Administrative Management and Clinical Nurse Leader majors and all tracks in the DNP Program. For selected sessions and
summer sessions during which the class, seminar, and practicum hours are concentrated, equivalent clock hours are provided.

**Dissertation Course Report**

Dissertation courses may be reported as In Progress (IP) until the work is completed. Dissertation courses are not counted in the grade point average.

**Examinations**

Examinations must be taken on the date and time scheduled. If extenuating circumstances prevent the student from taking an examination, prior approval must be granted by the course instructor to postpone the examination. If a student misses an examination without prior approval by the instructor, a grade of F will be recorded for the examination.

**Readmission**

Individuals who have previously been enrolled in graduate nursing courses should complete an Application for Readmission. Transcripts from any colleges or universities attended since the time of the previous enrollment in the graduate programs must be submitted. Applicants may be requested to provide recent professional references. Proof of current licensure as a registered nurse in Texas is also required.

Individuals who have not registered in three consecutive terms, including summers, must apply for readmission unless they were previously granted official permission for leave of absence. Students who do not return from leave of absence within the three consecutive terms limit will be withdrawn from the nursing program and will have to apply for admission as a new student.

Those seeking readmission are subject to all requirements, procedures, and acceptance considerations outlined in this Catalog.

**Post-Graduate Certificate**

MSN-prepared nurses interested in obtaining a Post-Graduate Certificate (http://nursing.uthscsa.edu/programs/grad/msn_post.aspx) as a Nurse Practitioner may select from four areas of specialization: (1) Adult Gerontology-Acute Care Nurse Practitioner, (2) Family Nurse Practitioner, (3) Pediatric Nurse Practitioner Primary Care, and (4) Psychiatric Mental Health Nurse Practitioner. Students can expect to take a minimum of 26 semester credit hours towards their certificate. However, total semester credit hours needed for completion is determined on a case-by-case basis once admission is offered.

MSN-prepared nurses interested in obtaining a Post Graduate Certificate in Nursing Education must complete a minimum of 15 semester credit hours towards their certificate. However, total semester credit hours needed for completion is determined on a case-by-case basis once admission is offered.

**Admissions Requirements**

**Specialization, Program of Study**: Family Nurse Practitioner, Pediatric Nurse Practitioner-Primary Care, Psychiatric Mental Health Nurse Practitioner, Adult-Gerontology Acute Care Nurse Practitioner, Nursing Education

**Length**: 2 years

**General Admission Requirements**:

- NursingCAS application fee
- Master’s in Nursing
  - Completion of a graduate course in health assessment with a grade of B or better.
  - Completion of a graduate pathophysiology course with a grade of B or better.
  - Completion of a graduate pharmacology course with a grade of B or better.
- Submit official transcript(s) from each post-secondary institution attended, even if no degree awarded, to NursingCAS. International transcripts must be evaluated by an accredited foreign credential service. *For more information regarding international applicant requirements, click here (http://nursing.uthscsa.edu/students/intApplicants.asp).
- Grade Point Average of "B" (3.0 on a 4.0 scale) or higher on the student's last 60 hours of credit
- Official copy of Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) score, if international applicant. TOEFL and IELTS scores can be no more than two (2) years old. A minimum TOEFL score of 550 is required on the paper examination; minimum 250 on the computer-based examination; or, minimum 68 on the internet based examination. A minimum IELTS score of 6.5 for graduate admission is required. TOEFL or IELTS scores are not required for students who have successfully completed ENGL 1301 and 1302 (or equivalent courses) from an accredited college or university in the United States or for students who have earned a degree from an accredited college or university in the United States. TOEFL school code: 3383
- Licensure as a Registered Nurse in Texas or Compact State with multi-state privileges
- Current BLS for Healthcare Providers Certification through the American Heart Association. Adult Gerontology Acute Care Nurse Practitioner majors will need to possess Advanced Cardiovascular Life Support (ACLS) certification through the American Heart Association.
- Current Required Immunizations (http://nursing.uthscsa.edu/shc/hc_immunization.asp)
- Proof of Current Health Insurance Coverage (http://students.uthscsa.edu/studentlife/2013/03/health-insurance)
- Clear Criminal Background Check
- Three Professional References (Submit via NursingCAS application)
- Professional Goal Statement/Essay (Submit via Supplemental Application, not via NursingCAS application)
- Current resume or curriculum vita
- School of Nursing application fee
- Interview and Admission Essay

**Application Deadline**: Deadline for summer entrance is February 1

**Start Term**: Fall

**Contact**:
Office of Admissions
School of Nursing
UT Health Science Center at San Antonio
Certificate Requirements and Graduation

The Post Graduate Certificate Program option is available for students who hold a Master's degree in nursing and desire a Nurse Practitioner specialization in Adult-Gerontology Acute Care, Family, Pediatric Primary Care, Psychiatric Mental Health, or Nursing Education.

For the Post Graduate Certificate in a Nurse Practitioner track, a minimum of 26 semester credit hours of upper-division and graduate courses is required. A student must achieve no less than the total number of semester credit hours for the specific track.

To complete, a student must have an overall minimum GPA of 3.0, no more than one grade of C and no incomplete grades.

Curriculum and Plans of Study

MSN-prepared nurses interested in obtaining a Post-Graduate Certificate (http://nursing.uthscsa.edu/programs/grad/msn_post.aspx) as a Nurse Practitioner may select from three areas of specialization: (1) Adult Gerontology-Acute Care Nurse Practitioner, (2) Family Nurse Practitioner, (3) Pediatric Nurse Practitioner Primary Care, and (4) Psychiatric Mental Health Nurse Practitioner. Students can expect to take a minimum of 26 semester credit hours towards their certificate. However, total semester credit hours needed for completion is determined on a case-by-case basis once admission is offered.

MSN-prepared nurses interested in obtaining a Post Graduate Certificate in Nursing Education must complete a minimum of 15 semester credit hours towards their certificate. However, total semester credit hours needed for completion is determined on a case-by-case basis once admission is offered.

Post-Graduate Certificate students are subject to general and graduate policies of the Master's degree program and the School of Nursing. Students who complete the certificate program are eligible to take National credentialing boards.

Nursing Education

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<tr>
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Total Credit Hours: 0.0 180.0 0.0 0.0 15.0

Adult Gerontology Acute Care Nurse Practitioner (AG-ACNP)
### Family Nurse Practitioner (FNP)

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Total Credit Hours: 26.0
### Post-Graduate Certificate

**NURS 6452**  
Family Nurse Practitioner (FNP) Diagnosis Management of Aging Families: Concepts & Theory  
4

**NURS 6451**  
Family Nurse Practitioner (FNP) Diagnosis Management of Young Families: Concepts & Theory  
4

**NURS 6620**  
Family Nurse Practitioner (FNP) Diagnosis & Management of Aging Families: Clinical Application  
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**NURS 6621**  
Family Nurse Practitioner (FNP) Diagnosis & Management of Young Families: Clinical Application  
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Total Credit Hours: 0.0  
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**Psychiatric Mental Health Nurse Practitioner (PMHNP)**
### Pediatric Nurse Practitioner Primary Care (PNP-PC)

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Total Credit Hours: 0.0 600.0 0.0 0.0 26.0

### Graduate Program Policies

**General Information**

Information about academic progression, policies, or procedures, as well as curriculum information, may be obtained from the Office for Academic Affairs.

**Current Licensure as a Registered Nurse**

Each graduate nursing student is required to maintain current licensure in good standing as a registered nurse in Texas, or a Compact State with multistate privileges, throughout the graduate program. Students must provide a copy of the license verification to the Office for Academic Affairs. Failure to maintain a current license in good standing or to produce proof of current licensure in good standing is grounds for dismissal from the program.

**Advisement**

Each student enrolled in the graduate program is assigned an advisor in the Office for Academic Affairs.
Transfer of Credit

Students may, with the approval of the Committee on Graduate Studies (COGS), transfer from another accredited institution a maximum of six semester credit hours (9 quarter hours) of graduate credit applicable to their course of study leading toward the Master of Science in Nursing.

Approval of any course for transfer, prior to registration for the course, is strongly recommended.

Approval of transfer credit requires that the student be enrolled in the graduate program. The student must complete a Request for Transfer of Credit form and submit it to the Office for Academic Affairs with an official course description from the Catalog and must make certain that an official transcript, sent directly from the college or university attended, is in her/his file or request that a transcript be sent as soon as the course is completed. All courses must have been completed not more than five years before the degree is awarded. Courses in which a grade of C or less has been earned will not be accepted for transfer (see exception for students enrolled in the DNP Public Health Nurse Leader). The student may obtain additional information about materials that must be submitted with the petition from the Office for Academic Affairs.

Teaching Assistants

Opportunities are available for graduate nursing students enrolled part-time to work as teaching assistants in the School of Nursing. Interested applicants should contact the Office for Academic Affairs in the School of Nursing for additional information.

Honors

A graduate nursing student whose grade point average is 4.0 is awarded her/his degree with High Honors.

Grades and Grade Point Average

The standing of students in their work is expressed by five grades: A (above average graduate work), B (average graduate work), C (below average graduate work), D (failing graduate work), and F (failing graduate work). D and F grades are not acceptable for graduate credit. Students may also register in certain courses on a pass/fail basis, in which case the grade is recorded as either Pass (P) or Fail (F) and no letter grade is assigned.

Other symbols used in reporting the standing of students in their courses are: W=withdrawal from course; I=incomplete; IP=in progress (for selected courses); S=satisfactory; U=unsatisfactory, P=pass; F=fail; AU records an audited course. U is equivalent to a grade of F.

Courses in which a student receives a D, F, or U will not be counted toward the total number of courses and/or hours required for a graduate degree in the School of Nursing or the Graduate School of Biomedical Sciences. However, all grades (A to F) are included in the computation of the grade point average. In computing the grade point average, the following scale of points per semester credit hour is used:

- **A** = 4 points (90-100)
- **B** = 3 points (80-89)
- **C** = 2 points (75-79)
- **D** = 1 point (66-74)
- **F** = 0 points (65 or below)

Note: Final numeric grades are calculated to two decimal places and rounded mathematically as follows:

- Less than 0.50 – Round down to next whole number – (i.e. “89.49” would be rounded to “89”)
- 0.50 or greater – Round up to next whole number – (i.e. “90.50” would be rounded to “91”)

Progression in the Graduate Program

To continue in the graduate program, a student must:

- absolve any contingencies related to admission to the program within the time period stated in the letter of admission, or within the first semester if not stated;
- maintain satisfactory progress (B average in first 9 hours);
- receive no more than one C in any course;
- maintain a minimum cumulative grade point average of B (3.0) for all courses taken while enrolled in the graduate program.

Scholastic Probation

A student whose cumulative grade point average falls below 3.0 will be placed on scholastic probation and warned that continuation in the graduate program is in jeopardy.

The progress of students on scholastic probation will be reviewed by the Committee on Graduate Studies (COGS) each semester. A student on scholastic probation will not be admitted to candidacy nor awarded a degree. Satisfactory progress toward the degree is required throughout the student's enrollment. The Committee on Graduate Studies (COGS) may terminate a student's enrollment at any time if the student does not meet the criteria for continuance in the program.

Probation Policy and Procedure

1. Definition: Probation is the status of the student whose progression in the program may be delayed, interrupted or conditional due to the criteria listed below.

2. Criteria for Probation in the Nursing Program includes any one of the following:
   a. Earning a grade of C in a graduate course
      i. The student will be on probation the remainder of their program
   b. Earning a grade in a graduate course that drops the GPA below 3.0
   c. Failure to meet any of the School of Nursing Policies related to academic or professional conduct
   d. Failure to meet the terms of professional integrity standards defined in the current University Catalog, the Texas State Board of Nursing Nurse Practice Act (http://www.bon.texas.gov/laws_and_rules_nursing_practice_act.asp), the Texas State Board of Nursing Rules and Regulations (http://www.bon.texas.gov/laws_and_rules_rules_and_regulations.asp) and the American Nurses Association Code of Ethics (http://www.nursingworld.org/MainMenuCategories/EthicsStandards/CodeofEthicsforNurses).

3. Probation Procedure
   a. Initial Review of Recommendation for Probation
      i. A student whom receives a final grade of C in a course will be notified of his/her probation status by the Office for Academic Affairs
      ii. The student may present his/her case to the Associate Dean for Graduate Studies, if requested in writing, within 3 business
days of notification of the probation recommendation. If the student wishes to bring a person outside of the School of Nursing to the meeting, he/she must indicate this in the request to the Associate Dean for Graduate Studies. If the person attending the meeting with the student is an attorney, the meeting will be held with the University attorney present.

b. If a student is in validation of the criteria for probation one or more of the following actions will occur:
   i. Earning a Grade of C or a grade that drops the GPA below 3.0
      A written “Probation Letter of Expectation” that determines the length and conditions of the probation period which may include, but are not limited, any one of the following:
      • Referral of the student to resources and support services for academic success
      • Referral of the student to the faculty to devise a written plan for academic success
      • Referral of the student to the Associate Dean for Admissions and Student Services for non-academic support
   ii. Failure to meet School of Nursing Policies or failure to meet the terms of professional integrity standards defined in the current University Catalog, the Texas State Board of Nursing Rules and Regulations (http://www.bon.texas.gov/laws_and_rules_nursing_practice_act.asp), the Texas State Board of Nursing Rules and Regulations (http://www.bon.texas.gov/laws_and_rules_rules_and_regulations.asp) and the American Nurses Association Code of Ethics (http://www.nursingworld.org/MainMenuCategories/EthicsStandards/CodeofEthicsforNurses)

   1. The Associate Dean for Graduate Studies will present a recommendation for the “Probation Letter of Expectation” that determines the length and conditions of the probation to the Committee on Graduate Studies
   2. When indicated, the incident will be reported to the local law enforcement agency and/or other appropriate agencies, institutions, and/or regulatory bodies by the Associate Dean for Graduate Studies
   3. If the review of the recommendation for probation results in a recommendation for dismissal, the policy and procedure for dismissal will supersede the policy and procedure for probation

Dismissal Policy and Procedure

1. Definition: Dismissal is the removal of a student from the School of Nursing Graduate Program. A student who is dismissed from the graduate program may not continue in the graduate nursing program and is not eligible for reenrollment.

2. Criteria for Dismissal from the Graduate Nursing Program includes any one of the following:
   a. Earning a grade of D, F, or U in any graduate course
   b. Earning a grade of C in 6 or more credit hours of graduate coursework regardless of cumulative GPA or in two required graduate courses regardless of the number of credit hours and cumulative GPA
   c. Failure to meet the conditions of the School of Nursing “Probation Letter of Expectation”
   d. Failure to meet the terms of professional integrity and ethical standards defined in the current University Catalog, the Texas State Board of Nursing Nurse Practice Act, the Texas State Board of Nursing Rules and Regulations and the American Nurses Association Code of Ethics. When indicated, the incident will be reported to the local law enforcement agency and/or other appropriate agencies, institutions, and/or regulatory bodies.
   e. Failure to notify the school of non-matriculation for two consecutive semesters (excluding summers)

3. Dismissal Procedure
   a. A student whom receives a grade of D, F, or U in a course will be notified of his/her dismissal status by the Office for Academic Affairs
   b. When a student meets criteria in provision 2 above, he or she will be dismissed from his or her program. The student will receive notification of dismissal via a certified letter from the Associate Dean of Graduate Studies also sent to the Dean of the School of Nursing, the student’s file in the Graduate Office and to the Registrar for the student’s permanent record. The Associate Dean for Graduate Studies has full authority to proceed autonomously according to policy, but may choose to seek input from the Committee on Graduate Studies (COGS).
   c. A student who is dismissed from his or her program is not eligible to register for additional courses. If the student has already registered for subsequent courses, the student will be required to unenroll.

4. Student Appeal of Dismissal
   a. In the event of extenuating circumstances, a student may choose to appeal dismissal from his or her program. All appeals are presented to and reviewed by the Committee on Graduate Studies (COGS).
      i. A request for appeal of dismissal and presentation to COGS must be sent by the student in writing to the Associate Dean for Graduate Studies within 3 business days of receiving the certified letter of dismissal. The student must indicate in the request if he or she wishes to bring a person outside of the School of Nursing to the meeting. If the person attending the meeting with the student is an attorney, the meeting will be held with the University attorney present. The student may also request to bring other appropriate agencies to the meeting for consultation. The Committee on Graduate Studies may request additional agencies to attend the appeal or meet with them prior to deliberating. A review of the student’s records may also be conducted.
      ii. The Associate Dean for Graduate Studies will notify the student, in writing via email, that his or her case will be presented to the Committee on Graduate Studies. The written communication will include the date and time of the presentation. Student presentations are limited to a maximum of 15 minutes.
   b. After the student presentation is concluded, and any additional information deemed appropriate to the situation is obtained, the Committee on Graduate Studies will review all information related to the criteria set forth in provision 2 for adherence to process and outcome actions. The faculty voting members of the Committee on Graduate Studies, in closed deliberation with the Associate Dean for Graduate Studies can recommend one or more of the following actions:
      i. Uphold the decision to dismiss the student from the School of Nursing Graduate Program
      ii. Amend the dismissal decision to probation in the Graduate Nursing Program per explicit terms and expectations deemed
appropriate by COGS and the Associate Dean for Graduate Studies

iii. Reconsideration of dismissal due to adherence concerns with process; including next steps

c. A written recommendation from the Chairperson of the Committee on Graduate Studies will be made to the Dean of the School of Nursing.

d. The final decision will be made by the Dean and will be delivered to the student in writing by certified letter to the student's address of record. A student who receives probation in the Graduate Nursing Program is not eligible to re-enroll in courses the semester immediately following the semester in which the student originally met criteria for dismissal. A student who is dismissed from the School of Nursing may not continue in the Graduate Nursing Program and is not eligible for readmission.

**Petition**

Students may petition the Committee on Graduate Studies (COGS) for the consideration of relevant issues influencing program progression and/or completion. Students who wish to petition COGS should consult with the Associate Dean for Graduate Studies, and then complete the Student Petition Form that is available from the Office for Academic Affairs. Decisions regarding the petition will be communicated in writing to the students.

Petitions for reconsideration of the decision of COGS are reviewed by the Dean of the School of Nursing (http://nursing.uthscsa.edu). The Dean's decisions are final.

**Repetition of a Course**

Students cannot retake nursing courses for a grade in which they have already received a passing grade.

**The Semester Credit Hour**

The unit of measure for credit purposes is the semester credit hour. One semester credit hour is given for each one clock hour of class or one clock hour of seminar for didactic courses. Four clock hours per one semester credit hour of laboratory/practicum/computer lab experience per week, per semester is given in the Nurse Practitioner majors, Nursing Education major, Administrative Management and Clinical Nurse Leader majors and all tracks in the DNP Program. For selected sessions and summer sessions during which the class, seminar, and practicum hours are concentrated, equivalent clock hours are provided.

**Dissertation Course Report**

Dissertation courses may be reported as In Progress (IP) until the work is completed. Dissertation courses are not counted in the grade point average.

**Examinations**

Examinations must be taken on the date and time scheduled. If extenuating circumstances prevent the student from taking an examination, prior approval must be granted by the course instructor to postpone the examination. If a student misses an examination without prior approval by the instructor, a grade of F will be recorded for the examination.

**Readmission**

Individuals who have previously been enrolled in graduate nursing courses should complete an Application for Readmission. Transcripts from any colleges or universities attended since the time of the previous enrollment in the graduate programs must be submitted. Applicants may be requested to provide recent professional references. Proof of current licensure as a registered nurse in Texas is also required.

Individuals who have not registered in three consecutive terms, including summers, must apply for readmission unless they were previously granted official permission for leave of absence. Students who do not return from leave of absence within the three consecutive terms limit will be withdrawn from the nursing program and will have to apply for admission as a new student.

Those seeking readmission are subject to all requirements, procedures, and acceptance considerations outlined in this Catalog.

**Nursing Science**

The Doctor of Philosophy (Ph.D.) in Nursing prepares students for careers as clinical nurse scientists and faculty. Admission into the program is only offered once a year, with an application deadline of April 1st for students to begin classes in Fall. Admission can occur at the Post-BSN or Post-MSN levels. The Ph.D. program is rooted in foundations of theory and research with the expectation of students to become teachers and disseminators of knowledge in the field of Nursing.

**Ph.D. Admissions Requirements**

**Program Length:** 3 – 6 Years

**Admissions Requirements:**

To be considered for admission to the Doctor of Philosophy in Nursing Program the following factors are required:

- NursingCAS application fee
- Bachelors in Nursing and/or Masters in Nursing from a nationally accredited school of nursing (NLNAC, CCNE)
- Submit official transcript(s) from each post-secondary institution attended, even if no degree awarded, to NursingCAS. International transcripts must be evaluated by an accredited foreign credential service. *For more information regarding international applicant requirements, click here (http://nursing.uthscsa.edu/students/intApplicants.asp).
- Current Required Immunizations (http://shc.uthscsa.edu)
- Clear Criminal Background Check
- Licensure as a Registered Nurse in Texas or Compact State.
- Current BLS for Healthcare Providers Certification through the American Heart Association.
- Current Required Immunizations (http://shc.uthscsa.edu)
- Proof of Current Health Insurance Coverage (http://students.uthscsa.edu/studentlife/2013/03/health-insurance)
- Official results from the GRE exam taken within the last 5 years should indicate strong verbal, quantitative and analytic potential.
• Current resume or curriculum vita
• School of Nursing application fee
• Interview and Admission Essay

Application Deadline: Deadline for fall entrance is April 1 (Ph.D. applications are accepted only once each year)

Start Term: Fall

Contact:
Office of Admissions
School of Nursing
UT Health Science Center at San Antonio
7703 Floyd Curl Drive, MSC 7945
San Antonio, Texas 78229-3900
Phone: 210-567-0341
Toll Free: 877-235-0341
FAX 210-567-6189
http://nursing.uthscsa.edu/

Ph.D. Degree Requirements and Graduation
Students may enter the Ph.D. program post baccalaureate degree in nursing or post master’s degree in nursing.

Full-time and part-time study options are available. Part-time study for doctoral students is defined as six semester credit hours or two courses in the Fall and Spring semesters and one course in the Summer semester. Full-time study for doctoral students is defined as nine semester credit hours or three courses in the Fall and Spring semesters and two courses in the Summer semester.

Students complete a minimum of 81 semester credit hours (which includes previous graduate course work) in three to six years.

All policies of the Graduate School of Biomedical Sciences http://gsbs.uthscsa.edu are applicable to this program of study.

Ph.D. Nursing Science Plan of Study
Post-BSN to Ph.D. Full-Time

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* Part time plan of study varies for the BSN to Ph.D., please contact department

§ 9 hours of Cognate courses must be completed prior to or during the same term as Qualifying Exams

**Post-MSN to Ph.D. Full-Time**
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§ 6 hours of Cognate courses must be completed prior to or during the same term as Qualifying Exams

**Ph.D. Program Outcomes**

At the completion of the doctoral program the student will:

1. Advance the discipline of nursing through the generation of new knowledge and theory.
2. Demonstrate excellence as a clinical researcher in the health sciences in a focal area of nursing.
3. Synthesize theories from natural and/or behavioral sciences for application to a specific area of nursing.
5. Assume nurse scientist roles within academic health centers and other interdisciplinary health sciences and educational institutions.
6. Evaluate the value and knowledge components of philosophical and ethical dimensions of issues confronting healthcare and nursing.

The Ph.D. in Nursing program is offered by UT Health San Antonio School of Nursing (SON). The Ph.D. degree is awarded by UT Health San Antonio Graduate School of Biomedical Sciences.

**Ph.D. Program Policies**

**General Information**

Information about academic progression, policies, or procedures, as well as curriculum information, may be obtained from the Office for Academic Affairs.

**Current Licensure as a Registered Nurse**

Each graduate nursing student is required to maintain current licensure in good standing as a registered nurse in Texas, or a Compact State with multistate privileges, throughout the graduate program. Students must provide a copy of the license verification to the Office for Academic Affairs. Failure to maintain a current license in good standing or to produce proof of current licensure in good standing is grounds for dismissal from the program.

**Advisement**

Each student enrolled in the graduate program is assigned an advisor in the Office for Academic Affairs.

**Dissertation**

The Graduate School Instructions for Preparation and Submission of Thesis, Dissertations, and Dissertation Abstracts and forms for advisor approval are available from the GSBS website. Doctoral students should obtain a copy of the Guidelines that provide information about the dissertation process.

**Teaching Assistants**

Opportunities are available for graduate nursing students enrolled part-time to work as teaching assistants in the School of Nursing. Interested applicants should contact the Office for Academic Affairs in the School of Nursing for additional information.

**Transfer of Credit**

Academic work for the Ph.D. in Nursing are usually completed within the Health Science Center. However, students may, with the approval of the Committee on Graduate Studies (COGS), transfer from another accredited institution a maximum of six semester credit hours (9 quarter hours) of graduate credit applicable to their course of study leading toward the Ph.D. in Nursing degree.

Approval of transfer credit requires that the student be enrolled in the graduate program. The student must complete a Request for Transfer of Credit form and submit it to the Office for Academic Affairs with an official course description from the Catalog and must make certain that an official transcript, sent directly from the college or university attended, is in her/his file or request that a transcript be sent as soon as the course is completed. All courses must have been completed not more than five years before the degree is awarded. Courses in which a grade of C or less has been earned will not be accepted for transfer. The student may obtain additional information about materials that must be submitted with the petition from the Office for Academic Affairs.

**Honors**

A graduate nursing student whose grade point average is 4.0 is awarded her/his degree with High Honors.

**Grades and Grade Point Average**

The standing of students in their work is expressed by five grades: A (above average graduate work), B (average graduate work), C (below average graduate work), D (failing graduate work), and F (failing graduate work). D and F grades are not acceptable for graduate credit. Students may also register in certain courses on a pass/fail basis, in which case the grade is recorded as either Pass (P) or Fail (F) and no letter grade is assigned.

Other symbols used in reporting the standing of students in their classes are: W(withdraw); I(incomplete); IP(in progress for selected courses); S(satisfactory); U(unsatisfactory); P(pass); NP(no pass); AU(records an audited course). U and NP are equivalent to a grade of F.

Courses in which a student receives a D, F, U, or NP will not be counted toward the total number of courses and/or hours required for a graduate degree in the School of Nursing or the Graduate School of Biomedical Sciences. However, all grades (A to F) are included in the computation of the grade point average. In computing the grade point average, the following scale of points per semester credit hour is used:

- A = 4 points (90-100)
- B = 3 points (80-89)
- C = 2 points (75-79)
- D = 1 point (66-74)
- F = 0 points (65 or below)

**Note:** Final numeric grades are calculated to two decimal places and rounded mathematically as follows:

- Less than 0.50 – Round down to next whole number – (i.e. "89.49" would be rounded to "89")
- 0.50 or greater – Round up to next whole number – (i.e. "90.50" would be rounded to "91")

**Progression in the Graduate Program**

To continue in the Ph.D program, a student must:

- absolve any contingencies related to admission to the program within the time period stated in the letter of admission, or within the first semester if not stated;
- maintain satisfactory progress (B average in first 9 hours) if conditionally admitted;
- receive no more than one C in any course;
- maintain a minimum cumulative grade point average of B (3.0) for all courses taken while enrolled in the graduate program.

Should a student fail to meet the criteria for continuance in the program, her/his progress will be reviewed by the Committee on Graduate Studies (COGS) which may.
• impose conditions as requirements for continuation in the program, or
• terminate the student’s enrollment in the program, with the consent of the Dean of the School of Nursing or the Dean of the Graduate School of Biomedical Sciences (http://gsbs.uthscsa.edu).

Scholastic Probation
A student whose cumulative grade point average falls below 3.0 will be placed on probation and warned that continuation in the graduate program is in jeopardy.

The progress of students on scholastic probation will be reviewed by the Committee on Graduate Studies (COGS) each semester. A student on scholastic probation will not be admitted to candidacy nor awarded a degree. Satisfactory progress toward the degree is required throughout the student’s enrollment. The Committee on Graduate Studies (COGS) may terminate a student’s enrollment at any time if the student does not meet the criteria for continuance in the program.

Probation Policy and Procedure
1. Definition: Probation is the status of the student whose progression in the program may be delayed, interrupted or conditional due to the criteria listed below.
2. Criteria for Probation in the Nursing Program includes any one of the following:
   a. Earning a grade of C in a graduate course
      i. The student will be on probation the remainder of their program
   b. Earning a grade in a graduate course that drops the GPA below 3.0
   c. Failure to meet any of the School of Nursing Policies related to academic or professional conduct
   d. Failure to meet the terms of professional integrity standards defined in the current University Catalog, the Texas State Board of Nursing Nurse Practice Act (http://www.bon.texas.gov/laws_and_rules_nursing_practice_act.asp), the Texas State Board of Nursing Rules and Regulations (http://www.bon.texas.gov/laws_and_rules_regulations.asp) and the American Nurses Association Code of Ethics (http://www.nursingworld.org/MainMenuCategories/EthicsStandards/CodeofEthicsforNurses).

3. Probation Procedure
   a. Initial Review of Recommendation for Probation
      i. A student whom receives a final grade of C in a course will be notified of his/her probation status by the Office for Academic Affairs
      ii. The student may present his/her case to the Associate Dean for Graduate Studies, if requested in writing, within 3 business days of notification of the probation recommendation. If the student wishes to bring a person outside of the School of Nursing to the meeting, he/she must indicate this in the request to the Associate Dean for Graduate Studies. If the person attending the meeting with the student is an attorney, the meeting will be held with the University attorney present.
   b. If a student is in validation of the criteria for probation one or more of the following actions will occur:
      i. Earning a Grade of C or a grade that drops the GPA below 3.0
      1. A written “Probation Letter of Expectation” that determines the length and conditions of the probation period which may include, but are not limited, any one of the following:
         • Referral of the student to resources and support services for academic success
         • Referral of the student to the faculty to devise a written plan for academic success
         • Referral of the student to the Associate Dean for Admissions and Student Services for non-academic support
   ii. Failure to meet School of Nursing Policies or failure to meet the terms of professional integrity standards defined in the current University Catalog, the Texas State Board of Nursing Nurse Practice Act (http://www.bon.texas.gov/laws_and_rules_nursing_practice_act.asp), the Texas State Board of Nursing Rules and Regulations (http://www.bon.texas.gov/laws_and_rules_regulations.asp) and the American Nurses Association Code of Ethics (http://www.nursingworld.org/MainMenuCategories/EthicsStandards/CodeofEthicsforNurses)
      1. The Associate Dean for Graduate Studies will present a recommendation for the “Probation Letter of Expectation” that determines the length and conditions of the probation to the Committee on Graduate Studies.
      2. When indicated, the incident will be reported to the local law enforcement agency and/or other appropriate agencies, institutions, and/or regulatory bodies by the Associate Dean for Graduate Studies.
      3. If the review of the recommendation for probation results in a recommendation for dismissal, the policy and procedure for dismissal will supersede the policy and procedure for probation.

Dismissal Policy and Procedure
1. Definition: Dismissal is the removal of a student from the School of Nursing Graduate Program. A student who is dismissed from the graduate program may not continue in the graduate nursing program and is not eligible for readmission.
2. Criteria for Dismissal from the Graduate Nursing Program includes any one of the following:
   a. Earning a grade of D, F, NP, U, or Fail in any required graduate course
   b. Earning a grade of C in 6 or more credit hours of required graduate coursework regardless of cumulative GPA or in two graduate courses regardless of the number of credit hours and cumulative GPA
   c. Failure to meet the conditions of the School of Nursing “Probation Letter of Expectation”
   d. Failure to meet the terms of professional integrity and ethical standards defined in the current University Catalog, the Texas State Board of Nursing Nurse Practice Act (http://www.bon.texas.gov/laws_and_rules_nursing_practice_act.asp), the Texas State Board of Nursing Rules and Regulations (http://www.bon.texas.gov/laws_and_rules_regulations.asp) and the American Nurses Association Code of Ethics (http://www.nursingworld.org/MainMenuCategories/EthicsStandards/CodeofEthicsforNurses). When indicated, the incident will be reported to the local law enforcement agency and/or other appropriate agencies, institutions, and/or regulatory bodies
   e. Failure to notify the school of non-matriculation for two consecutive semesters (excluding summers)
3. Dismissal Procedure
a. A student whom receives a grade of D, F, NP, U, or Fail in a course will be notified of his/her dismissal status by the Office for Academic Affairs.

b. When a student meets criteria in provision 2 above, he or she will be dismissed from his or her program. The student will receive notification of dismissal via a certified letter from the Dean of the Graduate School of Biomedical Sciences. A copy of the letter will be sent to the Dean and the Associate Dean of Graduate Studies of the School of Nursing, placed in the student’s file in the Office for Academic Affairs and sent to the Registrar for the student’s permanent record. The Associate Dean for Graduate Studies has full authority to proceed autonomously according to policy, but may choose to seek input from the Committee on Graduate Studies (COGS).

c. A student who is dismissed from his or her program is not eligible to register for additional courses. If the student has already registered for subsequent courses, the student will be required to unenroll.

4. Student Appeal of Dismissal

a. In the event of extenuating circumstances, a student may choose to appeal dismissal from his or her program. All appeals are presented to and reviewed by the Committee on Graduate Studies (COGS).

i. A request for appeal of dismissal and presentation to COGS must be sent by the student in writing to the Associate Dean for Graduate Studies within 3 business days of receiving the certified letter of dismissal. The student must indicate in the request if he or she wishes to bring a person outside of the School of Nursing to the meeting. If the person attending the meeting with the student is an attorney, the meeting will be held with the University attorney present. The student may also request to bring other appropriate faculty to the meeting with COGS. The Committee on Graduate Studies may request University employees or supervising clinical agency personnel attend the appeal or meet with them prior to deliberating. A review of the student’s records may also be conducted.

ii. The Associate Dean for Graduate Studies will notify the student, in writing via email, that his or her case will be presented to the Committee on Graduate Studies. The written communication will include the date and time of the presentation. Student presentations are limited to a maximum of 15 minutes.

b. After the student presentation is concluded, and any additional information deemed appropriate to the situation is obtained, the Committee on Graduate Studies will review all information related to the criteria set forth in provision 2 for adherence to process and outcome actions. The faculty voting members of the Committee on Graduate Studies, in closed deliberation with the Associate Dean for Graduate Studies can recommend one or more of the following actions:

i. Uphold the decision to dismiss the student from the School of Nursing Graduate Program

ii. Amend the dismissal decision to probation in the Graduate Nursing Program per explicit terms and expectations deemed appropriate by COGS and the Associate Dean for Graduate Studies

iii. Reconsideration of dismissal due to adherence concerns with process; including next steps

c. A written recommendation from the Chairperson of the Committee on Graduate Studies will be made to the Dean of the Graduate School of Biomedical Sciences. A copy of the recommendation will be sent to the Dean of the School of Nursing.

d. The final decision will be made by the Dean of the Graduate School of Biomedical Sciences and will be delivered to the student in writing by certified letter to the student’s address of record. A student who receives probation in the Graduate Nursing Program is not eligible to re-enroll in courses the semester immediately following the semester in which the student originally met criteria for dismissal. A student who is dismissed from the School of Nursing may not continue in the Graduate Nursing Program and is not eligible for readmission.

Petition

Students may petition the Committee on Graduate Studies (COGS) for the consideration of relevant issues influencing program progression and/or completion. Students who wish to petition COGS should consult with the Associate Dean for Graduate Studies, and then complete the Student Petition Form that is available from the Office for Academic Affairs. Decisions regarding the petition will be communicated in writing to the students.

Petitions for reconsideration of the decision of COGS are reviewed by the Dean of the Graduate School of Biomedical Sciences. The Dean’s decisions are final.

Repetition of a Course

Students cannot retake nursing courses for a grade in which they have already received a passing grade. Credit for courses in which a D or F is received may not be repeated and is grounds for dismissal as indicated in the dismissal policy.

The Semester Credit Hour

The unit of measure for credit purposes is the semester credit hour. One semester credit hour is given for each one clock hour of class or one clock hour of seminar for didactic courses. Four clock hours per one semester credit hour of laboratory/practicum/computer lab experience per week, per semester is given in the Nurse Practitioner majors, Nursing Education major, Administrative Management and Clinical Nurse Leader majors and all tracks in the DNP Program. For selected sessions and summer sessions during which the class, seminar, and practicum hours are concentrated, equivalent clock hours are provided.

Dissertation Course Report

The dissertation course may be reported as In Progress (IP) until the work is completed. The dissertation course is not counted in the grade point average.

Examinations

Examinations must be taken on the date and time scheduled. If extenuating circumstances prevent the student from taking an examination, prior approval must be granted by the course instructor to postpone the examination. If a student misses an examination without prior approval by the instructor, a grade of F will be recorded for the examination.

Readmission

Individuals who have previously been enrolled in graduate nursing courses should complete an Application for Readmission. Transcripts from any colleges or universities attended since the time of the previous enrollment in the graduate programs must be submitted. Applicants may
be requested to provide recent professional references. Proof of current licensure as a registered nurse in Texas is also required.

Individuals who have not registered in three consecutive terms, including summers, must apply for readmission unless they were previously granted official permission for leave of absence. Students who do not return from a leave of absence within the three consecutive terms limit will be withdrawn from the nursing program and will have to apply for admission as a new student.

Those seeking readmission are subject to all requirements, procedures, and acceptance considerations outlined in this Catalog.

Doctor of Nursing Practice (DNP)
The Doctor of Nursing Practice (DNP) Program (http://nursing.uthscsa.edu/programs/grad/dnp.aspx) is designed as the highest possible degree for nurses committed to clinical work. The DNP is an outgrowth of an increasingly complex healthcare system that requires advanced practice nurses to understand leadership, policy, economics, quality and safety issues, apply and translate research into practice, and to be leaders of multidisciplinary practice initiatives. Post-BSN and Post-MSN entry options are available. Full-time and part-time study options are available.

Program Outcomes
Upon completion of the Doctor of Nursing Practice Program students will:

1. Integrate nursing science, ethics, biophysical, psychosocial, analytical, and organizational sources to provide the highest level of specialty nursing practices.
2. Develop, implement, and evaluate healthcare practices in healthcare systems that ensure quality improvement and patient safety.
3. Use analytic methods and evidence based practices to improve practice outcomes and the practice environment.
4. Implement and evaluate ethical healthcare information systems and patient care technology to improve the quality of patient health outcomes and care systems.
5. Advocate for healthcare practices that advance social justice, equity, and ethical policies within all healthcare arenas.
6. Employ interprofessional collaborative teams to improve patient and population health outcomes and healthcare delivery systems.
7. Lead the integration and institutionalization of (evidence based) clinical prevention and population based health guidelines.
8. Use clinical judgment, systems thinking, accountability, and specialized knowledge to design, deliver, and evaluate evidence based, culturally proficient care to improve patient, population, and health systems outcomes.

Graduate Program Policies

General Information
Information about academic progression, policies, or procedures, as well as curriculum information, may be obtained from the Office for Academic Affairs.

Current Licensure as a Registered Nurse
Each graduate nursing student is required to maintain current licensure in good standing as a registered nurse in Texas, or a Compact State with multistate privileges, throughout the graduate program. Students must provide a copy of the license verification to the Office for Academic Affairs. Failure to maintain a current license in good standing or to produce proof of current licensure in good standing is grounds for dismissal from the program.

Advisement
Each student enrolled in the graduate program is assigned an advisor in the Office for Academic Affairs.

Transfer of Credit
Students may, with the approval of the Committee on Graduate Studies (COGS), transfer from another accredited institution a maximum of six semester credit hours (9 quarter hours) of graduate credit applicable to their course of study leading toward the Master of Science in Nursing.

Approval of any course for transfer, prior to registration for the course, is strongly recommended.

Approval of transfer credit requires that the student be enrolled in the graduate program. The student must complete a Request for Transfer of Credit form and submit it to the Office for Academic Affairs with an official transcript from the Catalog and must make certain that an official transcript, sent directly from the college or university attended, is in her/his file or request that a transcript be sent as soon as the course is completed. All courses must have been completed not more than five years before the degree is awarded. Courses in which a grade of C or less has been earned will not be accepted for transfer (see exception for students enrolled in the DNP Public Health Nurse Leader). The student may obtain additional information about materials that must be submitted with the petition from the Office for Academic Affairs.

Teaching Assistants
Opportunities are available for graduate nursing students enrolled part-time to work as teaching assistants in the School of Nursing. Interested applicants should contact the Office for Academic Affairs in the School of Nursing for additional information.

Honors
A graduate nursing student whose grade point average is 4.0 is awarded her/his degree with High Honors.

Grades and Grade Point Average
The standing of students in their work is expressed by five grades: A (above average graduate work), B (average graduate work), C (below average graduate work), D (failing graduate work), and F (failing graduate work). D and F grades are not acceptable for graduate credit. Students may also register in certain courses on a pass/fail basis, in which case the grade is recorded as either Pass (P) or Fail (F) and no letter grade is assigned.

Other symbols used in reporting the standing of students in their classes are: W=withdrawal from course; I=incomplete; IP=in progress (for selected courses); S=satisfactory; U=unsatisfactory; P=pass; F= fail; AU records an audited course. U is equivalent to a grade of F.

Courses in which a student receives a D, F, or U will not be counted toward the total number of courses and/or hours required for a graduate degree in the School of Nursing or the Graduate School of Biomedical Sciences. However, all grades (A to F) are included in the computation of the grade point average. In computing the grade point average, the following scale of points per semester credit hour is used:
A = 4 points (90-100)
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Note: Final numeric grades are calculated to two decimal places and rounded mathematically as follows:

• Less than 0.50 – Round down to next whole number – (i.e."89.49" would be rounded to "89")
• 0.50 or greater – Round up to next whole number – (i.e. "90.50" would be rounded to "91")

**Progression in the Graduate Program**

To continue in the graduate program, a student must:

• absolve any contingencies related to admission to the program within the time period stated in the letter of admission, or within the first semester if not stated;
• maintain satisfactory progress (B average in first 9 hours);
• receive no more than one C in any course;
• maintain a minimum cumulative grade point average of 3.0 for all courses taken while enrolled in the graduate program.

**Scholastic Probation**

A student whose cumulative grade point average falls below 3.0 will be placed on scholastic probation and warned that continuation in the graduate program is in jeopardy.

The progress of students on scholastic probation will be reviewed by the Committee on Graduate Studies (COGS) each semester. A student on scholastic probation will not be admitted to candidacy nor awarded a degree. Satisfactory progress toward the degree is required throughout the student’s enrollment. The Committee on Graduate Studies (COGS) may terminate a student’s enrollment at any time if the student does not meet the criteria for continuance in the program.

**Probation Policy and Procedure**

1. Definition: Probation is the status of the student whose progression in the program may be delayed, interrupted or conditional due to the criteria listed below.

2. Criteria for Probation in the Nursing Program includes any one of the following:
   a. Earning a grade of C in a graduate course
      i. The student will be on probation the remainder of their program
   b. Earning a grade in a graduate course that drops the GPA below 3.0
   c. Failure to meet any of the School of Nursing Policies related to academic or professional conduct
   d. Failure to meet the terms of professional integrity standards defined in the current University Catalog, the Texas State Board of Nursing Nurse Practice Act (http://www.bon.texas.gov/laws_and_rules_nursing_practice_act.asp), the Texas State Board of Nursing Rules and Regulations (http://www.bon.texas.gov/laws_and_rules_rules_and_regulations.asp) and the American Nurses Association Code of Ethics (http://www.nursingworld.org/MainMenuCategories/EthicsStandards/CodeofEthicsforNurses).

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   a. Initial Review of Recommendation for Probation
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      ii. The student may present his/her case to the Associate Dean for Graduate Studies, if requested in writing, within 3 business days of notification of the probation recommendation. If the student wishes to bring a person outside of the School of Nursing to the meeting, he/she must indicate this in the request to the Associate Dean for Graduate Studies. If the person attending the meeting with the student is an attorney, the meeting will be held with the University attorney present.
   b. If a student is in validation of the criteria for probation one or more of the following actions will occur:
      i. Earning a Grade of C or a grade that drops the GPA below 3.0
         1. A written "Probation Letter of Expectation" that determines the length and conditions of the probation period which may include, but are not limited, any one of the following:
            • Referral of the student to resources and support services for academic success
            • Referral of the student to the faculty to devise a written plan for academic success
            • Referral of the student to the Associate Dean for Admissions and Student Services for non-academic support
      ii. Failure to meet School of Nursing Policies or failure to meet the terms of professional integrity standards defined in the current University Catalog, the Texas State Board of Nursing Nurse Practice Act (http://www.bon.texas.gov/laws_and_rules_nursing_practice_act.asp), the Texas State Board of Nursing Rules and Regulations (http://www.bon.texas.gov/laws_and_rules_rules_and_regulations.asp) and the American Nurses Association Code of Ethics (http://www.nursingworld.org/MainMenuCategories/EthicsStandards/CodeofEthicsforNurses).

**Dismissal Policy and Procedure**

1. Definition: Dismissal is the removal of a student from the School of Nursing Graduate Program. A student who is dismissed from the graduate program may not continue in the graduate nursing program and is not eligible for readmission.

2. Criteria for Dismissal from the Graduate Nursing Program includes any one of the following:
4. Student Appeal of Dismissal

a. Earning a grade of D, F, or U, in any graduate course
b. Earning a grade of C in 6 or more credit hours of graduate coursework regardless of cumulative GPA or in two required graduate courses regardless of the number of credit hours and cumulative GPA
c. Failure to meet the conditions of the School of Nursing “Probation Letter of Expectation”
d. Failure to meet the terms of professional integrity and ethical standards defined in the current University Catalog, the Texas State Board of Nursing Nurse Practice Act, the Texas State Board of Nursing Rules and Regulations and the American Nurses Association Code of Ethics. When indicated, the incident will be reported to the local law enforcement agency and/or other appropriate agencies, institutions, and/or regulatory bodies.
e. Failure to notify the school of non-matriculation for two consecutive semesters (excluding summers)

3. Dismissal Procedure

a. A student whom receives a grade of D, F, or U in a course will be notified of his/her dismissal status by the Office for Academic Affairs
b. When a student meets criteria in provision 2 above, he or she will be dismissed from his or her program. The student will receive notification of dismissal via a certified letter from the Associate Dean of Graduate Studies also sent to the Dean of the School of Nursing, the student's file in the Graduate Office and to the Registrar for the student's permanent record. The Associate Dean for Graduate Studies has full authority to proceed autonomously according to policy, but may choose to seek input from the Committee on Graduate Studies (COGS).
c. A student who is dismissed from his or her program is not eligible to register for additional courses. If the student has already registered for subsequent courses, the student will be required to unenroll.

4. Student Appeal of Dismissal

a. In the event of extenuating circumstances, a student may choose to appeal dismissal from his or her program. All appeals are presented to and reviewed by the Committee on Graduate Studies (COGS).
   i. A request for appeal of dismissal and presentation to COGS must be sent by the student in writing to the Associate Dean for Graduate Studies within 3 business days of receiving the certified letter of dismissal. The student must indicate in the request if he or she wishes to bring a person outside of the School of Nursing to the meeting. If the person attending the meeting with the student is an attorney, the meeting will be held with the University attorney present. The student may also request to bring other appropriate faculty to the meeting with COGS. The Committee on Graduate Studies may request University employees or supervising clinical agency personnel attend the appeal or meet with them prior to deliberating. A review of the student's records may also be conducted.
   ii. The Associate Dean for Graduate Studies will notify the student, in writing via email, that his or her case will be presented to the Committee on Graduate Studies. The written communication will include the date and time of the presentation. Student presentations are limited to a maximum of 15 minutes.

b. After the student presentation is concluded, and any additional information deemed appropriate to the situation is obtained, the Committee on Graduate Studies will review all information related to the criteria set forth in provision 2 for adherence to process and outcome actions. The faculty voting members of the Committee on Graduate Studies, in closed deliberation with the Associate Dean for Graduate Studies can recommend one or more of the following actions:
   i. Uphold the decision to dismiss the student from the School of Nursing Graduate Program
   ii. Amend the dismissal decision to probation in the Graduate Nursing Program per explicit terms and expectations deemed appropriate by COGS and the Associate Dean for Graduate Studies
   iii. Reconsideration of dismissal due to adherence concerns with process; including next steps

c. A written recommendation from the Chairperson of the Committee on Graduate Studies will be made to the Dean of the School of Nursing.

d. The final decision will be made by the Dean and will be delivered to the student in writing by certified letter to the student’s address of record. A student who receives probation in the Graduate Nursing Program is not eligible to re-enroll in courses the semester immediately following the semester in which the student originally met criteria for dismissal. A student who is dismissed from the School of Nursing may not continue in the Graduate Nursing Program and is not eligible for readmission.

**Petition**

Students may petition the Committee on Graduate Studies (COGS) for the consideration of relevant issues influencing program progression and/or completion. Students who wish to petition COGS should consult with the Associate Dean for Graduate Studies, and then complete the Student Petition Form that is available from the Office for Academic Affairs. Decisions regarding the petition will be communicated in writing to the students.

Petitions for reconsideration of the decision of COGS are reviewed by the Dean of the School of Nursing (http://nursing.uthscsa.edu). The Dean's decisions are final.

**Repetition of a Course**

Students cannot retake nursing courses for a grade in which they have already received a passing grade.

**The Semester Credit Hour**

The unit of measure for credit purposes is the semester credit hour. One semester credit hour is given for each one clock hour of class or one clock hour of seminar for didactic courses. Four clock hours per one semester credit hour of laboratory/practicum/computer lab experience per week, per semester is given in the Nurse Practitioner majors, Nursing Education major, Administrative Management and Clinical Nurse Leader majors and all tracks in the DNP Program. For selected sessions and summer sessions during which the class, seminar, and practicum hours are concentrated, equivalent clock hours are provided.

**Dissertation Course Report**

Dissertation courses may be reported as In Progress (IP) until the work is completed. Dissertation courses are not counted in the grade point average.

**Examinations**

Examinations must be taken on the date and time scheduled. If extenuating circumstances prevent the student from taking an
examination, prior approval must be granted by the course instructor to postpone the examination. If a student misses an examination without prior approval by the instructor, a grade of F will be recorded for the examination.

Readmission

Individuals who have previously been enrolled in graduate nursing courses should complete an Application for Readmission. Transcripts from any colleges or universities attended since the time of the previous enrollment in the graduate programs must be submitted. Applicants may be requested to provide recent professional references. Proof of current licensure as a registered nurse in Texas is also required.

Individuals who have not registered in three consecutive terms, including summers, must apply for readmission unless they were previously granted official permission for leave of absence. Students who do not return from leave of absence within the three consecutive terms limit will be withdrawn from the nursing program and will have to apply for admission as a new student.

Those seeking readmission are subject to all requirements, procedures, and acceptance considerations outlined in this Catalog.

Doctor of Nursing Practice (Post-BSN to DNP)

Two leadership tracks are available: Advanced Practice Leadership and Public Health Nurse Leader. The Advanced Practice Leadership track offers the following specialty areas: Adult-Gerontology Acute Care Nurse Practitioner, Family Nurse Practitioner, Psychiatric Mental Health Nurse Practitioner, and Pediatric Nurse Practitioner Primary Care. Part-time and full-time study options are available.

The Post-BSN pathway is a 76 semester credit hour program. The DNP program requires that all students have 1,000 clinical/practicum hours post-bachelors. The Advanced Practice Leadership track's clinical/practicum hour requirement is 1080 clinical/practicum hours.

Admissions Requirements

Degree: BSN to DNP

Specialization, Program of Study:

- Adult-Gerontology Acute Care Nurse Practitioner
- Family Nurse Practitioner
- Psychiatric Mental Health Nurse Practitioner
- Pediatric Nurse Practitioner Primary Care
- Public Health

Program Length: 3 - 5 Years

General Admissions Requirements:

To be considered for admission to the Bachelor of Science in Nursing (BSN) to Doctor of Nursing Practice (DNP) Program the following factors are required:

- Online application submitted via NursingCAS (http://nursingcas.org).
  View a video overview (http://www.screencast.com/t/TYbelPyAD) on completing NursingCAS application.
- NursingCAS application fee
- Bachelor's in Nursing from a nationally accredited school of nursing (NLNAC, CCNE)
- Submit official transcript(s) from each post-secondary institution attended, even if no degree awarded, to NursingCAS. International transcripts must be evaluated by an accredited foreign credential service. *For more information regarding international applicant requirements, click here (http://nursing.uthscsa.edu/students/intApplicants.asp).
- Grade Point Average of “B” (3.0 on a 4.0 scale) or higher on the student’s last 60 hours of credit
- Official copy of Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) score, if international applicant. TOEFL and IELTS scores can be no more than two (2) years old. A minimum TOEFL score of 550 is required on the paper examination; minimum 250 on the computer-based examination; or, minimum 68 on the internet based examination. A minimum IELTS score of 6.5 for graduate admission is required. TOEFL or IELTS scores are not required for students who have successfully completed ENGL 1301 and 1302 (or equivalent courses) from an accredited college or university in the United States or for students who have earned a degree from an accredited college or university in the United States. TOEFL school code: 3383
- Licensure as a Registered Nurse in Texas or compact state with multistate privileges
- Current BLS for Healthcare Providers Certification through the American Heart Association.
- Current Required Immunizations (http://nursing.uthscsa.edu/shc/hc_immunization.asp)
- Proof of Current Health Insurance Coverage (http://students.uthscsa.edu/studentlife/2013/03/health-insurance)
- Clear Criminal Background Check
- Three Professional References (Submit via NursingCAS Application)
- Current resume or curriculum vita
- School of Nursing application fee
- Interview and Admission Essay

Application Deadline: Deadline for fall entrance is March 1 (BSN to DNP applications are accepted only once each year)

Start Term: Fall

Contact:
Office of Admissions
School of Nursing
UT Health Science Center at San Antonio
7703 Floyd Curl Drive, MSC 7945
San Antonio, Texas 78229-3900
Phone: 210-567-0341
Toll Free: 877-235-0341
FAX 210-567-6189
https://www.uthscsa.edu/academics/nursing

Degree Requirements and Graduation

For the Post-BSN to DNP degree, completion of 76 semester credit hours (see Plan of Study), an overall minimum GPA of 3.0, no more than one C in a required course, and no incomplete grades are required to be eligible for graduation.
The program is designed to be completed in 36 months of full-time study, however, part-time enrollment is feasible within the program plan. A clinical preceptorship is required.

**Clinical/Practicum Hours**

The Doctor of Nursing Practice requires that all students have 1,000 clinical/practicum hours post bachelors. DNP clinical/practicum hour requirements for nurses in the BSN to DNP program are 360 hours. The Advanced Practice clinical/practicum hour requirements for nurses in the BSN to DNP program are 720 hours.

**DNP Project**

A hallmark of the practice doctorate is the DNP project demonstrating the student’s in-depth knowledge of one’s area of specialty practice and the synthesis of the student's coursework and practice application. The project is guided and evaluated by a primary faculty and secondary faculty (optional). The project results in a scholarly paper and presentation.

The focus of all DNP projects is on knowledge translation at multiple system levels. During the program, students work with faculty to begin exploring concepts related to their area of interest while evaluating sources of evidence related to the problem/need. The project will be defined through the DNP Seminar course. Based upon an assessment and evaluation of the evidence, the plan and design will be developed for a DNP project initiative.

**Curriculum**

The BSN to DNP Advanced Practice Leadership program has five Post-Bachelor's specialties in Adult Gerontology Acute Care Nurse Practitioner (AGACNP), Family Nurse Practitioner (FNP), Pediatric Nurse Practitioner Primary Care (PNP-PC), Psychiatric Mental Health Nurse Practitioner (PMHNP), and Public Health Nurse Leader. The BSN to DNP program is designed to prepare nursing leaders for the highest level of professional nursing practice beyond the initial preparation in the discipline. The curriculum is based on the Essentials of Doctoral Education for Advanced Nursing Practice developed by the American Association Colleges of Nursing (AACN, 2006).

**Advanced Practice Leadership**

Adult-Gerontology Acute Care Nurse Practitioner

The DNP-Advanced Practice Leadership degree can be earned in 9 semesters as a full-time student and in 15 semesters as a part-time student. The role of the Adult-Gerontology Acute Care Nurse Practitioner (AG-ACNP) is to provide advanced nursing care across the continuum of health care services to meet the specialized physiologic and psychological needs of patients with complex acute, critical, and chronic health conditions.

The Adult-Gerontology Acute Care Nurse Practitioner 76 credit hour plan of study is for nurses who are nationally certified and hold Registered Nurse (RN) licensure with the Board of Nursing.

**Full-Time Plan of Study**

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### Third Year - Summer Term
### Part-Time Plan of Study

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**NURS 7307**

DNP Dissemination

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**Second Year - Summer Term**

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**Third Year - Spring Term**

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**Third Year - Summer Term**
### Doctor of Nursing Practice (Post-BSN to DNP)

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**Fourth Year - Summer Term**
1 Please view individual course descriptions for information on required prerequisites or co-requisites. The Doctor of Nursing Practice requires that all students must have 1,000 clinical/practicum hours post bachelor’s to DNP. Clinical/practicum hour requirements for nurses in the UT Health San Antonio BSN to DNP program are a minimum of 360 DNP project hours and 720 Advanced Practice clinical hours. More hours may be required to complete the project/program requirements.

### Family Nurse Practitioner

The Family Nurse Practitioner\(^1\) (76 credit hours) track is for nurses who are nationally certified and hold Registered Nurse (RN) licensure with the Board of Nursing. The DNP-Advanced Practice Leadership degree can be earned in 9 semesters as a full-time student and in 15 semesters as a part-time student.

#### Full-Time Plan of Study

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# Part-Time Plan of Study

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**Second Year - Fall Term**

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**Total Credit Hours:**
- Second Year - Fall Term: 3.0

**Second Year - Spring Term**

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**Total Credit Hours:**
- Second Year - Spring Term: 6.0

**Second Year - Summer Term**

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**Total Credit Hours:**
- Second Year - Summer Term: 4.0

**Third Year - Fall Term**

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**Fifth Year - Fall Term**

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Total Credit Hours: 0.0 0.0 0.0 0.0 3.0

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1 Please view individual course descriptions for information on required prerequisites or co-requisites. The Doctor of Nursing Practice requires that all students must have 1,000 clinical/practicum hours post bachelor’s to DNP. Clinical/practicum hour requirements for nurses in the UT Health San Antonio BSN to DNP program are a minimum of 360 DNP project hours and 720 Advanced Practice clinical hours. More hours may be required to complete the project/program requirements.

**Psychiatric Mental Health Nurse Practitioner**

The Psychiatric Mental Health Nurse Practitioner (76 credit hours) track is for nurses who are nationally certified and hold Registered Nurse (RN) licensure with the Board of Nursing. The DNP-Advanced Practice
Leadership degree can be earned in 9 semesters as a full-time student and in 15 semesters as a part-time student.

### Full-Time Plan of Study

#### First Year - Fall Term

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**Total Credit Hours:** 9.0

#### First Year - Spring Term

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**Total Credit Hours:** 9.0

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**Second Year - Spring Term**

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NURS 6111  Psychiatric Mental Health Nurse Practitioner (PMHNP) Diagnosis and Management: Clinical Seminar 1

NURS 7306  DNP Project 180 3

Total Credit Hours: 0.0 420.0 0.0 0.0 10.0

Third Year - Spring Term

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Part-Time Plan of Study
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First Year - Spring Term

Total Credit Hours: 6.0

First Year - Summer Term

Total Credit Hours: 3.0

Second Year - Fall Term

Total Credit Hours: 6.0

Second Year - Spring Term

Total Credit Hours: 6.0

Second Year - Summer Term
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### Third Year - Spring Term

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**Fifth Year - Fall Term**
Doctor of Nursing Practice (Post-BSN to DNP)

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1 Please view individual course descriptions for information on required prerequisites or co-requisites. The Doctor of Nursing Practice requires that all students must have 1,000 clinical/practicum hours post bachelor’s to DNP. Clinical/practicum hour requirements for nurses in the UT Health San Antonio BSN to DNP program are a minimum of 360 DNP project hours and 720 Advanced Practice clinical hours. More hours may be required to complete the project/program requirements.

Pediatric Nurse Practitioner Primary Care

The Pediatric Nurse Practitioner Primary Care\(^1\) (76 credit hours) track is for nurses who are nationally certified and hold Registered Nurse (RN) licensure with the Board of Nursing. The DNP-Advanced Practice Leadership degree can be earned in 9 semesters as a full-time student and in 15 semesters as a part-time student.

Full-Time Plan of Study

First Year - Fall Term

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First Year - Spring Term

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**Third Year - Fall Term**

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## Part-Time Plan of Study

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### Fourth Year - Fall Term

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### Fourth Year - Spring Term

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Total Credit Hours: 0.0 180.0 0.0 0.0 4.0

Fifth Year - Fall Term

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Total Credit Hours: 0.0 180.0 0.0 0.0 3.0

Fifth Year - Spring Term

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Total Credit Hours: 0.0 180.0 0.0 0.0 3.0

Fifth Year - Summer Term

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Total Credit Hours: 0.0 0.0 0.0 0.0 3.0

1 Please view individual course descriptions for information on required prerequisites or co-requisites. The Doctor of Nursing Practice requires that all students must have 1,000 clinical/practicum hours post-bachelor’s to DNP. Clinical/practicum hour requirements for nurses in the UT Health San Antonio BSN to DNP program are a minimum of 360 DNP project hours and 720 Advanced Practice clinical hours. More hours may be required to complete the project/program requirements.

Admissions Requirements

Degree: DNP

Specialization, Program of Study: Nursing Practice Doctorate including tracks in Advanced Practice Leadership, Executive Administrative Management, and Public Health Nurse Leader

Program Length: 2 – 3 Years

General Admissions Requirements:

To be considered for admission to the Doctor of Nursing Practice (DNP) Program the following factors are required:

- Online application submitted via NursingCAS (http://nursingcas.org).
- View a video overview (http://www.screencast.com/t/TVbelPyAD) on completing NursingCAS application.
- NursingCAS application fee
- Master’s in Nursing from a nationally accredited school of nursing (NLNAC, CCNE)
- It is recommended that students applying to the Executive Administrative Management track have a master’s degree in administrative management or a master’s degree in nursing with equivalent experience in a healthcare leadership position and seek preparation as an executive level nurse leader.
Applicants to the Post-Masters Advanced Practice Leadership track must hold national certification as an Advanced Practice Registered Nurse or eligibility to sit for certification.

Submit official transcript(s) from each post-secondary institution attended, even if no degree awarded, to NursingCAS. International transcripts must be evaluated by an accredited foreign credential service. More information regarding international applicant requirements is available [here](http://nursing.uthscsa.edu/students/intApplicants.asp).

Grade Point Average of "B" (3.0 on a 4.0 scale) or higher on the student's last 60 hours of credit.

Official copy of Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) score, if international applicant. TOEFL and IELTS scores can be no more than two (2) years old. A minimum TOEFL score of 550 is required on the paper examination; minimum 250 on the computer-based examination; or, minimum 68 on the internet based examination. A minimum IELTS score of 6.5 for graduate admission is required. TOEFL or IELTS scores are not required for students who have successfully completed ENGL 1301 and 1302 (or equivalent courses) from an accredited college or university in the United States or for students who have earned a degree from an accredited college or university in the United States. TOEFL school code: 3383

Licensure as a Registered Nurse in Texas or compact state with multistate privileges

Current BLS for Healthcare Providers Certification through the American Heart Association.

Current Required Immunizations [here](http://nursing.uthscsa.edu/shc/hc_immunization.asp)

Proof of Current Health Insurance Coverage [here](http://students.uthscsa.edu/studentlife/2013/03/health-insurance)

Clear Criminal Background Check

Three Professional References (Submit via NursingCAS Application)

Current resume or curriculum vita

School of Nursing application fee

Interview and Admission Essay

Application Deadline: Deadline for fall entrance is April 1 (DNP applications are accepted only once each year)

Start Term: Fall

Contact:
Office of Admissions
School of Nursing
UT Health Science Center at San Antonio
7703 Floyd Curl Drive, MSC 7945
San Antonio, Texas 78229-3900
Phone: 210-567-0341
Toll Free: 877-235-0341
FAX: 210-567-6189
http://nursing.uthscsa.edu/

Degree Requirements and Graduation

Clinical/Practicum Hours

The Doctor of Nursing Practice requires that all students have 1,000 clinical/practicum hours post bachelors. Clinical/practicum hour requirements for nurses in the Post-Master’s DNP program for the Advanced Practice Leadership track, Public Health Nurse Leader track, and the Executive Administrative Management track are 480 hours. More hours may be required to complete the total 1,000 hour requirement depending on review of hours completed at the Masters level.

DNP Project

A hallmark of the practice doctorate is the DNP project demonstrating the student’s in-depth knowledge of one’s area of specialty practice and the synthesis of the student’s coursework and practice application. The project is guided and evaluated by a faculty advisor and project committee. The project results in a scholarly paper and presentation.

The focus of all DNP projects is on knowledge translation at multiple system levels. During the first semester, students work with faculty to begin exploring concepts related to their area of interest while evaluating sources of evidence related to the problem/need. The project will be further defined throughout the program and the proposal written during the DNP Advanced Nursing Seminar course. Based upon an assessment and evaluation of the evidence, the plan and design will be developed for a DNP project initiative.

Curriculum

The DNP program has three post master’s tracks in Advanced Practice Leadership, Executive Administrative Management and Public Health Nurse Leader. The DNP program is designed to prepare nursing leaders for the highest level of professional nursing practice beyond the initial preparation in the discipline. The curriculum is based on the Essentials of Doctoral Education for Advanced Nursing Practice developed by the American Association Colleges of Nursing (AACN, 2006).

Advanced Practice Leadership

The Advanced Practice Leadership (41 credit hours) track is for nurses who are nationally certified nurse practitioners and hold Advanced Practice Nurse (APN) licensure with the Board of Nursing. The DNP can be earned in 5 semesters as a full time student and in 7 semesters as a part time student.

<table>
<thead>
<tr>
<th>Theory</th>
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<th>Lab</th>
<th>Cont</th>
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</table>
| NURS 7311 | Theories and Research in Leadership, Quality, Safety, and Evidence Base | | | | 3
| NURS 7322 | Healthcare Policy Analysis and Advocacy | | | | 3
NURS 7222 Leadership In Complex Healthcare Systems 2
NURS 7324 Healthcare Economics And Policy 3

Evidence Based Courses
NURS 6315 Informatics & Health Care Technologies 3
NURS 6380 Fundamentals of Epidemiology 3
NURS 7321 Statistical Analysis for Quality Improvement and Health Delivery Systems 3
NURS 7301 Methods For Evidence-Based Practice (EBP) Translational Science 1 3
NURS 7323 Design And Analysis For Evidence-Based Practice (EBP) Translational Science 2 3

DNP Major Courses
NURS 7111 Advanced Nursing Seminar 1
NURS 7511 Advanced Nursing: Clinical Application 300 5
NURS 7312 DNP Project: Seminar 3
NURS 7313 DNP Practice Inquiry: Clinical Application 180 3

Cognate 3

Total Credit Hours: 41.0

**Executive Administrative Management**
The Executive Administrative Management (41 credit hours) track is for students with a master’s degree in nursing in administrative management or an equivalent degree in nursing who seek preparation as an executive level nurse leader. The DNP can be earned in 6 semesters as a full time student and 8 semesters as a part time student.

<table>
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<td>NURS 7322</td>
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<td>NURS 7222</td>
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NURS 7324 | Healthcare Economics And Policy | 3

**Evidence Based Courses**

NURS 6315 | Informatics & Health Care Technologies | 3
NURS 6380 | Fundamentals of Epidemiology | 3
NURS 7321 | Statistical Analysis for Quality Improvement and Health Delivery Systems | 3
NURS 7301 | Methods For Evidence-Based Practice (EBP) Translational Science 1 | 3
NURS 7323 | Design And Analysis For Evidence-Based Practice (EBP) Translational Science 2 | 3

**Executive Administrative Management Courses**

NURS 7314 | Nursing and Health Systems Administration | 3

**DNP Major Courses**

NURS 7111 | Advanced Nursing Seminar | 1
NURS 7511 | Advanced Nursing: Clinical Application | 300 | 5
NURS 7312 | DNP Project: Seminar | 3
NURS 7313 | DNP Practice Inquiry: Clinical Application | 180 | 3

| Total Credit Hours: | 0.0 | 480.0 | 0.0 | 0.0 | 41.0 |

**Public Health Nurse Leader**

The Public Health Nurse Leader\(^1\) (48 credit hours) track is for students with a master's degree in nursing who desire leadership preparation in population-based public health nursing. Nurses in this track receive a Public Health Certificate from the University of Texas Houston School of Public Health concurrent with the SON DNP degree. The DNP can be earned in 7 semesters as a full time student and 9 semesters as a part time student.

**Leadership Courses**

<table>
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<td>NURS 7222</td>
<td>Leadership In Complex Healthcare Systems</td>
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<td>NURS 7324</td>
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<td>PHM 2612</td>
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<td>PHM 1690</td>
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<td>PHM 3715</td>
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<td><strong>DNP Major Courses</strong></td>
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Please view individual course descriptions for information on required prerequisites or co-requisites. Also, the Doctor of Nursing Practice requires that all students must have 1,000 clinical/practicum hours post bachelors to DNP. Clinical/practicum hour requirements for nurses in the UTHSCSA Post-Master’s DNP program are 480 hours for all tracks. More hours may be required to complete the total 1,000 hour requirement depending on review of hours completed at the Masters level.

Courses in these tracks are not listed in sequence.
FACULTY

Gregory Abrahamian, BS,MD
Jason Adams, BEd,MPAS,BPAS
Sandra Adams, BS,MD,MS
Todd Agan, AA,BS
Animesh Agarwal, BS,MD
Ildiko Agoston, MD
Ricardo Aguiar, MD,PhD
Christine Aguilar, MS,MD,MPH
Alfonso Aguilera, DDS
S. Ahmed, BS,MD
Seema Ahuja, BM BS
Sunil Ahuja, MD,MS
Armen Akopian, BS,MS,PhD
Alexandria Alas, MD
Peggy Alexander, BS,DDS,MPH
Peggy Alexander, BS,DDS,MPH
Fozia Ali, BS,BM BS
Ana Allegretti, BS,MS,MS,PhD
Paul Allen, BS,MPAS,DSc
Judy Alvarado, BS,Med
Bennett Amaechi, BS,BDS,MS,PhD
Patricia Amerson, MSN, RN, CPNP, BSN,MSN
Sarah Ammerman, BEd,Med,PhD
Nancy Amodei, BS,MA,PhD
Elizabeth Anderson, BSN,DPL,MSN
Kent Anderson, DPL,AA,BS,PhD,MD
Christine Andre, BA,MD
John Andrews, BS,DDS
Melva Andrews, BS,MBA
Nehman Andry, BS,MD
Chidinma Aniemeke, BA,MD
Erica Annotti, MSN, RN, CPNP-PC, BS,BSN,MSN
Gregory Anstead, BS,BA,PhD,MD
Ravikumar Anthony, MS
Antonio Anzueto, BS,MD
Michelle Arandes, BA,MD
Mazen Arandes, MD
Antonio Arbona, BS,DMD
Theodore Arevalo, BS,MD
Veronica Armijo-Garcia, BS,MD
Alfredo Arribas, DDS, MS, BM BS,DDS,MS
Chatchawan Assanasen, BA,MD
Sidney Atkinson, BA,BA,MD
Gregory Aune, MD, PhD, FAAP, BA,BS,PhD,MD
Patricia Avant, DPL,BSN,MSN,PhD
Kelly Averill, BA,MD
Richel Avery, BSN,MD
Robert Badgett, BA,MD
Juli Bai, BS,MS,PhD
Yidong Bai, BA,MA,MS,PhD
Brigitte Bailey, BS,MD
Steven Bailey, BA,MD
Vidal Balderas, AS,AAS,BA,DDS,MPH
Abhik Bandyopadhyay, BS,MS,PhD
Shweta Bansal, BM BS
Mary Barbara, MD
Douglas Barber, BS,MD
Concepcion Barboza-Arguello, DDS
Takesha Barclay, ABS,BMS,MSN
Nasser Barghi, DDS,MA
Timothy Barker, AS,MD
Karin Barnes, BS,MS,PhD
Blair Barnett, BA,DDS
Julie Barnett, BPT,DPT
Constance Barone, BS,MD
Tyler Barreto, BA,MD
Viktor Bartanusz, MD
Deborah Baruch-Bienen, BS,MD,MA
Joseph Basler, BA,MA,MA,PhD,MD
Isabel Bass, BS,MD
Kathryn Bauer, BSN, MA, MS
Richard Bauer, BApAS, MD, MS
Ameya Baxi, BM BS
Oralia Bazaldua, BS, PharmD
Carlos Bazan, AB, MD
Gregg Bean, MD
Heidi Benavides, MSN, RN, ADN, MSN
Kelly Berg, BS, MS, PhD
Courtney Berger, BS, MS
Ruth Berggren, BA, MD
Michael Berkus, BS, MA, MD
Andrea Berndt, PhD, BS, MS, PhD
Michael Berton, BS, PhD
Ratna Bhavaraju-Sanka, BM BS
Suverta Bhayana, BM BS
Ryan Bierle, BS, MPAS
Christina Bird, BS, DO
Alexander Bishop, BS, PhD
Joseph Blader, BS, MA, PhD, MS
Cynthia Blanco, BS, MD, MS
James Bland, BSN, BSN, BSN, BSN, MSN, MSN, MSN, MSN
Leticia Bland, BS, MPAS
Abby Blankenship, BA, MA, PhD
Bonnie Blankmeyer, AA, BA, MA, PhD
Tabatha Blount, BS, MA, PhD
Jessica Blower, BS, MD
M. Danet Bluhm, PhD, RN, MSCI, BSN, BSN, BS, PhD, MS
Ralph Blumhardt, MD
Alex Bokov, BS, PhD, MS
John Boldt, BA, MD
Brandon Bolfing, BS, MD
Joyce Borgfeld, DNP, RN, NE-BC, BSN, MSN, DNP
J. Edgar Bost, MD, MBA
Robert Bourquein, DDS, DDS, MS
Charles Bowden, BS, MD
Elizabeth Bowhay, BS
Gregory Bowling, BS, MD
Jason Bowling, BA, MD
Carie Boychuk, BS, PhD
Angela Boyd, BSN, MPH, MD
Jaime Boyd, ADN, BSN, MSN
Thomas Boyer, BS, BS, PhD
Carrie Jo Braden, PhD, RN, FAAN, BSN, MS, MS, PhD
Nicole Braida, BA, BS, MD
Andrew Brenner, BS, PhD, MD
Robert Brenner, BS, MS, PhD
Eileen Breslin, DPL, BS, MS, PhD
Robin Brey, MD
Heather Briggs, BS, PhD, MD
Bloyce Britton, BHS, DDS, MS
Edward Brooks, BS, MD
Matthew Brown, BA, MA, PhD
Renee Brown, BS, PhD
Thomas Brown, BS, MD
Jan Bruder, DPL, BA, BS, MD
Sonja Brune, ADN, BSN, MSN
Amy Buck, ADN, MSN
Larisa Buck, BA, DO
Delia Bullock, BBA, BS, MD
Leonid Bunegin, BS
Paige Burau, BS, BSN, MSN
Sandra Burge, BS, MS, PhD
David Burgess, BS, BS, PharmD
Tiffani Burgin, MPAS, BS
Jim Burk, BS, DDS
Alfred Burns, BS, DDS
Cheryl Burns, BS, BS, MS
Henry Bussey, AS, AAS, BS, PharmD
William Butler, BS, AAS, BA
Frank Butticacovoli, BA, MD
Bruce Butterfras, BS, MS
David Cadena, BS, MD
Jose Cadena Zuluaga, BA, MD
John Calhoon, BS, MD
Brent Callegari, BS, DDS, MS
Adina Campbell, BS, MS, MD
Fred Campbell, BS, MD
Jennifer Campbell, BSN, MSN
Joseph Cantey, BA, MD
Adelita Cantu, PhD, RN, BSN, MS, PhD
Deborah Cardell, BS, MD
Lee Carlisle, BS, MD
Jean-Louis Caron, MD
Andrea Carpenter, BS, MS, PhD, MD
Flavia Carreno, BS, MS, PhD
Virginia Carrillo, AA, BS, MEd
John Carter, BS, MD
Deborah Carver, BS, MD
Joseph Castellano, BA, DDS
Cynthia Castillo MD, BS, MD
Jessica Castorena, BSN, MSN
Ingrid Cavanaugh, BA, BPAS, MPAS
Jose Cavazos, MD, PhD
Frances Cena, BA, BA, MD
Eugenio Cersosimo, MD, PhD
Maria Jose Cervantes Mendez, DDS
Sherri Cervantez, BS, MD
Patricia Chalela, BS, MPH, DPH
Suman Challa, BDS, MS
Tiencheng Chang, BS, MS, PhD
Christopher Chaput, BA, MD
Bandana Chatterjee, BS, MS, PhD
Gaurang Chaudhary, BDS
Jayanta Chaudhuri, MD
Clarisa Chavez, BSN, MS
Lizhen Chen, BS, PhD
Shuo Chen, MD, MD, PhD
Xiao-Dong Chen, MD, MS, PhD, MS
Yidong Chen, BS, MS, PhD
Robert Chilton, BS, DO
Byeongyeob Choi, BS, BS, MS, PhD
Varvara Chrepa, DDS, MS
Yong-Hee Chun, DDS, MS, PhD
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Anesthesiology (ANES)

Courses

ANES 4000. Special Topic. 4 Credit Hours.
This is a self-designed course created by both the student and the department to cover a specific topic. A Course Approval Form must be completed along with documentation of the designed course description.

ANES 4001. Clinical Anesthesiology. 4 Credit Hours.
Students are required to participate in Anesthesiology at one of the general hospitals affiliated with the Health Science Center with supervised, graded responsibility for anesthetic management during all phases of the peri-operative period. Objectives are to develop skills for physical assessment, choice of anesthetic management, administration of anesthesia, airway maintenance, and basic life support of the anesthetized patient.

ANES 4002. Critical Care. 4 Credit Hours.
Students are required to participate in the adult surgical intensive care unit at Audie Murphy VA Hospital. Emphasis will be placed on the diagnosis and treatment of all aspects of acute respiratory failure, especially that occurring in the postoperative state, including post-cardiac surgery. The principles of pulmonary, renal, cardiac, and nutritional support will be discussed. The ethics of life support are also discussed.

ANES 4003. Anesthesiology Research. 4 Credit Hours.
Research experiences are in either the clinical or basic sciences. Clinical research includes developing an understanding of clinical study design, procedures involved in the clinical study and data analysis. Studies are carried out largely in the operating room environment. Basic research can include studies of vascular control, studies on anesthetic agent interactions with the central nervous and cardiovascular systems, CNS ischemic or traumatic injury, and electrophysiologic monitoring and drug kinetics across the human maternal/fetal placental barrier.

ANES 4004. Obstetrical/Analgesia Mgmt. 4 Credit Hours.
Participation in Obstetric Anesthesiology at University Hospital, teaching will emphasize practical care with the student taking an active part in the monitoring of and assisting in the anesthetic care of healthy or complicated women in labor, as well as those undergoing cesarean section. Students will have the opportunity to perform intubations, epidurals, and spinals. Management of GYN outpatient anesthesia will also be included. Emergency resuscitation for hypotension, convulsions, aspiration, and respiratory cardiac arrest may be reviewed as well as prophylactic measures for the prevention of these conditions.
ANES 4005. Pain Management. 4 Credit Hours.
Students participate in the University Center for Pain Medicine at University Hospital. Students participate in the management of chronic pain patients using a multi-disciplinary approach. Students will be exposed to areas of pain management that include operative vs. non-operative options for chronic pain patients and physical therapy and mobilization techniques. Student's responsibilities include evaluating new patient with a focused and detailed physical exam, seeing follow up patients for medication management, and managing patient pre, during, and post procedures. The student is required to become proficient in accurately evaluating back pain, neuropathies, radiculopathies, and pain diseases including regional complex pain syndromes. This rotation is designed for any student; especially those interested in primary care, anesthesiology, orthopedics, neurology, neurosurgery, or has in interest in learning how to deal with patients with chronic pain.

ANES 4008. Cardiothoracic Anesthesia. 4 Credit Hours.
Students will be involved in care of the cardiothoracic patients at University Hospital. Emphasis will be on anesthesia for patients with cardiovascular and thoracic disease, cardiopulmonary physiology and pharmacology, and invasive hemodynamic monitoring. Students will work directly with one of the cardiothoracic faculty in the Anesthesiology Department.

ANES 4009. Regional Anesthesia and Acute Pain. 4 Credit Hours.
Students will be involved in the care of patients on the acute pain service and of regional anesthesia patients at University Hospital with direct supervision by the acute pain and regional anesthesia faculty. Emphasis will be on orthopedic procedures requiring regional blocks, surgeries, requiring epidural or spinal placement, and management of an acute pain service, including medication management. Students will also have an option for 1 week exposure to chronic pain at the UT Medicine Pain Clinic with 3 weeks on the acute pain service, if interested. The student would need a basic understanding of the sedation used for blocks, along with medications used for pain during and after surgery. The student should have an understanding of anesthetic requirements for surgery and have context on when blocks may be indicated, as well as having seen successful blocks used in the ORs. Prerequisite: This course is recommended for students who have a strong career interest in Anesthesiology and have completed at least one MS3 or MS4 rotation in Clinical Anesthesiology.

ANES 4103. Critical Appraisal of the Medical Literature. 4 Credit Hours.
Students will initially be introduced to the principles of evidence-based medicine through online lectures. They will participate in online activities and discussions to further facilitate learning. Throughout the course, students will be preparing for a final small group presentation at Journal Club, which will take place at the end of the course. At Journal Club, students will present their article and participate in discussion of their peers' articles.

ANES 6081. Anesthesia Rotation. 1.5 Credit Hour.
Students rotate through the operating room and peri-operative patient areas of the hospital to evaluate patients undergoing general anesthesia and deep conscious sedation. Primary purposes of this clinical rotation are to allow the student to become comfortable with airway management and patient monitoring.

ANES 7000. Off Campus. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty member prior to the beginning of the rotation (at least one week before the course begins). Credit will not be given for any rotation that has not been approved in advance. Required paperwork includes: "Course Approval" form, a written letter or email for acceptance from the physician preceptor with the start and end dates of the course/rotation, and a course description of your learning objectives and responsibilities during the rotation. Forms must include a complete address and telephone number for the off campus location or residence address for the student while at the off campus site. Forms will not be approved after the rotation has already begun. Contact the department for assistance with enrolling in this course.

Biochemistry (BIOC)

Courses
BIOC 0003. Scientific Writing: Development and Defense of a Research Proposal. 2 Credit Hours.
The course consists of writing a progress report describing research results during the last year. The course is required of all graduate students beginning the first semester after selection of a supervising professor.

BIOC 4000. Special Topic. 4 Credit Hours.
This is a self-designed course created by both the student and the department to cover a specific topic. A Course Approval Form must be completed along with documentation of the designed course description.

BIOC 4001. Biochemistry Research. 4 Credit Hours.
This course is an opportunity to work in close collaboration with a member of the department on a problem in research of mutual interest. A sincere interest to acquire research experience or techniques, but no formal research training, is required.

BIOC 5083. Hydrodynamic Methods. 2 Credit Hours.
This course is intended to provide students with the opportunity to gain a solid understanding of hydrodynamics and macromolecular transport processes, such as sedimentation and diffusion. The focus will be on hydrodynamic methods involving analytical ultracentrifugation and light scattering. Topics in sedimentation velocity, sedimentation equilibrium, buoyant density sedimentation, as well as static and dynamic light scattering and the complementarity of these approaches will be discussed. Macromolecular interactions involving mass action, concentration dependent nonideality, and reaction rates are covered. This course will also cover a range of data analysis approaches including the van Holde-Weischet method, the second moment method, direct boundary fitting by finite element modeling, the C(s) method, the 2-dimensional spectrum analysis, genetic algorithm optimization, nonlinear least squares fitting approaches to user-defined models. Statistical analysis using Monte Carlo and bootstrap methods also will be covered. Open for Cross Enrollment on Space Available Basis.

BIOC 5085. Biophysical Methods In Biology. 2 Credit Hours.
This course is required for all students enrolled in the Molecular Biophysics and Biochemistry track. The course covers modern biophysical methods for studying biological macromolecules in sufficient detail to understand the current literature. Topics to be covered include macromolecular structure determination by X-ray crystallography and NMR spectroscopy; absorbance, fluorescence, and EPR spectroscopy; circular dichroism; light scattering; mass spectrometry; and hydrodynamics, including diffusion, electrophoresis, sedimentation velocity, and sedimentation equilibrium. Open for Cross Enrollment on Space Available Basis.
BIOC 5087. Molecular Genetics And Biotechnology. 1 Credit Hour.
This course is required for all students enrolled in either Molecular Biophysics & Biochemistry Track. The objective of this course is to provide comprehensive treatment of approaches to experimental biochemistry and biophysics rooted in genetics, recombinant DNA technology, and genomics.

BIOC 5091. Special Topics In Biochemistry: Hydrodynamic Methods. 1 Credit Hour.
This course is intended to provide students with the opportunity to gain a solid understanding of hydrodynamics and macromolecular transport processes, such as sedimentation and diffusion. The focus will be on hydrodynamic methods involving analytical ultracentrifugation and light scattering. Topics in sedimentation velocity, sedimentation equilibrium, buoyant density sedimentation, as well as static and dynamic light scattering and the complementarity of these approaches will be discussed. Macromolecular interactions involving mass action, concentration dependent nonideality, and reaction rates are covered. This course will also cover a range of data analysis approaches including the van Holde-Weischet method, the second moment method, direct boundary fitting by finite element modeling, the C(s) method, the 2-dimensional spectrum analysis, genetic algorithm optimization, nonlinear least squares fitting approaches to user-defined models. Statistical analysis using Monte Carlo and bootstrap methods will also be covered.

BIOC 5092. Nuclear Magnetic Resonance Spectroscopy For Biochemists. 2 Credit Hours.
This course provides a working knowledge of the basic underlying theory of modern pulsed Nuclear Magnetic Resonance methods in the study of the structures and internal dynamics of biological macromolecules in solution. The theoretical concepts to be covered include an overview of pulse excitation, digital sampling, and Fourier transformation. The product operator formalism will be used to describe how modern multinuclear multidimensional pulse methods function to yield the desired signals. The practical concepts to be covered will include an overview of modern methods for obtaining sequential resonance assignments, determining high-resolution three-dimensional structures, and analyzing internal dynamics.

BIOC 5093. Data Analysis In Biochemistry And Biophysics. 1 Credit Hour.
This course is required for all students enrolled in either Molecular Biophysics & Biochemistry Track, or the Diabetes & Metabolic Disorders Track, and is open to all students enrolled in the Integrated Multidisciplinary Graduate Program. The course covers statistical and mathematical analysis of typical biochemical data. Topics to be discussed include: enzyme kinetics, first and second order chemical reactions, ligand binding, scintillation counting of radioactivity, UV-VIS difference and derivative spectra, analytical ultra-sedimentation, and solution of multiple simultaneous equations using matrix algebra. Emphasis is placed upon the use of computers to analyze experimental data using programs running under Windows, or Linux platforms. Students will also become familiar with file transfers between these two platforms and the use of VNC viewer to enable their PC computers to be used as a Linux terminal.

BIOC 6010. Gene Expression and Omics. 2 Credit Hours.
This course presents 1) the principles of gene expression, including transcription, epigenetic regulation (histone modifications and DNA methylation), mRNA processing and degradation, translation, post-translational modifications, and protein degradation, and 2) the omics approaches for collective characterization and quantification of different aspects of gene expression, including genomics, epigenomics, proteomics, and metabolomics. Two main teaching formats are used in this course: 1) Didactic lectures in which information is delivered to the class, and 2) Paper presentations and discussions, in which students present assigned papers and lead discussions by the entire class. Although one student will present each paper, all students will be expected to read each paper and to be prepared to discuss it in the form of comments and questions. Prerequisites: Permission of the Course Director and IBMS 5000 (or equivalent).

BIOC 6015. Metabolic Disorders. 2 Credit Hours.
This course will present an introduction to dysfunctions in normal metabolic processes that lead to major human disorders and pathologies. Major topics to be covered include the causes and pathogenesis associated with Type 2 diabetes, obesity, and related hormonal signaling pathways. Other topics will focus on lipid and protein metabolic disorders, and on dysfunctions associated with mitochondrial and extracellular matrix defects.

BIOC 6029. MBB Journal Club and Student Research Presentations. 2 Credit Hours.
To be taken by all graduate students in the MBB track each semester starting with the second year. Students will each make one presentation per semester. Presentations will typically be of a recent journal article in the area of biochemistry or biophysics. Journal articles for presentations must be approved by the instructor. With permission, a student may present a summary of his or her doctoral research. In the Spring semester of their third year, students will present a review of literature relevant to their doctoral research. Grading will be based on both the presentation and involvement in class discussion.

BIOC 6030. Cell Signaling Mechanisms. 2 Credit Hours.
This course covers the molecular mechanisms of action of various extracellular mediators including hormones, neurotransmitters, growth factors, cytokines, etc., and cell signaling events. Several areas will be discussed including: (1) mechanisms of mediator synthesis; (2) interaction of mediators with specific receptors; (3) modulation by mediators of various second messenger systems including cyclic nucleotides, inositol phospholipids, calcium, protein phosphorylation, ion flux, etc.; and (4) intra- and intercellular mechanism for regulating mediator action. Open for Cross Enrollment on Space Available Basis.

BIOC 6035. Drug Design And Discovery. 2 Credit Hours.
This course covers state-of-the-art approaches to the discovery and design of drugs - from small molecules to peptides - as well as drug delivery vehicles, with a strong emphasis on structure-based approaches. Topics to be covered will include the following: high-throughput screening, fragment based drug discovery, protein:protein and protein:ligand interactions, use of nuclear magnetic resonance (NMR), surface plasmon resonance (SPR) and fluorescent methods in drug discovery, virtual (in silico) screening, peptides and peptidomimetics, structure based drug design, and use of macromolecular assemblies as drug delivery vehicles and as targets for drug therapy. Prerequisites: IBMS 5000 Open for Cross Enrollment on Space Available Basis.
BIOC 6036. Macromolecular Structure & Mechanism. 2 Credit Hours.
This course will cover the fundamentals of protein and nucleic acid structure and of enzyme catalysis. The course is required of students in the Molecular Biochemistry and Biophysics Track. Topics to be covered include: DNA and RNA structure, protein structure, protein folding, ligand binding by proteins, and enzyme catalysis. Open for Cross Enrollment on Space Available Basis.

BIOC 6037. Integration Of Metabolic Pathways. 2 Credit Hours.
The course is required of students in the Molecular Biophysics and Metabolic Pathways track. The objective is to provide an understanding of the individual reactions in intermediary metabolism and how the reactions are integrated by regulatory mechanisms. Topics include carbohydrate, lipid, and nitrogen metabolism and mechanisms of regulation of individual enzymes and metabolic pathways. Open for Cross Enrollment on Space Available Basis.

BIOC 6038. Surface Plasmon Resonance Workshop. 0.5 Credit Hours.
Surface plasmon resonance can be used to measure the equilibrium and rate constants of a variety of biomolecular interactions, including protein-protein, protein-small molecule, protein-nucleic acid and protein-phospholipid. In this laboratory intensive workshop, students will be exposed to the principles of experimental design, data collection, and data analysis utilizing state of the art instrumentation and model interactions.

BIOC 6043. Structure & Function Of Membrane Proteins. 2 Credit Hours.
This is a course targeted at students within any of the Graduate Tracks. The objective is to provide a broad view, allowing for in depth consideration in selected areas, of the structure and diverse functions of proteins within a membrane environment. Specific topics covered will include: ion selective channels, large membrane pores, membrane transporters, membrane pumps, and membrane receptors. The format of the course will be didactic lecture followed by student presentations of relevant topics. Open for Cross Enrollment on Space Available Basis.

BIOC 6069. Contemporary Biochemistry Student Review. 1 Credit Hour.
The course has two aspects. In the first, students will have the opportunity to put together a didactic lecture on a biochemical topic, essentially an oral review. Alternatively, students who attend a scientific meeting may pick a theme that was presented at that meeting in any of multiple venues (symposia, platform presentations, posters) and develop it as a presentation equivalent to an oral review. In each case, students will research the background of the material and present the latest findings. This is not intended to be a journal club but rather a didactic or teaching lecture. The course Director will work with the students ahead of time to assist them in preparing their presentation. The second aspect is that students who are not themselves presenting are required to attend the presentations. Biochemistry students must present at least once in years 3.5 of their matriculation in order to graduate with the Ph.D. degree. May be repeated for credit.

BIOC 6071. Supervised Teaching. 1-9 Credit Hours.
This course consists of teaching medical or dental biochemistry under close supervision of instructors. Management of small conference teaching groups as well as formal lecture presentations will be included.

BIOC 6097. Research. 1-12 Credit Hours.
This course consists of independent, original research under the direction of a faculty advisor.

BIOC 6098. Thesis. 1-12 Credit Hours.
Registration for at least one term is required of M.S. candidates.

BIOC 7099. Dissertation. 1-12 Credit Hours.
Registration for at least two terms is required for Ph.D. candidates.

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Biomedical Engineering (BIME)

Courses

BIME 5091. Independent Study. 0.5-3 Credit Hours.
This course will be arranged through BME faculty. Topic and mode of study are agreed upon by student and instructor. Semester hours are variable and credit hours will be determined by topic. The course is offered all terms. The course may be repeated for credit when topics vary. Prerequisites: Graduate student standing and consent of instructor.

BIME 6003. Introduction To Clinical Practices. 1 Credit Hour.
This course will provide an introduction to clinical medicine for the graduate biomedical engineering students. It will provide the opportunity for the student to gain a working knowledge of engineering aspects as it relates to clinical practice. A variety of specialties will be presented. The students will also have the opportunity to observe surgery to gain additional insight. Integration with the medical industry will be made at the end. Prerequisites: open to Biomedical Engineering graduate students.

BIME 6004. Biology For Bioengineers. 3 Credit Hours.
This course provides a broad background in biological concepts with specific attention given to biological processes important in bioengineering. Topics will include biochemistry, genetics, molecular biology, cell biology, and physiology. Applications will emphasize understanding cellular processes important in bioengineering, such as gene therapy and tissue repair and regeneration. Prerequisites: permission of the instructor Open for Cross Enrollment on Space Available Basis.

BIME 6006. Human Physiology for Bioengineers. 3 Credit Hours.
The objective of this course is to introduce students to human physiology with emphasis on physical principles, guiding rules, and quantitative approaches. The course will focus on cellular function and physiological processes as applied to human systems including cardiovascular, respiratory, musculoskeletal, nervous, digestive, renal, reproductive and endocrine. An undergraduate biology course or an equivalent to it is required prior to registering for this course. Open for Cross Enrollment on Space Available Basis.

BIME 6071. Supervised Teaching. 1 Credit Hour.
Supervised teaching of undergraduate, graduate, medical/dental students, or clinical residents will be required for at least one semester. For example, students may be required to lecture at undergraduate courses at UTSA, or lecture to orthopaedic/dental residents about implants and materials at the HSC. The exact nature of the teaching will be determined based on each student's program of study. Prerequisites: admitted to candidacy and consent of the supervising professor, program director, and COGS chair.

BIME 6090. Seminar. 1 Credit Hour.
Students will have the opportunity to hear presentations from outside speakers, BME faculty, and peers. Prerequisites: Graduate (Ph.D.) student standing; required of all students during fall and spring semesters while pursuing doctoral studies.

BIME 6097. Research. 1-12 Credit Hours.
This course consists of independent, original research under the direction of a faculty advisor.

BIME 6098. Thesis. 1-12 Credit Hours.
Registration for at least one term is required of M.S. candidates. Prerequisite: admission to candidacy for Master of Science degree.
Cardiothoracic Surgery (CTSR)

Courses

CTSR 4008. Cardiothoracic Surgery. 4 Credit Hours.
Senior students function as "sub-interns" on the cardiothoracic surgery service, taking part in all aspects of pre-operative and post-operative care in addition to observing and assisting in the operating room. They will be exposed to a wide range of pathophysiology, including cardiovascular, pulmonary and foregut disease, as well as hemodynamics and critical care. Daily responsibilities include rounding and presenting patients in the intensive care unit and inpatient ward, keeping daily records, seeing in patient consults, assisting with patient discharges and mentoring third-year medical students. Students will also evaluate patients in the outpatient clinics and emergency room. They will attend education conferences and present a case at department grand rounds. They will take call as designated by the cardiothoracic surgery services.

CTSR 4050. Congenital & Cardiac Surgery. 4 Credit Hours.
Students will attend daily rounds with the congenital heart team, including cardiologists, cardiac surgeons, pediatric internists and neonatologists. They will participate in the pre-operative evaluation and post-operative care of patients with congenital heart disease, including attendance at weekly conferences with the team. They will perform histories and physical examinations in the hospital and in the cardiology and surgery clinics. They will scrub in for congenital heart operations and cardiac catheterization procedures and present these patients to the team on daily rounds.

CTSR 7000. Off-Campus Rotation In Cardiothoracic Surgery. 4 Credit Hours.
In this course the student will work closely with the preceptor in a clinical setting that can be either in-patient or out-patient or both. The physician can work either in private practice or a residency program setting. The preceptor must be board-certified in CT surgery and have clinical faculty appointment with a LCME-Accredited Medical School. The student must not be a relative of the preceptor. Students must arrange the preceptorship directly with the attending physician.

Cell Systems and Anatomy (CSAT)

Courses

CSAT 4000. Special Topic. 4 Credit Hours.
This is a self-designed course created by both the student and the department to cover a specific topic. A Course Approval Form must be completed along with documentation of the designed course description.

CSAT 4001. Anatomy of the Newborn. 4 Credit Hours.
Detailed gross dissection and study of newborn specimen with special emphasis on developmental origins as well as features and relationships differing from the adult; combined with library study of developmental malformations. Course fees: Lab fee $30.

CSAT 4002. Regional Anatomy. 4 Credit Hours.
Anatomy associated with one of the usual medical or surgical specialties, such as gastroenterology, neurology, orthopedics, obstetrics and gynecology, etc. Activities include detailed dissection, presentation of dissected material, assigned readings, and individual project. Course fees: Lab fee $30.

CSAT 4004. Selected Research Project. 4 Credit Hours.
Individual research projects to be arranged between the student and faculty members with whom he/she wishes to work.

CSAT 4005. Advanced Anatomy. 4 Credit Hours.
Selected students are required to participate in lectures, detailed dissections, presentations of prossected material, and teaching in the first year medical gross anatomy laboratory. Special projects, activities, and assigned readings in the surgical anatomy and history of anatomy literature. Course fees: Lab fee $30.

CSAT 4017. Advanced Neuroanatomy. 4 Credit Hours.
Selected students will be assigned a special project and readings in the neuro anatomical literature. Course Fees: Lab fee $30.

CSAT 4024. History of Anatomy In Situ: Reawakening & Development of Anatomy in the 14th - 18th Century Italy. 4 Credit Hours.
An in-depth study of the awakening and development of anatomy in 14th - 18th century Italy, visiting the sites where this occurred in Padua, Bologna, and Florence. The course consists of one week of didactic lectures and discussion prior to two weeks in Italy visiting anatomical museums and two of the oldest universities in the world, and ending with a week of student presentations based on a paper focusing on a historical, social, or scientific issue arising during this period in the Italian medical schools and currently relevant to the students' chosen field of medicine.

CSAT 4025. Anatomy Mentored Teaching. 4 Credit Hours.
The Mentored Teaching Elective allows 3rd and 4th year medical students to serve as teaching assistants for the spring CSAT 5022 Inter-professional Human Gross Anatomy course. CSAT 5022 serves students in the occupational therapy, physical therapy, physician assistant and biomedical engineering programs, and students in the Masters of Anatomy graduate program. Teaching assistants will serve as instructors for laboratory dissections which cover the central and peripheral nervous systems, vertebral column and back, the upper and lower limbs, head and neck, body wall, thorax, abdomen, pelvis, and perineum. Other teaching assistant duties include preparation of presection specimens for teaching and demonstration, lab practical exam setup and grading, and preparation and presentation of a brief topical review relevant to anatomy. Applicants should have attained a minimum grade of B in Language of Medicine and in Musculoskeletal/Dermatology and exhibit the highest standards of professionalism. Enrollment is by permission of the Undergraduate Medical Education Office and by the course directors.

CSAT 5007. Methods In Cell Biology. 1 Credit Hour.
Through a combination of lectures and demonstrations, the instructors will introduce students to techniques which are currently being used in cellular biology laboratories. The emphasis will be on the applications themselves, their uses, limitations, and the necessary controls. The following topic areas will be covered: imaging and microscopy, immunological techniques, bioinformatics (DNA and protein), rodent anatomy and histology, cytogenetics, and in vitro cell growth and transfection.
**CSAT 5012. Physician Assistant Gross Anatomy. 5 Credit Hours.**
This course will cover the basic principles of human anatomy. Lectures are correlated with laboratory sessions in which students will learn human gross anatomy of the adult through the study of cadaver dissections, bones, models, atlas drawings and radiographs. Emphasis will be placed on basic systems anatomy as they apply to the physician’s assistant. Course Fees: Gross Anatomy fee $30.00.

**CSAT 5015. History Of Anatomy. 2.5 Credit Hours.**
The history of anatomy course is designed to acquaint medical, dental, and graduate students with the history of medicine and especially with the physicians and scientists who made essential discoveries in human anatomy. Using a biographical approach, the course is presented as a seminar with lectures, assigned readings and student presentations.

**CSAT 5022. Inter-professional Human Gross Anatomy. 5.5 Credit Hours.**
This course will teach structural and functional anatomy of the normal human body. Lectures will serve as introductory information for the laboratory dissections to follow and to clarify the interactions of the various anatomical components to accomplish the function of the body. The course will cover the central and peripheral nervous systems, vertebral column and back, the upper and lower limbs, head and neck, body wall, thorax, abdomen, pelvis, and perineum. Special emphasis will be placed on the laboratory experience in which the learner will perform a detailed dissection of the entire human body in order to achieve an understanding of the three-dimensional relationships and thus the interactive function of the body. The dissections will allow the student to understand the anatomical basis for disease and dysfunction in organ systems and their applications to clinical practice. They will be supplemented by the study of preserved specimens where possible, models skeletons, and other demonstration materials.

**CSAT 5023. Development. 1 Credit Hour.**
The course provides a survey of concepts in developmental biology (induction, cell-cell interactions, morphogen gradients, morphogenetic movements, transcription regulation, organogenesis) using experimental examples from both invertebrate and vertebrate embryos. The first set of lectures will focus on gametogenesis, fertilization, and early developmental events, such as cleavage, midblastula transition, gastrulation, and axis formation. The second set of lectures will explore the fates of germ layers in the context of cell type-specific differentiation and cell-cell interactions during organogenesis.

**CSAT 5024. RNA Biology and Genomics. 1 Credit Hour.**
This course covers the molecular mechanisms and physiological roles of post-transcriptional regulation of gene expression, such as mRNA splicing, alternative splicing, translation and RNA degradation and the function of RNA binding proteins and non-coding RNAs. Another important component of this course is how to employ omics methods such as RNA-seq, RIP-Seq, BRIC, CLIP, Ribo-seq, CRISPR to study these processes and regulators. Hands-on training on biological databases and classes covering examples of the use of genomics is an important component of the course, helping the students to visualize how genomics can be used in their own research project.

**CSAT 5025. Genetics. 1 Credit Hour.**
This course is designed to provide an overview of genetic research. Topics to be covered include: cytogenetics, mitochondrial genetics, cancer genetics, linkage analysis, complex traits, population genetics, animal models, sex determination, and epigenetics.

**CSAT 5026. Stem Cell Biology. 1 Credit Hour.**
This course is an up-to-date overview on current topics in stem cell biology. It is intended for the (future) basic scientist who is interested in studying the regulatory mechanisms of stem cells as well as for the (future) clinician who is interested in how stem cell biology will continue to impact patient care. Topics that will be discussed are: (1) basic biology and stem cells, including embryonic stem cells, adult stem cells, stem cells in different tissues and model systems; (2) microenvironment-mediated; (3) epigenetic regulators of stem cells; (4) stem cells in medicine, including regenerative medicine, cancer and aging; and (5) ethics.

**CSAT 5030. Basic Histology. 1 Credit Hour.**
This course is designed to provide students in the Anatomical Sciences track of the M.S. degree program an introduction to microscopic cell structures and relevant functions followed by study of the four basic human tissues (epithelial, connective, muscle and nervous tissues). In addition, a few specialized tissues (blood cells, bone, cartilage and lymphoid tissues) will be examined in depth to develop skill in understanding function in relation to viewing microscopic anatomical features. Overall, this course is meant to provide a foundation for the understanding of the microscopic architecture of the organ systems of the body and the role these play in normal activity and disease processes. Lectures, independent study (self-directed learning), and laboratory experiences will be used in teaching the fundamentals of human histology.

**CSAT 5033. Brain Health Journal Club. 1 Credit Hour.**
A journal club with an emphasis on brain health. The scope of the journal club is broad, with topics ranging from molecular mechanisms to the impact of injuries on behavior. Brain injuries ranging from stroke, spinal cord injury and traumatic brain injury (TBI) to age-associated neurodegeneration will be emphasized. Scientific articles on relevant or state-of-the-art techniques will also be encouraged. On a rotating basis, participants will be expected to present to the group either a paper of interest and relevance to their work or an update on their ongoing research or some combination of the two. PowerPoint slides are discouraged in favor of a chalk talk when presenting to the group.

**CSAT 5060. Advanced Histology. 2 Credit Hours.**
This course, designed for students enrolled in the Anatomical Sciences track of the MS degree program in Cell Systems & Anatomy, will examine the microscopic architecture of organs and their higher level organization into systems performing specific functions. Topics covered will include the integumentary, cardiovascular, respiratory, gastrointestinal, endocrine, urinary and male and female reproductive systems. The goal of this course is to enable students acquire knowledge of normal histological structure of organs and organ systems using light and electron microscopy, thereby providing a strong basis for the sound understanding of cell and tissue morphology in health and disease. The course will include lecture, laboratory and self-directed student learning. A prerequisite for this course is Basic Histology.

**CSAT 5074. Introduction to Research. 0.5 Credit Hours.**
This course is required of all MS students in the Anatomy Track in Cellular & Structural Biology and is available to the Biotechnology Track students. Students will have the opportunity to learn about the research interests of faculty in the program. This course will introduce students to the research strategies and help them identify a mentor and committee members.
CSAT 5077. Scientific Writing. 2 Credit Hours.
This course will provide students with the opportunity to develop skills in scientific writing and the presentation of research results. It will emphasize learning-by-doing-and-re-doing. Students will be required to write something every week. The capstone project for students will be to write a grant proposal and defend it in front of the class. One hour per week will be devoted to lecture and critique of published work; the other hour will consist of critique and revision of student writing by other students, as well as by the course director. Topics to be covered include: (1) fundamentals of writing clearly, (2) principles of revision, (3) effective presentation of data, (4) fundamentals of oral presentation, (5) writing/presenting to the appropriate audience, (6) how to write background/introductory sections, (7) how to write materials and methods, (8) how to write the discussion section, and (9) how to constructively critique one's own and others writing.

CSAT 5083. Practical Optical Microscopy. 1 Credit Hour.
This course will be a one-hour elective for graduate students consisting of eight (8) one-hour lectures plus eight (8) one-hour laboratories. The course focuses on the practical aspects of using optical microscopes. The objectives are to teach students the fundamental principles of optical microscopy and to provide them with hands-on experience using the optical instrumentation in the Institutional Imaging Core.

CSAT 5089. Graduate Colloquium. 2 Credit Hours.
This course is designed to provide graduate students with training in evaluating the scientific literature and in presentation of research in a seminar or journal club format. The course will focus on critical thinking, including evaluation of existing literature, interpretation of experimental results, and comparison of alternative models and interpretations. These tools are essential both for oral presentations and for writing grant proposals and manuscripts. Emphasis will be placed on evaluation of the science, organization of the manuscript, and on oral presentation skills.

CSAT 5091. Special Topics. 1-9 Credit Hours.
No description available.

CSAT 5095. Experimental Design And Data Analysis. 3 Credit Hours.
The purpose of the course is to provide an introduction to experimental design and statistical analysis. The emphasis of the course will be on the selection and application of proper tests of statistical significance. Practical experience will be provided in the use of both parametric and nonparametric methods of statistical evaluation. Among the topics to be covered are: data reduction, types of distributions, hypothesis testing, scales of measurement, chi square analysis, the special case of the comparison of two groups; analysis of variance; a posteriori multiple comparisons tests, tests of the assumptions of parametric analyses, advanced forms of the analysis of variance, linear regression, and correlation analysis. This course involves the use of statistical software; therefore, access to a laptop or a computer with web access for classes and examinations is required.

CSAT 6005. Rigor & Reproducibility. 1 Credit Hour.
This course will focus on two of the cornerstones of science advancement, which are rigor in designing and performing scientific research and the ability to reproduce biomedical research findings. The course will also emphasize the application of rigor that ensures robust and unbiased experimental design, methodology, analysis, interpretation, and reporting of results. The notion that when a result can be reproduced by multiple scientists, it validates the original results and readiness to progress to the next phase of research will be covered in this course. This is especially important for preclinical studies that provide the basis for rigorous clinical trials in humans. In recent years, there has been a growing awareness of the need for rigorously designed preclinical studies, to ensure that such studies can be reproduced. The aim of this course is to help attendees acquire the skills necessary to meet the need to enhance rigor and reproducibility in preclinical scientific research. Successful completion of CSAT 5095, or an equivalent approved by the Rigor & Reproducibility course director, is a prerequisite for this course.

CSAT 6015. Selective Topics In Oncology: Gynecological Cancers. 2 Credit Hours.
This advanced elective course for the Cancer Biology Track provides a unique learning experience intended to prepare students in the emerging research areas of gynecological cancers for designing research experiments using pre-clinical and clinical research materials. The entire course comprises a small-group format in which students interact closely with a group of faculty who has active research or clinical programs focusing on molecular, clinical, and therapeutic areas of gynecological cancers.

CSAT 6021. Animal Models. 3 Credit Hours.
The relevant biology, applicability, and practical use of a number of animal models to biomedical research is covered. Invertebrate (e.g., C. elegans) and vertebrate (e.g., fish and rodents) model systems are included in the course. Strengths and weaknesses of each organism that render them particularly valuable as animal models are emphasized. Experimental approaches and tools that are utilized in conjunction with each animal model are rigorously examined. The course is taught from primary scientific literature using classic historical publications and recent publications.

CSAT 6040. Gross Anatomy Mentored Teach. 1 Credit Hour.
The Gross Anatomy Mentored Teaching Elective allow students in the Integrated Biomedical Sciences Program, School of Health Professions, and other qualified students to serve as preceptors for the spring CSAT 5022 Interprofessional Human Gross Anatomy course. CSAT 5022 serves students in the occupational therapy, physical therapy, physician assistant and biomedical engineering programs, and students in the Masters of Anatomy graduate program. Preceptors will serve as instructors for laboratory dissections which cover the central and peripheral nervous systems, vertebral column and back, the upper and lower limbs, head and neck, body wall, thorax, abdomen, pelvis, and perineum. Other preceptor duties include preparation of prospection specimens for teaching and demonstration, lab practical exam setup and grading, and preparation and presentation of a brief topical review relevant to anatomy. Students enrolling in this elective must have taken an approved human gross anatomy course (as determined and agreed upon by the course directors) with a minimum final grade of B within the previous five years.
CSAT 6048. Biology of Aging. 4 Credit Hours.
Biology of Aging is the core course of the Biology of Aging Track. The course consists of two modules: Aging and Longevity Mechanisms and Molecular and Cellular Mechanisms of Aging. The purpose of this course is to provide students with the most up-to-date information on the current understanding of the aging process. This advanced interdisciplinary graduate course provides experimental understanding of the interrelated areas of aging and age-related diseases. Faculty from several departments will be involved in teaching this course, which will cover the molecular and cell biology of aging, model systems used for aging studies, age-related changes in organs and tissues, and age-related diseases.

CSAT 6049. Cellular and Molecular Mechanisms of Aging. 2 Credit Hours.
This course provides up-to-date information on the current understanding of cellular and molecular mechanisms that contribute to aging. The focus is on investigation of specific mechanisms of aging including oxidative stress, nutrient sensing signaling pathways, stem cells and senescence, and genome stability. Experimental design and analysis, including pros and cons of approaches used to gain knowledge and how to appropriately interpret data, will be discussed throughout the course. The relationship between age-related changes in function and potential contributions age associated diseases will be examined via recently published research.

CSAT 6050. Aging and Longevity Mechanisms. 2 Credit Hours.
This module will focus on and evaluate several approaches used to modulate longevity and how these are used to discover the genetic, physiological and intracellular foundation of aging processes. The course will consist of interactive lectures complemented by guided reading of currently research papers. Students will be taught to hone critical reading skills and develop testable hypotheses to carry research forward. Topics will include: Genetics of Aging, Exceptional Longevity, Pharmacological Interventions, Calorie Restriction, Healthspan and Pathology of Aging.

CSAT 6054. Organogenesis and Development. 3 Credit Hours.
The developmental biology section provides a survey of concepts in developmental biology (induction, cell-cell interactions, morphogen gradients, morphogenetic movements, transcriptional regulation, organogenesis) using experimental examples from both invertebrate and vertebrate embryos. The stem cell biology section includes the following topics: basic biology of stem cells, including embryonic stem cells, adult stem cells, stem cells in different tissues and model systems; microenvironment-mediated and epigenetic regulators of stem cells; stem cells in medicine, including regenerative medicine, cancer, and aging; and ethics. Required for the Genetics, Genomics & Development Track.

CSAT 6055. Stem Cells & Regenerative Medicine. 1 Credit Hour.
The fields of stem cells and regenerative medicine are rapidly evolving and have great potential to change the way medicine is practiced. This course will encompass topics from basics of tissue specific stem cell biology to pre-clinical animal models, strategies and progress in regenerative medicine. We will discuss some of the most current research being done in regenerative medicine from stem cell transplantation to biomaterials. Prerequisite: IBMS 5000.

CSAT 6060. Anatomical Sciences Thesis. 1-8 Credit Hours.
Designed as an alternative to a "bench research"- based thesis, this longitudinal course for the Anatomical Sciences track in the Masters Program will culminate in the production of a thesis ideally suitable for adaption as a scholarly publication in a peer-reviewed journal. The thesis should focus on assessment of an unanswered and important question on a relevant and approved subject, involve in-depth research and demonstrate critical thinking on the part of the student. A student in the Anatomical Sciences Track will meet with the Course Director during the spring semester of his/her first year in the program to begin to identify a research area and specific topic(s) for his/her thesis proposal. Areas of focus include (but are not limited to) the following: 1) Clinical Anatomy - anatomy related to medical procedures and/or training of health professionals; 2) Anatomical Variations - comparative research utilizing human cadavers in the gross anatomy laboratories or comparative research in animal models; 3) Anatomical Sciences Education - education research on anatomy teaching methods and approaches to teaching anatomy to health professions students; 4) History of Anatomy - research on the development of human anatomical studies, comparative anatomy concepts, anatomy education, or involving other applications of the humanities to anatomical sciences (e.g. medical illustration, literature, music); 5) Human and rodent micro-anatomy /histology; or 6) Anatomical aspects of a biomedical research endeavor.

CSAT 6064. Genes & Development. 4 Credit Hours.
Genes and Development is the core course of the Genetics, Genomics, and Development Track. The course consists of four modules: genetics, genomics, developmental biology, and stem cell biology. Basic concepts in genetics such as cytogenetics, mitochondrial genetics, cancer genetics, linkage analysis, complex traits, population genetics, animal models, sex determination, and epigenetics will be presented. The genomics section will include historical aspects of the genome project and high throughput analysis. The students are introduced to new techniques in global analysis as well as have hands-on experience. The developmental biology section provides a survey of concepts in developmental biology (induction, cell-cell interactions, morphogen gradients, morphogenetic movements, transcriptional regulation, organogenesis) using experimental examples from both invertebrate and vertebrate embryos. The stem cell biology section includes the following topics: basic biology of stem cells, including embryonic stem cells, adult stem cells, stem cells in different tissues and model systems; microenvironment-mediated and epigenetic regulators of stem cells; stem cells in medicine, including regenerative medicine, cancer, and aging; and ethics. Required for the Genetics, Genomics & Development Track.
CSAT 6068. Cancer Biology Core 1: An Introductory Course. 1.5 Credit Hour.
This team-taught course will provide an introduction to molecular oncology with a focus on defining cancer and key molecular/cellular changes often associated with the development of cancer. The goal of the course is to provide the student with a solid background in general cancer biology. This course requires a strong background in basic cellular processes, such as those covered in IBMS 5007. These processes will be discussed with regard to how they are altered in cancer and whether such differences from normal biology offer a therapeutic opportunity to target cancer. Tumorigenesis is a multi-step process driven by genetic, epigenetic and metabolic/environmental changes that occur over time. Although cancer is a heterogeneous disease, many human tumors exhibit similar acquired physiological features. This course will cover the underlying molecular and cell biology mechanisms involved in carcinogenesis, tumor growth, and metastasis at a basic level. The implications of these biological findings on cancer prevention, diagnosis, and treatment will also be introduced. Upon completion of the class, students should have a general understanding of the mechanisms by which tumors gain and maintain a growth advantage as well as an initial handle on potential therapeutic targets. This course is meant to be the basic introduction.foundation for CSAT 6069, Cancer Biology Core 2; Advanced Cancer Biology. Open for Cross Enrollment on Space Available Basis.

CSAT 6069. Cancer Biology Core 2; Advanced Cancer Biology. 2.5 Credit Hours.
This course is designed to provide a detailed representation of cancer biology, from progression, standard of care and molecular alterations that drive recent diagnoses and therapeutic strategies. In addition, this course will offer an overview on special populations affected by cancers and models used in the investigation of cancer. Included are basic experimental methods, mouse models, ex vivo systems, molecular profiling and clinical trials. The conceptual notions on clinical trials of cancer drugs and the process of development of novel therapeutic drugs in cancer will be discussed. Required for Cancer Biology Discipline. Prerequisites: INTD 5007 (or INTD 6007 and INTD 6009) and CSAT 6068.

CSAT 6070. Cancer Biology Preceptorial. 0.5 Credit Hours.
This is a discussion-based course to help unify our cancer biology students. The idea is to work in a small team based manner for students to disseminate knowledge that they are obtaining by participating in advanced courses of different topics by presenting the topic, methods and relevance to cancer biology to their peers. The intent is that participating students will discuss the topic in detail to understand how it might be useful to cancer biology research, in effect an active learning process. The goal is to provide an integrated multidisciplinary view on cancer research. Prerequisites: CSAT 6068 and CSAT 6069.

CSAT 6071. Supervised Teaching. 1-12 Credit Hours.
This course consists of participation in the teaching program of the first-year medical, dental, or health professions curriculum. Semester hours vary depending on the time spent in teaching.

CSAT 6072. Presentation Skills. 0.5 Credit Hours.
This course is designed to provide graduate students in the CSB masters program the opportunity to develop their skills in oral presentation. The course will focus on critical thinking, clear and concise presentation of research endeavors, and communicating science to the public, to students, and to other scientists. The course will meet for 1 hour every other week and is intended for MS students in their second year of study. Part I (Fall Semester) will focus on general scientific presentation skills.

CSAT 6073. Selective Topics In Oncology: Gynecological Cancers. 2 Credit Hours.
This is an advanced elective course for the Cancer Biology Track. The course is a unique learning experience in preparing students in the emerging research areas of gynecological cancers for designing research experiments using preclinical and clinical research materials. The entire course is a small-group format in which student interact closely with a group of faculty who have active research or clinical programs focusing on molecular, clinical, and therapeutic areas of gynecological cancers.

CSAT 6074. Molecular Aspects Of Epigenetics. 2 Credit Hours.
The purpose of this course is to develop an understanding of the molecular aspects of epigenetics. This advanced course will be a unique learning experience that prepares the student to evaluate and design new research in the areas of epigenetic processes including imprinting, gene slicing, X chromosome inactivation, position effect, reprogramming, and the process of tumorigenesis. This module concerns epigenetic mechanisms. Topics include: DNA methylation, histone modifications, epigenetics and stem cells, cancer epigenetics, RNA interference and epigenetics, bioinformatics and epigenetics, and translational epigenetics. This course will include a didactic program and student discussion. For the student discussion module, faculty and students will jointly discuss key publications that serve to bridge the gap between the student’s prior understanding of the field and the state of the art in that area.

CSAT 6075. Cancer Biology Enrichments Course. 0.5 Credit Hours.
This course is a series of enrichment presentations to the students, either in lecture format, visit to labs or attendance of a conference. The goal is to give secondary reinforcements of the didactic components of the core courses on cancer biology. Required for Cancer Biology Discipline.

CSAT 6076. Eucaryotic Molecular Biology. 2 Credit Hours.
This 8-week didactic course will not only introduce the student to the fundamentals of molecular biology but will familiarize the student with the modern molecular biology techniques used in research laboratories.

CSAT 6077. Eucaryotic Cell Biology. 2 Credit Hours.
This 8-week didactic course will introduce the student to the fundamentals of cell biology, familiarize the student with current techniques used to manipulate cells, describe the higher order integration of cells to tissues and thereby the development of multicellular organisms.

CSAT 6090. Seminar. 1-9 Credit Hours.
Attendance and participation in the regularly scheduled department seminar series is required each semester the course is offered. The activities included in the seminar course are attendance at invited seminars, journal club, and the student presentations including student annual progress and final dissertation and thesis presentations.

CSAT 6094. Advanced Neuroanatomy. 0.5 Credit Hours.
This course in neuroanatomy is offered to graduate students seeking to advance their knowledge beyond the fundamental level. The course consists of reading from more advanced texts and current anatomical literature as well as dissection of deep white matter tracts within the cortex. The student must also complete a 20-page paper on a neuroanatomical topic.

CSAT 6095. Analysis and Visualization of Genomic Data. 2 Credit Hours.
This course covers the basics of genomic data analysis and visualization. The focus is on general computational methods, their basis in biomedicine, and how to evaluate and visualize analysis results. Students are expected to be able to qualitatively describe the algorithms presented. Prerequisites: CSAT 5095 or Equivalent.
CSAT 6096. Research Rotations. 2 Credit Hours.
Laboratory rotations will acquaint students with the research pursued by faculty members in the CSA MS Program, and help identify research projects to fulfill their thesis requirements. In addition, laboratory rotations will allow students the opportunity to explore and assess their compatibility in the laboratory environments created by potential faculty mentors and their laboratory personnel. Conversely, faculty members serving as rotation advisors will have an opportunity to evaluate students wishing to complete their MS thesis research in their laboratories. The experience should give the students an understanding of future expectations, and exposure to new experimental strategies and methodologies that may prove useful in the students’ eventual thesis research.

CSAT 6097. Research. 1-12 Credit Hours.
This course consists of independent, original research under the direction of a faculty advisor.

CSAT 6098. Thesis. 1-12 Credit Hours.
This course consists of instruction in the preparation of the thesis. Registration for at least one term is required of M.S. candidates. Admission to candidacy for Master of Science degree is required.

CSAT 6100. Anatomy Practicum. 1.5 Credit Hour.
This is a foundational course that provides students in the Cell Systems & Anatomy (CSA) Master’s Degree Program, Anatomical Sciences Track an opportunity to experience full cadaver dissection. Under the guidance of CSA anatomy faculty, students will develop their necessary and requisite dissection skills by preparing anatomical specimens during whole body dissection. Students will gain an appreciation of complex anatomical systems, revealed layer-by-layer through a systematic, step-by-step plan of hands-on-dissection. Students will gain teaching experience by presenting and explaining the anatomical aspects of the prosections that they complete to course faculty. This course will enhance competency in anatomy and prepare students for serving as teaching assistants in other medical, dental and health professions courses. Completion of CSAT 5022 Interprofessional Human Gross Anatomy and must be officially enrolled in the Master’s Degree Program, Anatomical Sciences Track, Cell Systems & Anatomy.

CSAT 6165. Medical Genetics. 3 Credit Hours.
This course provides an introduction to the basic concepts of medical genetics and current areas of medical genetic research. The course reviews basic genetic concepts including the principles of Mendelian and nontraditional inheritance, cytogenetics, molecular genetics, quantitative and population genetics, and discuss important medical aspects of genetic counseling and pedigree analysis, dysmorphology, cancer genetics and counseling for inherited cancers, developmental genetics, prenatal diagnosis, newborn screening, and pharmacogenetics. Diagnosis and current research toward treatment and cure of common genetic disorders affecting metabolism, reproduction, the endocrine system, the functioning of the eye and the nervous system are discussed. An important aspect of the course will be a discussion of ethical issues in medical genetics. A basic background in genetics, cell biology, and biochemistry is assumed. Prerequisites: A basic background in genetics, cell biology, and biochemistry.

CSAT 7099. Dissertation. 0.5-12 Credit Hours.
Registration for at least one term is required of Ph.D. candidates. Prerequisites: admission to candidacy for Doctor of Philosophy degree.

CSAT 8010. Anatomy 2. 2 Credit Hours.
This course reinforces principles of human anatomy studied in CSBL 7014. Students study human anatomy as it relates to function through cadaver dissection. Concentration is on osteology, radiology, arthrology, neuromuscular, vascular, and basic systems anatomy as they apply to physical therapy. Course fees: Lab Assistance fee $10 per hour Gross Anatomy Lab fee $30 Human Materials fee $865.

Cellular & Structural Biology (CSBL)

Courses

CSBL 3005. Advanced Anatomy. 0 Credit Hours.
Selected students will participate in lectures, detailed dissections, presentations, and teaching of Pre-Matriculation students in the gross anatomy laboratory. A special project or readings in the surgical anatomy literature will be assigned. This elective is considered to be a full-time commitment (40 hours per week). Students are expected to 1) attend all lectures given in the Pre-Matriculation program, 2) to teach in all scheduled laboratory sessions, 3) to prepare and present prosections, 4) to help prepare a laboratory examination, 5) to write and present a literature review on an original topic of interest to the student related to the region of the body being studied.

CIRCLE (CIRC)

Courses

CIRC 5001. Medicine, Behavior and Society Longitudinal Module. 6 Credit Hours.
The Medicine, Behavior, and Society module explores the areas of history, law, ethics, clinical, social and cultural contexts of medicine as well as human behavior & development over the lifespan (cognitive, social and emotional development from infancy to death.) The course will focus on global issues such as the health care system and on local issues such as the physician-patient relationship. Students will be introduced to communication skills, professionalism, research, and cultural competency.

CIRC 5003. Language of Medicine Longitudinal Module. 5.4 Credit Hours.
The Language of Medicine component of the curriculum serves as the common denominator necessary for students to be able to discuss systematic anatomy in the integrated modules to follow. Basic structure, conceptual anatomical principles and development of the human body presented. Knowledge is acquired in didactic sessions emphasizing clinical relevance, reinforced by practical application during laboratory application during laboratory sessions in which supervised cadaver dissection is performed by the students. Imaging techniques, prossections, demonstrations, and presentations by clinical specialists supplement the laboratory work.

CIRC 5005. Clinical Skills Longitudinal Module. 14.75 Credit Hours.
The Clinical Skills Longitudinal module threads throughout the entire first and second year curriculum. Using standardized and real patients, students learn medical history taking and physical examination techniques. In addition, through didactic sessions, simulations, small group sessions and labs, students master the knowledge, communication skills, professional, and interpersonal skills necessary for fostering positive doctor-patient relationships.
CIRC 5007. Fundamentals: Molecules to Medicine. 9 Credit Hours.
The Fundamentals: Molecules to Medicine module provides the foundation for subsequent courses and clinical practice. Through active, collaborative learning activities which may include, but are not limited to, laboratory, small group, and clinical case sessions the students gain a deeper understanding of the homeostatic structure of molecules, cells, and tissues. Students develop problem-solving skills in a multidisciplinary approach to human health and disease.

CIRC 5009. Attack and Defense. 9 Credit Hours.
The Attack and Defense module is an integrated and innovative look at microbiology, immunology, and infectious disease including public and international health issues. Students are prepared for clinical encounters requiring diagnosis, treatment, and preventive measures for immunological conditions and disorders and infectious diseases by fostering critical thinking skills. The learning environment promotes professional identity formation, effective communication and professionalism. Students acquire a broad understanding of normal and abnormal immune system function through active, collaborative learning activities which may include, but are not limited to laboratory, small group, and clinical case sessions.

CIRC 5011. Circulation. 5 Credit Hours.
The Circulation module provides an integrated approach to the basic and clinical science concepts related to the cardiovascular and hematopoietic systems. Students acquire a broad understanding of normal structure and function of the cardiovascular and hematopoietic systems including the cardiac cycle, cardiovascular pressures and flows, nutrients and oxygen delivery, hematopoiesis, and the hemostasis system through active, collaborative learning activities which may include, but are not limited to, laboratory, small group, and clinical case sessions. A comprehensive, multidisciplinary overview of the pathophysiology, epidemiology, biostatistics, interpretation of diagnostic tests, and pharmacotherapeutic and other therapeutic principles related to cardiovascular and hematopoietic disorders is included.

CIRC 5013. Respiratory Health. 4 Credit Hours.
The Respiratory Health module integrates basic science and clinical concepts related to respiratory health disease. A comprehensive study is conducted of the normal structure and function, pathophysiology/pathology, clinical manifestations, and interpretation of diagnostic tests for respiratory diseases. The student is immersed in a multidisciplinary study of pharmacotherapeutic approaches to treatment, interventional therapies, the use of evidence-based medicine and research, epidemiology, and prevention in the field of respiratory health. Students acquire a broad understanding of normal and abnormal respiratory system function through active, collaborative learning activities which may include, but are not limited to laboratory, small group, and clinical case sessions.

CIRC 5015. Renal and Male Reproductive. 5 Credit Hours.
The Renal and Male Reproductive module is a comprehensive overview of the structural and urologic components of the renal and the male reproductive system. Students gain a deeper understanding of glomerular and tubular function and pathology, as well as acute and chronic kidney injury and also benefit from a multidisciplinary approach represented by adult and pediatrics, and biochemistry. A broad understanding of normal and abnormal renal and male reproductive system function is achieved through active, collaborative learning activities that may include, but are not limited to laboratory, small group, and clinical case sessions.

CIRC 5017. Hematology. 3 Credit Hours.
The goal of this course is to expose students to the pathogenesis and pathophysiology of disease and disorders as they pertain to the specialty of hematology. During the module, the first year medical students will come to appreciate the basic science foundation for the clinical practice of Hematology. Students will gain an understanding of the medical non-medical factors that effect the hematology system.

CIRC 6001. Medicine, Behavior and Society Longitudinal Module. 6 Credit Hours.
The Medicine, Behavior, and Society module explores the areas of history, law, ethics, clinical, social and cultural contexts of medicine as well as human behavior & development over the lifespan (cognitive, social and emotional development from infancy to death.) The course will focus on global issues such as the health care system and on local issues such as the physician-patient relationship. Students will be introduced to communication skills, professionalism, research, and cultural competency.

CIRC 6005. Clinical Skills Longitudinal Module. 14.75 Credit Hours.
The Clinical Skills Longitudinal module threads throughout the entire first and second year curriculum. Using standardized and real patients, students learn medical history taking and physical examination techniques. In addition, through didactic sessions, simulations, small group sessions and labs, students master the knowledge, communication skills, professional, and interpersonal skills necessary for fostering positive doctor-patient relationships.

CIRC 6007. Mind, Brain and Behavior. 9 Credit Hours.
Mind, Brain, and Behavior module provides a comprehensive introduction to the normal anatomy, development, physiology and radiological features of the human nervous system and its pathologic disorders. Through active learning methods, students will practice clinical assessment of the nervous system while learning the major features of common neurological, neurosurgical, psychiatric and psychological disorders and pharmacological approach for the nature of the experience of the brain. The student will gain an appreciation for the nature of the experience of having an illness affecting the brain and mind, and a deepened compassion for patients with these illnesses.

CIRC 6009. Endocrine and Female Reproductive. 7 Credit Hours.
The Endocrine- Reproductive module provides an integrated, comprehensive study of the normal structure and function of the endocrine and reproductive systems as well as the clinical manifestations of endocrine and reproductive disorders. Innovative, active learning methods which may include, but are not limited to laboratory, small group, and clinical case sessions allow students to develop critical thinking skills and gain a deeper understanding of the role of the endocrine system in regulation of metabolic activity, water and electrolyte balance, the endocrinology of the menstrual cycle, pregnancy, as well as human reproduction. The students benefit from a multidisciplinary approach incorporating the study of pharmacotherapeutic modalities, evidence based medicine, as well as current clinical/translational research applications into the endocrinology/reproductive medicine curriculum.
CIRC 6011. Digestive Health and Nutrition. 7 Credit Hours.
The Digestive Health and Nutrition module provides an integrated overview of the basic science and clinical concepts related to digestive health and nutrition. Through innovative learning methods that may include, but are not limited to laboratory, small group, and clinical case sessions, students gain a deeper understanding of the normal structure and function of the digestive system, as well as pathophysiology/pathology, clinical manifestations and interpretation of diagnostic tests as they relate to digestive health and nutrition. This comprehensive, multidisciplinary study includes pharmacotherapeutic approaches to treatment, interventional therapies, psychosocial aspects of digestive disease, the use of evidence-based medicine and research, epidemiology, and prevention in the field of digestive health and nutrition.

CIRC 6013. Form and Function: Skin, Muscles & Bones. 7.5 Credit Hours.
The Musculoskeletal and Dermatology module provides a comprehensive study of the development, structure, and function of the musculoskeletal and integumentary systems. Students acquire a broad understanding of normal and abnormal musculoskeletal and dermatologic function through active, collaborative learning during laboratory, small group, and clinical case sessions. Diagnostic and therapeutic techniques in the management of musculoskeletal and dermatologic disorders are discussed.

Community Dentistry (COMD)

Courses

COMD 7031. Professional Ethics. 0.5 Credit Hours.
This course provides a deeper understanding of the role that ethics plays in dental practice through a series of small-group discussions focused on the resolution of ethical dilemmas. It also provides a more thorough appreciation of the ethical principles and theory of normative ethics, as well as an understanding of the importance of dental research ethics, the role of ethics in the "business" of dentistry, and dentist's role in addressing social justice issues.

COMD 7050. Preventive Dentistry Clinic. 1.5 Credit Hour.
As part of the junior clinic, this course is for the clinical application of prior study of Preventive & Community Dentistry, Preventive Methods, Nutrition, Cariology, Caries Risk Management, and Sophomore Clinic. With the emphasis on dental caries, it also includes prevention of gingivitis, oral cancer, and orofacial trauma. Students record preventive history, diagnosis and document caries, request appropriate lab and dietary assessments, carry out a caries activity (risk) assessment, write a preventive plan, and evaluate outcomes.

COMD 8014. Oral Health Care System. 1 Credit Hour.
A series of lectures and panel discussions introduce students to the structure as well as methods of financing dental care. Concepts of both traditional and recently evolved forms of dental practice also are discussed.

COMD 8032. Jurisprudence. 0.5 Credit Hours.
An in-depth review of the Texas Dental Practice Act and the Rules and Regulations of the Texas State Board of Dental Examiners will be presented as preparation for the Dental Jurisprudence examination given by the Board. General review of the interface of the law and dental practice including dental torts, malpractice, partnerships, insurance, record keeping, and other related legal issues are presented.

Deaf Educ & Hearing Science (DEHS)

Courses

DEHS 5001. Foundations of Ed for the Deaf. 2.5 Credit Hours.
History of the education of the hearing impaired including Deaf Culture and American Sign Language (ASL). Impact of hearing loss on academic access, vocational choice, and personal development. Current trends in academic programming, parent-infant through college, and provisions for multicultural populations.

DEHS 5003. Speech Mech-Anatomy/Physiology/Acoustics. 2.5 Credit Hours.
This course is a study of the component parts of the speech mechanisms and their coordination to permit functional speech, physiology and acoustics of speech, impact of hearing loss on development and maintenance of functional speech skills, and individual assessment procedures. Practicum included.

DEHS 5005. Factors In Child Language Acquisition. 2.5 Credit Hours.
Course content includes the normal progression of language, cognition and social development, and how hearing loss impacts on development; an overview of acquisition of language by children who may have more than one handicapping condition; the nature of bilingual and ESL language learning in relation to hearing loss; including the impact of visual language learning through speech reading and signing systems; and the nature of language development as related to learning theories, communicative functions, and culture. Practicum included.

DEHS 5007. Introduction to Audiology. 3 Credit Hours.
Nature of sound, anatomy, and physiology of hearing; types of testing for hearing loss; analysis of audiograms; fitting of ear molds; operation and design of hearing aids; use and maintenance of FM units; and Cochlear implants and assistive technology. Practicum included.

DEHS 5011. Language Development. 3 Credit Hours.
Course content includes the assessment of present language and listening levels in hearing impaired children and methods of aural habilitation and language instruction/therapy. Practicum included.

DEHS 5021. Teaching/Management Apprenticeship 1. 4 Credit Hours.
Students spend time in the education and management/coordination of services for the hearing impaired. Students spend time teaching both hearing and hearing-impaired students and in managing and coordinating social, education, and health services for the hearing impaired. Course fees: Practicum $10.

DEHS 5090. Independent Study. 0.5-4 Credit Hours.
This course will be arranged through DEHS faculty. Topic and mode of study are agreed upon by student and instructor. Semester hours are variable and credit hours will be determined per topic. The course is offered any term. The course may be repeated for credit when topics vary.

DEHS 6002. Comp Assessment, Counseling, Management. 1.5 Credit Hour.
The impact of a hearing loss upon the child, the family, and the community; reactions and adjustments identified and evaluated; delivery of services from birth through adulthood; and newborn screening are included. Crisis periods are identified and coping mechanisms evaluated. Also included are the role of classroom teacher and health professional in providing support to the family, and a multi-professional team approach to long-term management for the hearing impaired.
DEHS 6004. Curriculum Mod-Child W/Hear Loss. 2.5 Credit Hours.
Course content includes the development and adaptation of curricular materials and instructional procedures for the child with hearing impairment; selection and writing of objectives for speech, language, and listening within the content of early childhood education best practices; impact of current research in the effective teaching of reading and the language arts for children with hearing loss, including the identification of techniques and materials useful in meeting the individual needs of each student. Students will have the opportunity to learn adaptive strategies to address the needs of students with multiple handicaps. Practicum included.

DEHS 6006. Best Practices in Early Intervention. 2.5 Credit Hours.
Provision of services to infants, toddlers and preschoolers and their families through public and private agencies. Use of the Auditory-Verbal Therapy approach emphasizing the development of optimum listening skills in children with hearing impairment and the recognition of caregivers as the primary models of spoken language. Includes parent guidance, counseling, education and support. Practicum is included.

DEHS 6008. Speech for Hearing Impaired Student. 2.5 Credit Hours.
This course addresses: specific development and remedial techniques for articulation therapy; assessment of phonetic and phonologic level skills; strategies for elicitation, development; transfer and maintenance of all English phonemes and suprasegmentals; and choosing techniques appropriate to auditory/visual/tactile modalities available to the child with hearing loss. Practicum included.

DEHS 6009. Aural (Re) Habilitation. 2.5 Credit Hours.
This course is designed to study methods of pediatrics aural rehabilitation available for children with hearing loss and the impact of new technologies on therapy and teaching.

DEHS 6022. Teaching/Management Apprenticeship 2. 4 Credit Hours.
Continuation of Teaching/Management Apprenticeship I. Students will be required to develop a comprehensive portfolio of their experiences and abilities. Outcomes of their knowledge and skills gained in the program are emphasized. Course fees: Practicum $10.

DEHS 6099. Comprehensive Examination. 0 Credit Hours.
The comprehensive examination is required prior to graduation. The examination, which incorporates all critical elements of the curriculum, tests for mastery of knowledge as well as professional skills.

Dental Diagnostic Science (DIAG)

Courses
DIAG 5007. Graduate OMR Clinic. 3 Credit Hours.
The Graduate Radiology Clinic is in operation five full days per week. Services include intra- and extra-oral radiography, panoramic, cephalometric, linear, and multi-directional tomography; sialography; arthrography; CT image processing; and planned CT image acquisition.

DIAG 5015. Panoramic Radiology. 1 Credit Hour.
This lecture course includes topics such as the principles of panoramic radiology, concepts of panoramic image formation, review of anatomic structures, clinical techniques, and recognition and correction of panoramic errors. Also, the uses and limitations of panoramic radiology as well as digital panoramic radiology will be discussed. The goal is to achieve competency in this subject matter. Proficiency will be achieved during clinical rotations in panoramic radiology as part of the graduate OMR clinic experience.

DIAG 5016. Head & Neck Anatomy. 1 Credit Hour.
This review course is designed to provide the resident with the opportunity to acquire an anatomical foundation for oral and maxillofacial radiology. The course uses interactive computer-based head and neck clinical anatomy software as well as digital libraries of radiographic and cross-sectional anatomical specimens. Numerous Internet-based references are also used to provide the student with the most up-to-date and graphic information. Clinical anatomic information is correlated with plain film, CT, and MRI images to provide a contextual reference between clinical and radiographic anatomy. Written and oral examinations are given to assess competency in this area.

DIAG 5017. Literature Review. 1 Credit Hour.
Each week a topic in Oral and Maxillofacial radiology is discussed. In addition, students receive a block of instruction in evidence-based literature evaluation. At each session a student leader presents from 2-4 papers that meet the current topic. Articles are approved by the course director beforehand for scientific accuracy, validity, and relevance. Students are expected to read the articles before the session and participate in the group discussion. Discussion is facilitated by a question and response format led by the course director. Literature from past reviews is filed for student reference.

DIAG 5018. Practicum In Oral Medicine. 4 Credit Hours.
Practice in clinical skills required for diagnosis, management, and treatment of oral and perioral diseases, including such special procedures as sialography, cytological smearing, biopsy, and culture taking is offered. A comprehensive review of the conditions that the dentist may be called upon to diagnose and treat as the result of the physical examination of the patient is the focus of this course. Topics include extraoral findings such as general appearance of the hands, eyes, ears, nose and neck; intraoral findings such as lesions as in lip swelling or palatal swelling; and color changes, surface changes, and other problems such as pain and functional disorders.

DIAG 5026. Diagnostic Imaging Of The Jaws. 4 Credit Hours.
The goal of this class is to achieve competency regarding the interpretation of plain and advanced images of hard and soft tissue conditions affecting the teeth, jaws, and surrounding structures of the maxillofacial complex including, but not limited to, the paranasal sinuses, salivary glands, and trauma. The material is presented and repeated through three basic formats: by pattern recognition, by disease process, and as further analyzed using contrast studies, CT, MR, nuclear scans, and ultrasound images where applicable. This course forms the basis for more advanced seminar and clinical courses through which proficiency is required to be achieved.
DIAG 5037. Oral And Maxillofacial Radiology Interpretation 1. 1 Credit Hour.
The overall purpose of this course is to provide students with learning experiences that will give them the opportunity to develop proficiency in OMR image analysis and interpretation. This course meets in one-hour sessions with a seminar or grand rounds format. Each week, students receive cases and are requested to generate a written report and present the case to other students and faculty. Cases include a variety of diagnoses that comprise the field of oral and maxillofacial radiology including both typical and unusual examples. Additionally, high-quality, properly exposed images are supplied. Many examples include plain film, CT, and MR for the same case. Additional cases include other imaging modalities such as tomograms, contrast studies, and nuclear scans. In some instances, glass slides and a microscope are used to correlate histological features with MR images, an activity much requested by students. Imaging particular to salivary gland disease and TMJ disorders will also be emphasized. Students will record these cases in a special section of their logbook and may, circumstances permitting, copy the cases for future reference or teaching. The course director’s collection of cases is one of the most extensive and is broadly representative and thus guarantees the student exposure to a variety of clinical cases which cannot be assured through the various clinical experiences during the time frame of the program.

DIAG 5040. Basic Principles Of Oral And Maxillofacial Imaging. 2 Credit Hours.
This is a didactic and clinical course aimed at providing oral and maxillofacial radiology residents with basic knowledge of oral and maxillofacial radiographic anatomy and helps the residents develop proficiency in routine and special OMF imaging procedures. The course consists of a complete review of plain film techniques used in OMF radiography and hands-on imaging exercises with radiographic phantoms. The radiographic anatomy displayed on these projections will be reviewed in lecture and exercise format using the practice phantom films and radiographic anatomy review sets. Bone anatomy and organ-based anatomy will be reviewed.

DIAG 5045. Radiation Physics. 3 Credit Hours.
This course presents the fundamental principles of radiation physics as they apply to medical and dental diagnostic radiology. Topics include the nature and production of X-rays, interactions of X-rays with matter, the physics of films and intensifying screens, the nature of the radiographic image, fundamentals of radiation dosimetry and protection, principles of tomography, and panoramic radiography. Topics also include computed tomography, particulate radiation and nuclear medicine, ultrasound, and digital image receptors and displays. Laboratory sessions provide a wide range of experience in institutional trainings and a course capstone project.

DIAG 5050. Fundamentals of Dental Radiography. 1 Credit Hour.
This lecture course reviews the basics of diagnostic radiography and introduces the latest techniques. Review includes sessions on exposure factors, projection techniques, film processing, and radiation protection. The major extraoral technique stressed in the course is panoramic radiography, including normal anatomy, technique errors, and interpretation. Skull projections are reviewed and basic principles and indications of special techniques such as xeroradiography, CT, nuclear medicine, and others are presented as time allows.

DIAG 5070. Supervised Teaching. 1 Credit Hour.
Graduate students are assigned to the various clinics, laboratories, and classes for the opportunity to acquire experience in teaching undergraduate students in a variety of situations. Supervision and evaluation of teaching performance is provided by the graduate faculty.

DIAG 5091. Case Conference. 1 Credit Hour.
This course meets weekly and serves as a venue for students to plan and present their cases to other students and faculty, and supply follow-up information where feasible.

DIAG 5092. Diag Science Seminar. 1 Credit Hour.
The format of this course includes presentations, reviews, and discussions of current cases from the Dental Diagnostic Science Clinic as well as cases of interest from the teaching file.

DIAG 5093. Diag Science Seminar. 1 Credit Hour.
The format of this course includes presentations, reviews, and discussions of current cases from the Dental Diagnostic Science Clinic as well as cases of interest from the teaching file.

DIAG 5181. Principles Forensic Odontology. 1 Credit Hour.
A didactic course covering such topics as forensic photography, forensic radiology, dental identification, mass disaster techniques, bite mark analysis, child abuse, and courtroom protocol. Students will be encouraged to investigate specific areas in more detail. (This course is an elective for the MS degree.)

DIAG 6000. Introduction to Advanced Dental Diagnostic Science for Interns. 1 Credit Hour.

DIAG 6005. Clinical Path Conference. 1 Credit Hour.
Formal review of clinical, radiographic, and histopathologic presentations of various conditions affecting the head and neck area and the oral cavity, in particular, is presented. A variety of cases are presented for group discussion with a view toward obtaining a differential diagnosis.

DIAG 6007. Graduate Oral And Maxillofacial Clinic. 3 Credit Hours.
The Graduate Radiology Clinic is in operation five full days per week. Services include intra- and extra-oral radiography, panoramic, cephalometric, linear, and multi-directional tomography; sialography; arthrography; CT image processing; and planned CT image acquisition.

DIAG 6008. Orofacial Pain. 2 Credit Hours.
This course is designed to introduce the student to the field of orofacial pain. The course objectives include: introduction to orofacial pain, assessment of orofacial pain disorders, diagnostic classification of orofacial pain disorders, differential diagnosis and management of vascular intracranial disorders, differential diagnosis and management of neuralgias, nerve trunk pain and deafferentation pain, differential diagnosis and management of intraoral pain, differential diagnosis and management of temporomandibular disorders, and differential diagnosis and management of mental disorders.

DIAG 6009. Noninfectious Diseases/Oral Mucosa. 2 Credit Hours.
This course is designed to discuss a selected group of diseases of the oral mucosa with the primary purpose of presenting diagnostic and therapeutic guidelines. The role of oral medicine specialists in the care of noninfectious oral mucosal diseases, appropriate (e.g., timely and accurate) consultations/referral, definitive therapy, clinical review (e.g., the disease and/or side-effects of theory), disease prevention, and counseling of patients and relatives will be discussed.

DIAG 6017. Literature Review. 1 Credit Hour.
Each week a topic in Oral and Maxillofacial radiology is discussed. In addition, students receive a block of instruction in evidence-based literature evaluation. At each session, a student leader presents from 2-4 papers that meet the current topic. Articles are approved beforehand by the course director, for scientific accuracy, validity, and relevance. Students are expected to read the articles before the session and participate in the group discussion. Discussion is facilitated by a question and response format led by the course director. Literature from past reviews is filed for student reference.
DIAG 6018. OMR Case Conference. 1 Credit Hour.
This course meets weekly and serves as a venue for students to plan and present their cases to other students and faculty, and supply follow-up information where feasible.

DIAG 6019. Chemosensory Disorders/ Salivary Gland Dysfunctions. 2 Credit Hours.
Chemosensory disorders affect in particular disproportionately a large segment of the elderly population, the fastest growing segment of the western industrialized nation. Also saliva plays a major role in the preservation and protection of the oral and pharyngeal tissues. When salivary gland function is altered, multiple stomatologic and systemic disorders can develop. This graduate level elective course is designed to make the graduate student (oral medicine) aware of the etiology, prevalence and mechanisms of normal and diseased chemosensation and salivary gland functions of the oral cavity. Its focus will be on the diagnosis and management of patients with taste, smell and salivary gland dysfunctions.

DIAG 6020. Tumor Board. 1 Credit Hour.
The class meets for one hour once a week at the MARC building and is sponsored by the Department of Otolaryngology and Head and Neck Surgery. Students will have the opportunity to learn case management and prognosis of patients with oral and maxillofacial and head and neck tumors. Exposure to the diagnostic imaging work-up of the patients presented, interact with attending medical and dental specialists, attend special seminars related to tumor board, and have an opportunity to interact with various medical residents for further learning opportunities. Students are expected to share some of their learning experiences and present cases during case conferences to other OMR program venues such as graduate clinic.

DIAG 6021. Medical Radiology Rotation. 2 Credit Hours.
Medical radiology training occurs within the dental school using image-acquired data from a medical clinic. It also occurs in the University Hospital, at Wilford Hall Medical Center at nearby Lackland Air Force Base, and in a private radiology clinic. Cases using advanced imaging are available in the program director's extensive collection to further enhance medical radiology training. A minimum of 7.5 semester credit hours are required. Each student must enroll in a minimum of three one-month rotations.

DIAG 6022. Practicum In Oral Medicine. 6 Credit Hours.
Practice in clinical skills required for diagnosis, management, and treatment of oral and perioral diseases, including such special procedures as sialography, cytological smearing, biopsy, and culture taking is offered. The focus of this course is a comprehensive review of the conditions that the dentist may be called upon to diagnose and treat as the result of the physical examination of the patient. Topics include extraoral findings such as general appearance of the hands, eyes, ears, nose and neck; intraoral findings such as lesions in lip swelling or palatal swelling; and color changes, surface changes, and other problems such as pain and functional disorders.

DIAG 6025. Diagnostic Imaging Of The Head And Neck. 4 Credit Hours.
The goal of this course is to achieve competency regarding the interpretation of plain and advanced images of hard- and soft-tissue conditions affecting the teeth, jaws and surrounding structures of the maxillofacial complex including, but not limited to, the paranasal sinuses, salivary glands, and trauma. The material is presents and repeated through three basic formats: by pattern recognition, by disease process, and as further analyzed using contrast students, CT, MR, nuclear scans and ultrasound images where applicable. This course forms the basis for more advanced seminar and clinical courses through which proficiency is required to be achieved.

DIAG 6027. Advanced Imaging Technology. 3 Credit Hours.
This class will provide oral and maxillofacial radiology residents with proficiency level understanding of the physical principles of all the advanced imaging methods and techniques such as computed tomography, magnetic resonance imaging, ultrasounds, and radionuclide imaging commonly used in medical care, and understand the clinical applications of these advanced imaging modalities. This will also cover the fundamental basis for digital imaging, image enhancement and restoration, image analysis, image compression, image synthesis and image displacement.

DIAG 6041. Radiation Biology. 2 Credit Hours.
An introductory course in the basic concepts of radiation biology, this course is appropriate for dentists desiring an opportunity to gain additional knowledge of the biological effects of diagnostic and therapeutic levels of x-radiation. Concepts of designing an office for optimum radiation protection also are presented.

DIAG 6043. Advanced Radiation Biology. 1 Credit Hour.
An in-depth study of radiation biology is presented, emphasizing such topics as radiation risk, dosimetry, theories of radiation damage, radiation hygiene and protection, and the effects of therapeutic levels of radiation on the oral tissues.

DIAG 6049. Oral And Maxillofacial Radiology Interpretation 2. 1 Credit Hour.
The overall purpose of this course is to provide students with learning experiences that will give them the opportunity to develop proficiency in OMR image analysis and interpretation. This course meets in one-hour sessions with a seminar or grand rounds format. Each week, students receive cases and are requested to generate a written report and present the case to other students and faculty. Cases include a variety of diagnoses that comprise the field of oral and maxillofacial radiology including both typical and unusual examples. Additionally, high-quality, properly exposed images are supplied. Many examples include plain film, CT, and MR for the same case. Additional cases include other imaging modalities such as tomograms, contrast studies, and nuclear scans. In some instances, glass slides and a microscope are used to correlate histological features with MR images, an activity much requested by students. Imaging particular to salivary gland disease and TMJ disorders will also be emphasized. Students will record these cases in a special section of their logbook and may, circumstances permitting, copy the cases for future reference or teaching. The course director's collection of cases is one of the most extensive and is broadly representative and thus guarantees the student exposure to a variety of clinical cases which cannot be assured through the various clinical experiences during the time frame of the program.
DIAG 6051. Oral And Maxillofacial Radiology Interpretation 3. 1 Credit Hour.
The overall purpose of this course is to provide students with learning experiences that will give them the opportunity to develop proficiency in OMR image analysis and interpretation. Students receive cases and are requested to generate a written report and present the case to other students and faculty. Cases include a variety of diagnoses that comprise the field of oral and maxillofacial radiology including both typical and unusual examples. Additionally, high-quality, properly exposed images are supplied. Many examples include plain film, CT, and MR for the same case. Additional cases include other imaging modalities such as tomograms, contrast studies, and nuclear scans. In some instances, glass slides and a microscope are used to correlate histological features with MR images, an activity much requested by students. Imaging particular to salivary gland disease and TMJ disorders will also be emphasized. Students will record these cases in a special section of their logbook and may, circumstances permitting, copy the cases for future reference or teaching. The course director's collection of cases is one of the most extensive and is broadly representative and thus guarantees the student exposure to a variety of clinical cases which cannot be assured through the various clinical experiences during the time frame of the program.

DIAG 6052. Case Conference 3. 1 Credit Hour.
Oral and Maxillofacial radiology resident will plan and present an assigned case to other students and faculty and provide follow up information where feasible. It will enhance the residents ability to write and present accurate case reports; teaches the ability to plan a case, and interact with the referring practitioner, and enhance their ability to recognize imaging characteristics of a disease or condition.

DIAG 6071. Supervised Teaching. 1 Credit Hour.
Graduate students are assigned to the various clinics, laboratories, and classes for the opportunity to acquire experience in teaching undergraduate students in a variety of situations. Supervision and evaluation of teaching performance are provided by the graduate faculty.

DIAG 6078. Literature Review 3. 1 Credit Hour.
During this course, oral and maxillofacial radiology residents will review the principles of evidence based medicine and learn how it applies to reviewing scientific articles. At each class session, a student will present articles from the current or classic radiology literature including radiation safety, periodontal disease, CT, systemic disease, digital imaging, endodontic disease, MRI, implants, bite-wings, tomography, developmental disorders, selection criteria, panoramic radiology, sectional criteria, trauma, forensics, inflammation, QARM, Caries, TMJ, tumors and biomedical modeling. Prerequisites: DIAG 6017.

DIAG 6079. Graduate OMR Clinic 3. 3 Credit Hours.
The Graduate Radiology Clinic operates 4.5 days per week and provides opportunities for oral and maxillofacial radiology residents to develop skills in intra- and extra oral radiography, panoramic, cephalometric, linear and multi-directional tomography, sialography, arthrography, and CT imaging processing and planned CT image acquisition. Prerequisites: DIAG 6007.

DIAG 6083. Forensic Odontology Lab. 1 Credit Hour.
Demonstration and application of information and principles are presented in this introductory course in laboratories of the Health Science Center and the Bexar County Medical Examiner's Office. Successful completion of DIAG 5181 Principles in Forensic Odontology and this course will fulfill requirements for membership in the American Academy of Forensic Sciences.

DIAG 6091. Diagnostic Science Seminar. 1 Credit Hour.
The format of this course includes presentations, reviews, and discussions of current cases from the Dental Diagnostic Science Clinic as well as cases of interest from the teaching file.

DIAG 6135. Clinical Case Conference. 1 Credit Hour.
Each student will be assigned one or more cases to cover in a written report and to present in conference. Over two semesters, weekly conferences will allow for a large variety of representative pathoses to be reviewed and discussed. Students will have the opportunity to correlate the historical, clinical, and radiographic findings in the formation of a differential diagnosis or a diagnostic impression.

DIAG 7036. Radiographic Interpretation. 1 Credit Hour.
This is a comprehensive didactic course in dental radiologic interpretation of diseases of the jaws including differential radiological diagnosis of developmental abnormalities and pathological lesions of the teeth and jaws.

DIAG 7052. Geriatrics. 1.5 Credit Hour.
Lectures and seminars emphasizing dental management of the geriatric patient cover such topics as normal aging, treatment planning, pharmacologic considerations, management and communication techniques, dementias, dentistry for nursing home and homebound elderly, and clinical care.

DIAG 7055. Oral Medicine. 2 Credit Hours.
Lectures, demonstrations, and visual aids present the fundamentals of diagnosis and treatment in general medicine and surgery as they relate to dentistry. Students have the opportunity to demonstrate skill in physical diagnosis in laboratory sessions.

**Dental Hygiene (DENH)**

**Courses**

**DENH 3004. Oral Anatomy. 2 Credit Hours.**
The oral anatomy course is designed to provide the dental hygiene student with instruction in dental terminology and the anatomy of the teeth. Emphasis is placed on clinical considerations of oral anatomy relevant to dental hygiene practice. Includes one (1) lecture hour and three (3) laboratory hours per week. Course fees: Materials fee $50.

**DENH 3006. Preclinical Dental Hygiene. 2 Credit Hours.**
This course is an introduction to instrumentation techniques and basic clinical procedures. The course offers an opportunity to develop competency in fundamental clinical skills necessary to engage in patient treatment. Includes eight (8) clinical hours per week. Course fees: Lab fee $10 Corequisites: DENH 3023.

**DENH 3007. Preclinical Teaching Practicum. 4 Credit Hours.**
This course will provide students with an introduction to concepts of preclinical instruction. Instruction will include seminar and laboratory application sessions emphasizing theories of psychomotor skill development; diagnosis of performance problems; provision of feedback; identification of cognitive, psychomotor, and affective behaviors; and faculty calibration. This course requires formal agreement with a participating dental hygiene program prior to the beginning of class. (The didactic portion of this course is delivered through Canvas, Learning Management System) Course Fees: Practicum fee $10 per hour.
DENH 3015. Public Health Practicum. 4 Credit Hours.
This course is an opportunity to gain experience with oral health care delivery or promotion in a public health area. The course will include planning and execution of a project in the student’s individual area of interest. One full day per week requires the Bachelor of Science Completion student to work in a public health setting in San Antonio or in their community. A formal agreement must be established with the participating public health clinic prior to the beginning of class. Course Fees: Lab fee $10 per hour.

DENH 3017. Clinical Teaching Practicum. 4 Credit Hours.
This course is an introduction to clinical instruction for the Bachelor of Science Degree Completion Student. Students will have the opportunity to gain experience in identifying and correcting performance problems relating to direct patient care. Instruction will include seminar and a clinical application session emphasizing the instructor’s role as a facilitator, role model and evaluator. (Pre clinic teaching practicum is required as a pre-requisite for this course, exceptions will be considered for DH educators. It is possible for students not living in San Antonio to complete this course with another Dental Hygiene program) (Requires formal agreement with the participating DH program prior to classes beginning). Course Fees: Practicum fee $10 per hour.

DENH 3018. Dental Radiography. 3 Credit Hours.
This course is an introduction to scientific principles of oral radiography including essential terminology, the production and absorption of radiation, X-ray unit function, imaging systems, processing, quality assurance, radiation biology, and protection. This course is designed to emphasize radiation health and protection principles and techniques of intraoral and extraoral radiography, exposing, processing, mounting, and critical evaluation of dental radiographs. Laboratory experience and clinical applications are emphasized. Includes two (2) lecture hours and three (3) clinical hours per week. Course fees: Materials fee $50.

DENH 3019. Preventive Dental Hygiene Theory. 3 Credit Hours.
This course is an introduction to concepts used in oral health instruction and patient education. Included in the course is the etiology of dental disease, plaque control, oral physiotherapy, methodology of oral health instruction, nutritional counseling, and patient motivational techniques. This course is designed to give the student an opportunity to develop skills which are necessary for teaching patients how to achieve optimal oral health and to offer experience in communication skills for interpersonal, professional and patient education interaction. The course will also provide an overview of current counseling recommendations to prevent dental and periodontal disease. Includes two (2) lecture hours and three (3) hours of lab per week.

DENH 3020. Clinic 1 Seminar. 2 Credit Hours.
This course presents current theoretical perspectives in which to interpret and expand dental hygiene care. Topics included within the course are cultural diversity, instrument sharpening, communication skills, ultrasonic scalers, and air abrasive polishers. Other topics related to beginning clinical practice are also incorporated. Includes two (2) lecture hours per week. Corequisites: DENH 3021.

DENH 3021. Clinic 1 Practicum. 3 Credit Hours.
This course is a clinical experience in the practical application of patient education and oral prophylaxis techniques. Emphasis will be placed on comprehensive care for the simple patient classifications, including patient assessment, dental hygiene treatment planning, patient education, instrumentation, preventive therapies, and radiographic skills. Includes twelve (12) clinic hours per week. Course fees: Practicum fee $10 per hour Lab fee $30. Corequisites: DENH 3020.

DENH 3022. Dental Materials. 3 Credit Hours.
This course is a study of the materials and adjunct materials used in restorative dentistry and in various other specialty areas of dentistry to fabricate dental appliances and tooth restorations. This course includes lecture and laboratory components designed to help students develop an understanding of the composition, properties, structure, and manipulative variables of dental materials historically used in dentistry as well as the most current materials available. Emphasis is placed on practical, clinical applications of materials; the dental hygienist’s role in educating patients regarding these materials; and the techniques for placement of the materials in the oral cavity. Also included is a discussion of the various categories of dental specialties and the materials used by each specialty. Includes two (2) lecture hours and three (3) lab hours per week. Course fees: Materials fee $50.

DENH 3023. Intro To Clinical Theory. 3 Credit Hours.
This course is an introduction to the theory associated with clinical procedures and patient care. Topics include prevention of disease transmission in the dental setting and patient assessment skills such as vital signs, health history, and oral inspection. An introduction to ethics related to the dental setting is incorporated. Includes three (3) lecture hours per week. Corequisites: DENH 3006.

DENH 3033. Structures Of The Head And Neck. 2 Credit Hours.
The purpose of this course is to give dental hygiene students an appreciation of the anatomical structure of the head and neck region of the human body, which will serve as a foundation of anatomical knowledge that is essential for patient care and useful in understanding function, local pain, anesthesia, and oral pathology. Includes one (1) lecture hour and three (3) lab hours per week.

DENH 3034. Periodontics. 3 Credit Hours.
This course presents an in-depth study of the basics of periodontics. This course will include, but is not limited to, the following: the tissues of the periodontium, clinical assessment of the periodontium, classifications of periodontal diseases, identification of etiologic factors, the relationship of the immune response to the inflammatory process and pathogenesis of periodontal diseases, clinical indices used in periodontics, and systemic factors involved in periodontal diseases. Emphasis is placed on the clinical application of current theory. Includes three (3) lecture hours. Corequisites: DENH 3021.

DENH 3035. Pharmacotherapeutics. 4 Credit Hours.
This course integrates elements of dental hygiene care as they relate to the treatment planning for special patients, understanding pharmacological agents used in dentistry, and management of medical emergencies in the dental office to include: concepts and practice related to the prevention, recognition, and management of medical emergencies that occur in the dental office with specific emphasis on systemic disease processes; understanding drug groups, their mechanism of action, dosage, indication of use, adverse effects, drug interactions, oral side effects in the treatment of human disease process, and its application in the dental hygiene clinical setting. Includes three (3) lecture hours and three (3) laboratory hours per week. Course Fees: Materials fee $50.

DENH 3040. Histology/Embryology. 2 Credit Hours.
This course continues the study of the oral cavity from a histological perspective. It includes the development and microscopic organization of the four basic body tissues in the formation of the oral cavity (i.e., development of the face, oral cavity, and teeth). This information is basic to the understanding of the histological changes arising from pathological alterations in the oral cavity. Includes two (2) lecture hours per week.
DENH 4007. Clinical Administration Practicum. 4 Credit Hours.
The purpose of this course is to present Bachelor of Science Degree Completion students with an opportunity to hone administrative skills in a clinical environment. There will be interactions with second-year dental hygiene students as well as with the second-year clinic coordinator. The course includes conference and clinical application sessions to expand and refine teaching and evaluation skills and clinic administration issues including outcomes assessment, quality assurance, and information technology. This course requires a formal agreement with a participating dental hygiene program at least six weeks to the beginning of class. To begin the process, contact the UTHSCSA program director. Completion of DENH 3007 Pre-Clinic Teaching Practicum is required or previous clinical teaching experience. The course instructor may waive the prerequisites course requirement based on previous clinical teaching experience. Course Fees: Practicum fee $10.00 per hour. Open for Cross Enrollment on Space Available Basis.

DENH 4012. Oral Pathology. 3 Credit Hours.
This course introduces the principles of human disease including pathogenesis, clinical appearance, and treatment. In certain instances, microscopic features will be discussed if they enhance the understanding of the disease process. A portion of the course is devoted to basic principles of general pathology. The majority of the course is an overview of oral pathology with an emphasis on the dental hygienist’s role in the recognition of oral disease. Includes three (3) lecture hours per week. Prerequisites: DENH 3033.

DENH 4015. Clinic 3 Practicum. 3 Credit Hours.
A continuation of DENH 4022 Clinic 2, this course provides students the opportunity to incorporate all learning in providing comprehensive dental hygiene care for patients with simple to complex needs with emphasis on more complex cases, gain experience in the practical application of dental hygiene diagnosis, utilize preventive techniques in patient education skills, practice oral prophylaxis techniques including advanced scaling, implement various management techniques for the difficult patient, and improve efficiency and effectiveness in patient care. Includes twelve (12) clinic hours per week. Course fees: Practicum fee $10 Lab fee $30. Prerequisites: DENH 4012, DENH 4020, and DENH 4022. Corequisites: DENH 4016.

DENH 4016. Clinic 3 Seminar. 2 Credit Hours.
This course will provide the dental hygiene student with current theoretical perspectives in which to interpret and expand dental hygiene care. Advanced and adjunctive procedures for clients of special populations are presented in seminar format and build upon the basic concepts and skills learned during Preclinical, Clinic I, and Clinic II. Knowledge gained will be applied in clinical practice through new skill acquisition and expanded client care options. Professional ethical codes and major contemporary health issues facing the dental hygienist will be presented as well as legal aspects of health care and state Dental Practice Act requirements. Includes two (2) lecture hours per week. Prerequisites: DENH 4012, DENH 4020, and DENH 4022. Corequisites: DENH 4015.

DENH 4017. Community Oral Health Practicum 2. 2 Credit Hours.
This course is the continuation of the fall Community Oral Health Practicum 1 in which students apply public health/health education principles through implementing individual community oral health education projects, and through participating in service-learning activities outside the Dental School setting. Opportunities include rotations in public schools and in public health dental clinics. Emphasis is placed on students interacting with a variety of patients, including the physically and mentally challenged, indigent populations, and geriatric groups. Students gain experience in health education, as well as additional experience in providing clinical preventive services out in the community. Includes eight (8) clinic hours per week in off-campus rotations or community projects. Course fees: Practicum fee $10 per hour. Prerequisites: DENH 4021.

DENH 4018. Introduction to Research. 3 Credit Hours.
This course is designed to provide the student with an opportunity to expand research knowledge in two dimensions; principles and applications. The course will consist of an in-depth study of the research process, its contexts, design, data collection and communication techniques to provide learners with the analytical skills to interpret professional and scientific literature. Topics include: basic research terminology, critical evaluation of research design, methodology and sampling techniques, basic statistical calculations, data collection, and the application of evidenced-based research to dental hygiene best practice. The course will also develop reading and writing skills within the context of face-to-face and/or virtual environments.

DENH 4019. Practice Management. 2 Credit Hours.
This course presents the fundamentals of dental practice for the transition from dental hygiene student to practitioner, including basic OSHA regulations and procedures necessary to be an OSHA compliance manager in private practice, maintaining a recall system, interpersonal relationships among members of the dental health team, résumé writing and interviewing skills, and computer applications to patient records. Emphasis will be on current issues in dental hygiene practice and on practical approaches to preparing students to enter the private practice setting as a member of the oral health team. Includes two (2) lecture hours per week.

DENH 4020. Clinic 2 Seminar. 2 Credit Hours.
This course is designed to provide the dental hygiene student with current theoretical perspectives in which to interpret and expand dental hygiene care. Advanced and specialized adjunctive procedures are presented in seminar format and build upon the basic concepts and skills learned during Preclinical and Clinic I. Knowledge gained will be applied in clinical practice through new skill acquisition and expanded client care options. Case studies will be presented related to ethical issues encountered in clinical settings. Includes two (2) lecture hours per week. Prerequisites: DENH 3022, DENH 3035, DENH 3021, DENH 3034. Corequisites: DENH 4022.
DENH 4021. Community Oral Health Practicum 1. 4 Credit Hours.
Community Oral Health Practicum 1, offered in the fall semester, is the prerequisite course to Community Oral Health Practicum II offered in the spring semester. The purpose of this course is to instill in students the important role of the dental hygienist in the community, and to provide an understanding of the relationship of community oral health to public health. Students will have an opportunity to learn how to promote oral health and prevent oral disease in the community. Students will have an opportunity to learn concepts such as assessment, planning, implementation, and evaluation phases of community-based programs. During this course, the students will plan a community oral health education program that is implemented and evaluated during Community Oral Health Practicum II. Cultural differences, socioeconomic factors and barriers to health care are discussed in relation to developing preventive programs. In addition, students will have an opportunity to learn about federal and state public health programs and current public health issues. Community oral health programs for vulnerable populations such as indigent, geriatric, and special-needs patients are included. Also, students will have an opportunity to participate in community service learning activities that will allow them to provide clinical and educational services to underserved populations. The course includes three lecture hours and four clinical hours per week. Course fees: Practicum fee $10 per hour.

DENH 4022. Clinic 2 Practicum. 3 Credit Hours.
A continuation of DENH 3021 Clinic 1, this course provides further opportunity to incorporate all learning in providing comprehensive dental hygiene care for patients with simple to complex needs with an emphasis on moderate cases. In addition, this course provides an opportunity for the student to gain experience in the practical application of dental hygiene diagnosis, utilize preventive techniques in patient education skills, practice oral prophylaxis techniques including advanced scaling, and implement various management techniques for the difficult patient. Includes twelve (12) clinic hours per week. Course Fees: Practicum fee $10 per hour Lab fee: $30. Prerequisites: DENH 3021, DENH 3022, DENH 3034, and DENH 3035 Corequisites: DENH 4020.

DENH 4023. Special Topics. 1-3 Credit Hours.
Students will be given an opportunity to gain an in-depth understanding of selected topics through seminars, conferences, projects, or other appropriate learning methods.

DENH 4024. Concepts And Practice In Teaching. 3 Credit Hours.
This course offered to Bachelor of Science Degree Completion students, introduces basic principles and techniques used in health care education. Topics include: issues and trends in professional education, principles of adult education, learning styles and motivation, case-based learning, competency-based education, patient and community education, clinical and laboratory instruction, course design, development of lesson plans and learning activities, guidelines for presentation skills, evaluating student performance, and using educational media and software. Open for Cross Enrollment on Space Available Basis.

DENH 4025. Advanced Periodontics. 3 Credit Hours.
This course builds on the knowledge base presented in DENH 3034 Periodontics, and gives students the opportunity to expand their understanding of treatment, prevention, and diagnosis of periodontal disease. This course examines, but is not limited to, the following topics: the role of the hygienist in non-surgical soft-tissue management, exposure to surgical techniques, wound healing, new technology in diagnostic tools, and products used in treatment or home care. This course further emphasizes the integration of theory into the practice of clinical dental hygiene. Includes three (3) lecture hours per week. Prerequisites: Completion of first year dental hygiene coursework.

DENH 4026. Healthcare Ethics. 1 Credit Hour.
This course is designed to provide students with an overview of professional and ethical issues facing dental hygiene professionals. Topics to be explored include the beliefs, fundamental principles, core values and standards of professional responsibility set forth in the ADHA Code of Ethics for Dental Hygienists. Ethical dilemmas will be discussed and decision making models will be introduced and used to assist students in solving these dilemmas. Additionally, team-based learning activities will serve to support student learning.

DENH 4027. The Summer Institute In Aging. 3 Credit Hours.
This course is an intensive interdisciplinary service-learning study of the assessment, health promotion, disease prevention, and treatment of the aging person. The course will examine physical, mental, emotional, legal, cultural, and social aspects of gerontology. The course is also designed to encourage the learner to reflect on the impact of the elderly on society, the impact to the dental hygiene profession, and the learner on a personal level.

DENH 4028. Public Health Policy. 3 Credit Hours.
This course will provide the learner with a history and overview of American public health policy. Included in the course is the evolution of health policy in the United States. Various resources will be explored to gain understanding of the process for policy development. By the end of the term the learner will develop a mock public policy analysis, about a topic of their choice that will include elements discussed in the course. When appropriate this course will utilize new and emerging public health policies to supplement course material. Admission to the Bachelor of Science Degree Completion Program is required.

DENH 4029. Dental Hygienist Role in the Management of Elder Abuse. 3 Credit Hours.
This course will allow the learner to acquire the skills and knowledge to recognize the mistreatment of elders. First, the various types of elder abuse will be identified followed by discussion of the prevalence of abuse. Next, case study application will direct the learner in recognizing the risk factors and signs of elder abuse. The legal requirement and major ethical dimensions for the dental hygienist to report abuse will be explored, and an explanation of required abuse documentation will be provided. Finally, techniques for the dental hygienist may work effectively with law enforcement will conclude this course.

DENH 4030. Introduction to Professional Writing. 1 Credit Hour.
This course was designed to help the online bachelor completion student develop concepts of professional writing skills utilizing state of the art communication resources. This is a required course for BS completion students to be taken in their first semester of the program.

DENH 4040. Dental Hygiene Honors Program. 0 Credit Hours.
This course is to introduce dental hygiene students to fundamental principles of teaching and learning with focus on planning courses, analyzing the learning environment, planning and presenting brief, focused mini-lectures, known as Rapid Teach Topics, and completing a Triple T (Tough Teaching Topic) exercise in small groups. Students also analyze their personality in relation to academics as a career.

DENH 4045. Academic Dental Hygiene Career Mentorship. 0 Credit Hours.
This course provides dental hygiene students with an opportunity to explore first-hand the academic arm of the dental hygiene profession by learning about faculty members’ pathways into academic teaching and eliciting faculty perspectives about working in dental hygiene schools.
DENH 4050. Dental Hygiene Classroom Teaching Seminar. 0 Credit Hours.
The course goal is to provide senior dental hygiene students with opportunities to function as a teacher by planning and delivering instruction followed by self-assessment, feedback from the students who received the instruction, and feedback from the THP Director and/or faculty members who observed the students’ teaching activities. The focus of this course is classroom teaching.

DENH 4091. Independent Study. 1-3 Credit Hours.
This course includes independent reading, research, discussion, project, and/or writing under the direction of a faculty member. The course may be repeated for credit. UTHSCSA graduates are limited to one Independent Study course; non-UTHSCSA grads are limited to two Independent study courses.

DENH 4103. Health Promotion. 3 Credit Hours.
This course provides the Bachelor of Science Degree Completion student a theoretical framework for defining health promotions and set the foundation for students to see potential for health promotions in their work. Topics in this course will use evidence-based practice to reflect health promotion theories, prevention, risk assessment, health education, and health policy. Additionally, interventions and strategies will be used to effectively evaluate the determinants of health and the outcomes of individuals, families, groups, and communities. In addition this course will help learners understand the impact of media and delivery style for effective health messages.

DENH 4111. Current Issues in Dental Hygiene. 3 Credit Hours.
This course investigates trends influencing the practice of dental hygiene. The history and image of dental hygiene, career satisfaction, educational trends and access to care, independent practice and self-regulations are the issues addressed in this course. A closer look at the legal, political and ethical ramifications of these topic areas as they relate to the dental hygiene profession will be explored.

DENH 4415. Advanced Public Health Practicum. 4 Credit Hours.
This course is a continuation of the Public Health Practicum and will provide the Bachelor of Science Degree Completion students with an opportunity to gain further experience with oral health care delivery projects, development of health promotion and prevention activities, or gain advanced skills in designing community-based and service learning programs. This course will include planning and execution of a project related to the student’s individual area of interest. Course fees: Practicum fee $10 per hour.

DENH 4926. Peer Teaching Rotation. 0 Credit Hours.
This selective is limited to THP students pursuing the Distinction in Dental Education. The course goal is to provide senior dental hygiene students with opportunities to function as a clinical instructor (Faculty for the day) in the 1st Year Clinic I (DENH 3021) for junior dental hygiene students.

DENH 4927. Research in Dental Hygiene Education (RIDHE). 0 Credit Hours.
This selective is designed for students pursuing the Distinction in Dental Education who desire to acquire skills and experience in educational research beyond the core expectations of the THP. The course goals are to enhance the capacity of participants to: (1) design a research poster or study that explores educational issues and (2) present the research at a professional organization meeting such as SCADHA. The RIDE course has 3 components: designing educational research, grant writing, and writing for publication. Students work in teams to plan and implement an educational research project during the course. During seminars on grant writing, participant teams develop and present a grant application to fund an educational development project and receive a critique. During seminars on writing for publication, participants complete writing exercises, critique a manuscript and write an abstract, which is presented to the class for peer feedback.

DENH 4928. Dental Spanish. 0 Credit Hours.
This 10 week/10 hour course is offered to dental students as a selective. It is designed for students who are interested in acquiring basic conversational skills in the Spanish language, with focus on Spanish terminology, phrases, and short sentences used during dental patient care to describe treatment, understand and answer patient questions, explain dental equipment and understand patient’s responses to medical and dental history questions. This course is not a Spanish language class and will focus mainly on teaching dental students how to interact with their Spanish-speaking patients in the clinic. Basic words, phrases and sentences used in everyday conversations in Spanish are also reviewed. This selective is conducted by Spanish-fluent dental students for their student peers who desire to enhance their ability to communicate with Spanish-speaking patients. Students in DENH 4928 complete pre and post-tests to measure their progress in recognizing basic Spanish terminology, phrases and brief/simple sentences that will be useful to know in the dental clinic. There is no required pass-level on the post-test; the test is for self-assessment purposes.

DENH 4929. Leadership in Interprofessional Service Learning. 0 Credit Hours.
This is an innovative interprofessional community service learning (CSL) course for medical, dental, nursing, and school of health profession students. The goal of this course is to promote social accountability among health professional students through the integration of meaningful service learning with the core competencies of interprofessional education. This course enables students from various health science professions to learn with, from, and about each other and each other’s roles on a health care team as they examine social determinants of health and social justice issues while applying these principles in a structured service learning practicum.

DENH 5003. Current Issues In Dental Hygiene. 3 Credit Hours.
This course investigates trends influencing the practice of dental hygiene. The history and image of dental hygiene, career satisfaction, educational trends, and access to care, independent practice, and self-regulations are the issues addressed in this course. A closer look at the legal, political and ethical ramifications of these topic areas as they relate to the dental hygiene profession will be explored. Acceptance into the Master of Dental Hygiene Program is required to take this course.
DENH 5007. Clinical Administration Practicum. 4 Credit Hours.
The purpose of this course is to present the graduate student with
an opportunity to hone administrative skills in a clinical environment.
There will be interactions with second-year dental hygiene students as
well as with the second-year clinic coordinator. The course includes
web based interaction focusing on clinical application to expand and
refine teaching and evaluation skills necessary for clinic administration.
Specific topics include outcomes assessment, quality assurance, and
information technology. Permission from the program director is required.
The prerequisite requirement can be waived by the program director.
Prerequisite: DENH 5050. Course Fees: Practicum fee $10 per hour.

DENH 5010. Teaching Internship. 3 Credit Hours.
This internship will provide graduate students with the opportunity to
learn in various clinics, laboratories, and didactic courses to acquire
experience in instructing undergraduate students in a variety of
situations. The course is arranged on a contractual basis and tailored
to meet the individual goals, needs, and interests of each graduate
student, while keeping in mind background experiences. Supervision
and evaluation of teaching performance are provided by the graduate
colleague. Student must have prerequisite or approval by Program Director.
Prerequisite: DENH 5050. Course Fees: Practicum fee $10 per hour.

DENH 5015. Public Health Practicum. 4 Credit Hours.
This course is an opportunity to gain experience with oral health care
delivery or promotion in a public health area. The course will include
planning and execution of a project in the student’s individual area of
interest. One full day per week requires the Master of Science student
to work in a public health setting in San Antonio or in their community.
A formal agreement must be established with the participating public
health clinic prior to the beginning of class. Course Fees: Practicum fee
$10 per hour.

DENH 5017. Clinical Teaching Practicum. 4 Credit Hours.
This course is an introduction to clinical instruction. The student will
have the opportunity to gain experience in identifying and correcting
performance problems relating to direct patient care. Instruction will
include seminar and a clinical application session emphasizing the
instructor’s role as facilitator, role model, and evaluator. This course
requires formal agreement with a participating dental hygiene program
prior to the beginning of class. (The didactic portion of this course is
delivered through CANVAS.) Students must have taken DENH 5050 before
registering for this course or get a waiver by the Program Director. Course
Fees: Practicum fee $10 per hour.

DENH 5022. Research Apprenticeship. 3 Credit Hours.
This course allows a graduate to review the literature and to design
a research project under the direction of a faculty advisor that leads
toward thesis research. Students are expected to design a research
proposal that prepares them to collect and analyze data for their future
thesis project. Prior to registering for this course requires approval from
the advanced program director. This course must be completed in its
 entirety prior to enrolling in Thesis (DENH 6098). Successful completion
of core studies for the Master of Science in Dental Hygiene program to
include Educational Principles and Applications, Research Principles
and Applications, Biostatistics, Research Ethics, and Professional
Communication.

DENH 5024. Professional Communication. 3 Credit Hours.
This course is designed to help the student develop concepts of
professional communication including verbal, visual, and writing
skills using state-of-the-art communication resources. Within an
interactive topic and computer laboratory format, the students is
expected to produce a series of scientific writings, abstracts, annotated
bibliographies, and a term paper/research report in the form of a review of
the literature. Open for Cross Enrollment on Space Available Basis.

DENH 5025. Dental Hygienist Role in the Management of Elder Abuse. 3
Credit Hours.
This course will allow the learner to acquire the skills and knowledge to
recognize the mistreatment of elders. First, the various types of elder
abuse will be identified following a discussion of the prevalence of
abuse. Next, case study application will direct the learner in recognizing
the risk factors and signs of elder abuse. The legal requirement and
major ethical dimensions for the dental hygienist to report abuse will be
explored, and an explanation of required abuse documentation will be
provided. Finally, techniques for the dental hygienist may work effectively
with law enforcement will conclude this course.

DENH 5026. Research Principles & Application. 3 Credit Hours.
This course is designed to provide the student with an opportunity to
expand research knowledge. The course will consist of an in depth
study of the research process, its contexts, design, data collection
and communication techniques. All students are expected to complete
assigned readings and participate in on-line discussions and activities
that will complement principles covered in assignments. Students must
be accepted into the Master of Science in Dental Hygiene program to take
this course.

DENH 5027. The Summer Institute In Aging. 3 Credit Hours.
This course is an intensive interdisciplinary service-learning study of the
assessment, health promotion, disease prevention, and treatment of the
aging person. The course will examine physical, mental, emotional, legal,
cultural, and social aspects of gerontology. The course is also designed
to encourage the learner to reflect on the impact of the elderly on society,
the impact to the dental hygiene profession, and the learner on a personal
level. Acceptance into the Master of Science in Dental Hygiene Program
is required to take this course.

DENH 5028. Public Health Policy. 3 Credit Hours.
This course will provide the learner with an overview of American Public
health policy, and the changes in policy as a result of international and
national initiatives. Included in the course is the evolution of oral health
public policy in the United States. Many resources will be explored to gain
understanding of the process of policy development. The student will
locate current event articles that discuss topics in the reading. Capstone
projects vary from researching and submitting a public policy paper or
white paper on a topic pertinent to the course work. Acceptance into the
Master of Science in Dental Hygiene Program is required before taking
this course.

DENH 5036. Health Promotion. 3 Credit Hours.
This course is designed to provide learners a theoretical framework for
defining health promotion and set the foundation for students to see
potential for health promotion in their work. Topics in this course will use
evidence based practice to reflect health promotion theories, prevention,
risk assessment, health education, and health policy. Additionally,
interventions and strategies will be used to effectively evaluate the
determinants of health and the outcomes of individuals, families, groups
and communities. Student must be accepted into the Master of Science
in Dental Hygiene Program to take this course.
DENH 5050. Educational Principles and Application. 3 Credit Hours.
This course is designed to promote high standards of teaching excellence by providing the learner with research based methods, policies, and practices for being an effective higher education teacher. The course will focus on all aspects of teaching: learning theories, course design, teaching methods and learning experiences, course management, and assessment. Specific emphasis will be on developing significant learning experiences for students. Gaining a better understanding of the design process will empower teachers to be more creative and effective in providing significant learning opportunities for students. Through this course, students will apply information gained and ultimately develop a personal educational statement. Acceptance into the Master of Science in Dental Hygiene Program is required to take this course.

DENH 5091. Special Topics in Dental Hygiene. 1-9 Credit Hours.
Students will be given an opportunity to gain an in-depth understanding of selected topics through seminars, conferences, projects, or other appropriate learning methods.

DENH 5903. Organizational Leadership. 3 Credit Hours.
The purpose of this course is to present foundational principles and theory relating to organizational leadership, communication strategies and behaviors, management of change, decision-making, and other essential elements of leadership. The course will provide students with general information relating to organizational theory, principles and styles. Additional topics will include leadership in educational organizations to include external and internal factors affecting leaders, program planning and as an elective and is open to all advanced education students enrolled in either the B.S. or M.S. Dental Hygiene Program and graduate students in other Health Professions Programs.

DENH 5924. Biostatistics. 3 Credit Hours.
This course is an introduction to biostatistics. Emphasis is upon application of statistical methods to biological problems. Topics include descriptive statistics, probability, hypothesis testing, and estimation.

DENH 5926. Preclinical Teaching Practicum. 4 Credit Hours.
This course is an introduction to concepts of preclinical instruction. Instruction will include seminar and laboratory application sessions emphasizing theories of psychomotor skill development; diagnosis of performance problems; provision of feedback; identification of cognitive, psychomotor, and affective behaviors; and faculty calibration. This course requires formal agreement with a participating dental hygiene program prior to the beginning of class. (The didactic portion of this course is delivered through Canvas.) Prerequisites: DENH 5050 and DENH 5010. Course Fees: Practicum fee $10 per hour.

DENH 6001. The Dental Hygienist Role in the Management of Elder Abuse. 3 Credit Hours.
This course will allow the learner to acquire the skills and knowledge to recognize the mistreatment of elders. First, the various types of elder abuse will be identified followed by discussion of the prevalence of abuse. Next, case study application will direct the learner in recognizing the risk factors and signs of elder abuse. The legal requirement and major ethical dimensions for the dental hygienist to report abuse will be explored, and an explanation of required abuse documentation will be provided. Finally, techniques for the dental hygienist may work effectively with law enforcement will conclude this course. Acceptance in the Master of Science in Dental Hygiene Program is required before taking the class.

DENH 6091. Independent Study. 1-3 Credit Hours.
This course includes independent reading, research, discussion, project, and/or writing under the direction of a faculty member. The course may be repeated for credit. Student must be accepted into the Master of Science in Dental Hygiene Program before taking the course.

DENH 6098. Thesis. 1-9 Credit Hours.
The first goal of this course is admit the student to candidacy in the Graduate School of Biomedical Sciences (GSBS) in order that they may begin individual research. The research is supervised by the Thesis Committee of selected faculty. The Thesis Chair will have the primary responsibility of supervising student progress. By conducting an individual research project, collecting and analyzing the data, and developing conclusions based on that data the student will understand the research process. Students will be mindful of the ethical issues associated with human subject and conduct the research under the guidelines of the University of Texas Health Science Center’s Internal Review Board (IRB) guidelines. Students who successfully complete the research project with an oral presentation of their findings and submission of a manuscript to a peer reviewed journal or write a thesis will conclude their studies and graduate. The student has an option of submission of a manuscript in the form of writing a full thesis. The thesis option must meet the guidelines of the GSBS. Student must have completed 30 hours of core and elective courses, DENH 5022 Research Apprenticeship in the MS in Dental Hygiene program before taking the course.

Dental Public Health (PBHL)

Courses

PBHL 5011. Advanced Education In Dental Public Health 1. 1 Credit Hour.
This course is designed to provide dental public health (DPH) students with the foundational knowledge about DPH topics and learn to critically review the scientific literature. Students will also develop skills in dental public health practice by applying knowledge in community-based practice and teaching. Through this participation course, DPH students are expected to review the seminal and current literature about a defined topic in dental public health and discuss the topic with a faculty member who is assigned to teach this topic. Students receive experiences in administration, programs, and policy. The DPH student participates to dental public health community service-learning experience and rotations, DPH students acquire knowledge and skills in education focusing on teaching methodologies, scholarship, and educational planning.

PBHL 5012. Advanced Education In Dental Public Health 2. 1 Credit Hour.
This course is designed to provide dental public health (DPH) students with the foundational knowledge about DPH topics and learn to critically review the scientific literature. Students will also develop skills in dental public health practice by applying knowledge in community-based practice and teaching. Through this participation course, DPH students are expected to review the seminal and current literature about a defined topic in dental public health and discuss the topic with a faculty member who is assigned to teach this topic. Students receive experiences in administration, programs, and policy. The DPH student participates to dental public health community service-learning experience and rotations, DPH students acquire knowledge and skills in education focusing on teaching methodologies, scholarship, and educational planning. Prerequisites: PBHL 5011.

PBHL 5014. Research Methodology in Dental Public Health 1. 1 Credit Hour.
This course provides a vehicle for dental public health (DPH) students to complete two research projects in fulfillment of the expectation of the American Board of Dental Public Health as described by the American Association of Public Health Dentistry. This course is required.
PBHL 5015. Research Methodology in Dental Public Health 2. 1 Credit Hour.
This course provides a vehicle for dental public health (DPH) students to complete two research projects in fulfillment of the expectation of the American Board of Dental Public Health as described by the American Association of Public Health Dentistry. This course is required. Prerequisite: PBHL 5014.

PBHL 5027. Teaching in Dental Public Health Science. 2 Credit Hours.
The DPH Student will supervise undergraduate dental students in community-based programs under the guidance of DPH faculty and participate in Clinical Preventive Dentistry Course (COMD 7050). Through this course, the DPH Student will acquire knowledge and skills in education focusing on teaching methodologies, educational planning and scholarship.

Dental Science (MSDS)

Courses

MSDS 5020. Dental Biomed Core 1. 4 Credit Hours.
The Biomedical Core Course will provide a multidisciplinary approach to basic science instruction as it relates to the clinical practice of dentistry. Both basic science and clinical science faculty will participate to provide a sound base of material required by each program. Individual programs will supplement the Biomedical Core Course in the basic science areas particular to that discipline. This combination of core instruction with individual supplementation should provide the advanced education student the appropriate background in biomedical science.

MSDS 5021. Dental Biomed Core 2. 1 Credit Hour.
This course is a continuation of MSDS 5020 Dental Biomedical Core Course 1.

MSDS 5057. Research I Protocol Development and Design. 3 Credit Hours.
The introductory course in research design and protocol development is limited to postdoctoral students enrolled in advanced education programs. It is the 1st of four required core research course for the Masters of Science in Dental Science curriculum. Registration for this course requires permission by the respective program director for a particular Masters of Science education track. The course occurs during the PGI year offered in summer, fall and spring semesters. Credit hours vary between educational tracks for a particular semester from 1-3 hours, with a total of 3 credit hours required for course completion.

MSDS 5090. Grad Research Methodology. 2 Credit Hours.
This course is an introduction to methods and techniques used in dental research. Topics will include basic assumptions and concepts of scientific research, selecting research topics, specifying objectives and hypotheses, literature reviews, and experimental design.

MSDS 5121. Biostatistics. 1 Credit Hour.
This course is designed to prepare the advanced education dentist with the knowledge of common statistical methods in order to critically evaluate the literature and to perform necessary analyses in support of their own research projects, particularly those directed at the completion of the Certificate from the Dental School and/or the Master of Science degree from the Graduate School of Biomedical Sciences.

MSDS 5157. Research 1- Project Proposal. 1 Credit Hour.
The introductory course in research design and protocol development is limited to postdoctoral students enrolled in advanced education programs. It is the 1st of four required core research courses for the Master of Science in Dental Science curriculum. Registration for this course requires permission by the respective program director for a particular Master of Science educational track. The course occurs during the PGI year offered in the spring semester. In fulfillment of the Master of Science degree, registration for this course requires completion of MSDS 5257 in the preceding semester.

MSDS 5257. Research 1- Project Proposal. 2 Credit Hours.
The introductory course in research design and protocol development is limited to postdoctoral students enrolled in advanced education programs. It is the 1st of four required core research courses for the Master of Science in Dental Science curriculum. Registration for this course requires permission by the respective program director for a particular Master of Science educational track. The course occurs during the PGI year offered in the spring semester.

MSDS 5357. Research 1- Project Proposal. 3 Credit Hours.
The introductory course in research design and protocol development is limited to postdoctoral students enrolled in advanced education programs. It is the 1st of four required core research courses for the Master of Science in Dental Science curriculum. Registration for this course requires permission by the respective program director for a particular Master of Science educational track. The course occurs during the PGI year offered in the spring semester.

MSDS 6057. Research 2 - Data Collection. 6 Credit Hours.
The course focuses on refining research design, implementation, and data collection. Enrollment limited to postdoctoral students in advanced education programs who have completed successfully both MSDS 5257 and MSDS 5157, or MSDS 5357 in PG1. This is the 2nd of four required core research courses for the Masters of Science in Dental Science curriculum. Registration for this course requires permission by the respective program director for a particular Masters of Science education track. The course occurs during the PGI 2 year offered in summer, fall and spring semesters. Credit hours vary between educational tracks for a particular semester from 1-6 hours, with a total of 6 credit hours required for course completion.

MSDS 6058. Research 3- Data Analysis. 2 Credit Hours.
The course focuses on analysis of research data and experimental design. Enrollment limited to postdoctoral students in advanced education programs who have completed successfully MSDS 6057. This is the 3rd of four required core research courses for the Masters of Science in Dental Science curriculum. Registration for this course requires permission by the respective program director for a particular Masters of Science education track. The course occurs during the PG II year offered and is offered in both fall and spring semesters. Credit hours vary between educational tracks for a semester from 1-2 hours, with a total of 2 credit hours required for course completion.
MSDS 6098. Thesis. 1-4 Credit Hours.
The research thesis course is limited to postdoctoral students in advanced education programs who have completed successfully MSDS 6058. This is the 4th of four required core research courses for the Masters of Science in Dental Science curriculum. Registration for this course requires permission by the respective program director from a particular Masters of Science education track. The course is offered in fall, and spring semesters. Credit hours vary between educational tracks for a semester from 1-4. The course occurs during the PG II and PG II year offered in summer, fall, and spring semesters. Credit hours vary between educational tracks for a semester from 1-4 hours, with a total of 4 credit hours required for course completion.

MSDS 6357. Research 2- Data Collection. 3 Credit Hours.
This course focuses on refining research design, implementation, and data collection. Enrollment limited to postdoctoral students in advanced education programs who have completed successfully MSDS 5257 and MSDS 5157 or MSDS 5357 in PG1. This is the 2nd of four required core research courses for the Master of Science in Dental Science curriculum. Registration for this course requires permission by the respective program director for a particular Master of Science education track. The course occurs during the PG2 year offered in fall and spring semesters. In fulfillment of the Master of Science degree, registration for this course requires registration for MSDS 6357 for two semesters.

MSDS 6657. Research 2- Data Collection. 3 Credit Hours.
The course focuses on refining research design, implementation, and data collection. Enrollment limited to postdoctoral students in advanced education programs who have completed successfully MSDS 5257 and MSDS 5157 or MSDS 5357 in PG1. This is the 2nd of four required core research courses for the Master of Science in Dental Science curriculum. Registration for this course requires permission by the respective program director for a particular Master of Science education track. The course occurs during the PG2 year offered in the spring semester.

**Emergency Health Sciences (EMSP)**

**Courses**

EMSP 1137. Emergency Procedures 1. 1 Credit Hour.
Application of emergency medical procedures.

EMSP 1149. Pre-Hospital Trauma Life Support. 1 Credit Hour.
This course is an intense skill development in emergency field management, systematic rapid assessment, resuscitation, packaging, and transportation of patients. It includes experiences necessary to meet initial certification requirements.

EMSP 1160. EMT Basic Clinical. 1 Credit Hour.
This course is a method of instruction providing detailed education, training, and work-based experience and direct patient/client care at a clinical site.

EMSP 1161. Clinical 1. 1 Credit Hour.
This course is a method of instruction providing detailed education, training, and work-based experience and direct patient/client care at a clinical site.

EMSP 1162. Clinical 2. 1 Credit Hour.
This course is a method of instruction providing detailed education, training, and work-based experience and direct patient/client care at a clinical site. Prerequisites: EMSP 1161.

EMSP 1201. Anatomy and Physiology for Paramedic Practice. 2 Credit Hours.
A study of the structure and function of the human body, emphasis will be given to the study of cells and tissues, and anatomical and physiological interrelationships of the skeletal, muscular, nervous, and endocrine systems. This course is designed primarily for Paramedic students.

EMSP 1238. Introduction to Paramedic Practice. 2 Credit Hours.
This course is an exploration of the foundations necessary for mastery of the advanced topics of clinical practice out of the hospital. Course Learning Outcomes: At the completion of this module, the student will be required to understand the roles and responsibilities of a paramedic within the EMS system, apply the basic concepts of development and pathophysiology to assessment, and management of emergency patients.

EMSP 1248. Emergency Pharmacology. 2 Credit Hours.
This course is a comprehensive course covering all aspects of the utilization of medications in treating emergencies. The course is designed to complement Cardiology, Special Populations, and Medical Emergency courses. Course Learning Objectives: The student will be required to display a command of general pharmacological terminology, general drug mechanisms, administration routes and administration procedures, and drug dose calculations. Students will be required to demonstrate understanding of the pharmacodynamics, pharmacokinetics, indications, contraindications, possible side effects, and common drug interactions of a variety of medications used in out-of-hospital medical care.

EMSP 1256. Airway Management and Patient Assessment. 2 Credit Hours.
This course is a detailed study of the knowledge and skills required to reach competence in performing patient assessment and airway management. Course Learning Outcomes: At the completion of this module, the student will be required to take a proper history and perform a comprehensive physical exam on any patient, develop a patient care plan, communicate with others, and establish and/or maintain a patent airway, oxygenate, and ventilate a patient. Course fees: Lab materials fee $150.

EMSP 1301. Anatomy and Physiology for Paramedic Practice. 3 Credit Hours.
A study of the structure and function of the human body, emphasis will be given to the study of cells and tissues, and anatomical and physiological interrelationships of the skeletal, muscular, nervous, and endocrine systems. This course is designed primarily for Paramedic students.

EMSP 1338. Introduction to Paramedic Practice. 3 Credit Hours.
Fundamental elements associated with emergency medical services to include preparatory practices, pathophysiology, medication administration, and related topics.

EMSP 1344. Cardiology. 3 Credit Hours.
This course is a detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with cardiac emergencies. Prerequisite: EMSP 1244.

EMSP 1348. Emergency Pharmacology. 3 Credit Hours.
This course is a comprehensive course covering all aspects of the utilization of medications in treating emergencies. The course is designed to complement Cardiology, Special Populations, and Medical Emergency courses.
EMSP 1356. Airway and Respiratory Management. 3 Credit Hours.
Integrates complex knowledge of anatomy, physiology, and pathophysiology into the assessment to develop and implement a treatment plan with the goal of assuring a patent airway, adequate mechanical ventilation, and respiration for patients of all ages. Course fees: Lab materials fee $225.00.

EMSP 1501. EMT. 5 Credit Hours.
This course is an introduction to the level of EMT Basic. It covers the skills necessary to provide emergency medical care at the basic life support level with an ambulance service or other specialized service.

EMSP 2135. Advanced Cardiac Life Support. 1 Credit Hour.
Instruction satisfies guidelines published by the American Heart Association for their ACLS core curriculum. The focus is on the initial management of the cardiopulmonary arrest patient, including advanced airway management techniques, cardiovascular pharmacology, defibrillation, and arrhythmia analysis. The student must review the current AHA ACLS text prior to class. Successful completion results in ACLS Provider Course Completion Card.

EMSP 2138. EMS Operations. 1 Credit Hour.
This is a course of study to prepare the paramedic to safely manage medical incidents, rescue situations, hazardous materials, and crime scenes.

EMSP 2160. Paramedic Clinical 3. 1 Credit Hour.
A method of instruction providing detailed education training and work-based experience and direct patient/client care at a clinical site. Prerequisites: EMSP 1162.

EMSP 2161. Paramedic Clinical 4. 1 Credit Hour.
This course is a clinical internship requiring each student under close supervision to complete a stated number of objectives in both the hospital and ambulance environment. Clinical courses to be taken in the sequence are listed above. Students are evaluated on cognitive, psychomotor, and affective domains. A numerical grade is awarded based on performance levels and course objectives met. Note: Successful completion of clinical requirements is based on objectives met along with the required Hours. It may be necessary for a student to complete more than the scheduled 375 hours in order to meet the objectives.

EMSP 2164. Paramedic Practicum. 1 Credit Hour.
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

EMSP 2177. Emergency Procedures 3. 1 Credit Hour.
Application of emergency medical procedures.

EMSP 2230. Special Populations. 2 Credit Hours.
This course is a detailed study of the knowledge and skills necessary to reach competence in the assessment and management of ill or injured patients in nontraditional populations.

EMSP 2237. Emergency Procedures 2. 2 Credit Hours.
Application of emergency medical procedures.
EMSP 2371. Physical Exam and History Taking. 3 Credit Hours.
The purpose of this course is to provide the learner with the ability to perform and work in non-traditional and rural settings. Learners will gain the skills of patient assessment, disease identification, health education, and preventative medicine. Learners are given the opportunity to study methods for understanding disease processes through proper techniques for eliciting a complete patient history and performing a thorough physical examination. (Successful completion of Physical Assessment & Airway Management and Physical Examination and History Taking satisfies the Physical Examination and History Taking course requirements for the EHS BS degree).

EMSP 2376. Cardiology 2. 3 Credit Hours.
A study of the fundamentals of electrocardiography with emphasis on the role of the 12-lead ECG for advanced paramedic and community paramedic practice. (Successful completion of Cardiology I and II satisfies the Electrocardiography in EHS course requirement for the EHS BS degree).

EMSP 2378. Critical Care Paramedic. 3 Credit Hours.
The purpose of this course is to provide the learner with advanced knowledge in critical care medicine and to prepare healthcare personnel to function as members of a critical care transport team. Topics will include monitoring technology, advanced procedures, diagnostic testing, and treatment of acutely critical patients. (Successful completion satisfies the Critical Care Paramedic course for the EHS BS degree.).

EMSP 2434. Medical Emergencies. 4 Credit Hours.
Knowledge and skills in the assessment and management of patients with medical emergencies, including medical overview, neurology, gastroenterology, immunology, pulmonology, urology, hematology, endocrinology, toxicology, and other related topics.

EMSP 2443. Assessment-Based Management. 4 Credit Hours.
A summative experience covering comprehensive, assessment-based patient care management for the paramedic level and preparation for national certification examination.

EMSP 3001. Foundations of Emergency Health Sciences. 3 Credit Hours.
This course is an introduction to EMSP. This course surveys the history, evolution, theoretical concepts, and clinical methods and techniques that support the practice of EMSP.

EMSP 3003. Critical Care Medicine. 3 Credit Hours.
This course is designed to provide advanced knowledge in critical care medicine. Topics will include monitoring technology, advanced procedures, diagnostic testing, and treatment of acutely critical patients.

EMSP 3004. Pharmacology 1 for EMS Providers. 3 Credit Hours.
This course is designed to provide the learner with a fundamental knowledge of the actions and therapeutic uses of drugs. The topics covered will include basic principles of drug action, pharmacokinetics, autonomic and cardiovascular pharmacology, neuropharmacology, toxicology, endocrine pharmacology, and respiratory tract pharmacology. Open for Cross Enrollment on Space Available Basis.

EMSP 3006. Electrocardiology in Emergency Health Science. 3 Credit Hours.
A study of the fundamentals of electrocardiography, this course will emphasize the role of the 12-lead ECG in out-of-hospital medical care. The purpose of this course is to teach a systematic-analytical approach to rapid 12-lead interpretation. Topics begin with cardiac anatomy and physiology and progress to the level of recognizing the classic 12-lead and multi-lead ECG patterns. Open for Cross Enrollment on Space Available Basis.

EMSP 3007. Human Diseases. 3 Credit Hours.
This purpose of this course is to provide a foundation in basic disease conditions, pathophysiological process behind major diseases and their causes, definitions of disease, classifications of disease, and descriptions of diseases as they pertain to the emergency health sciences. Open for Cross Enrollment on Space Available Basis.

EMSP 3010. Basic Cardiac Life Support. 0 Credit Hours.
Course instruction satisfies AHA guidelines for Basic Cardiac Life Support (BCLS). Successful completion merits AHS BLS Course Completion Card. Topics include basic airway and ventilatory management of the choking and/or unconscious infant, child, and adult; cardiac chest compressions; and automated external defibrillation (AED). AHD Standard written and skills exams administered.

EMSP 3011. EMS Informatics. 3 Credit Hours.
This course is a class designed to initiate today’s EMS professional to the rapidly advancing field of information science and to acquaint the students with the concepts of electronic field data collection, database theory, and its application to EMS, information driven performance improvement, and clinical education.

EMSP 3012. Behavioral Medicine and Psychopathology. 3 Credit Hours.
This course provides an opportunity to develop an understanding of human behavior by providing an overview of behavioral disease processes and differentiation criteria to include disease presentation, physical examination findings, laboratory testing, and therapeutic approaches. The course will focus on issues pertinent to the pre-hospital environment including common patient presentation, overview of the legal system with mental health patients, and individual and system interventions.

EMSP 3013. Professional Orientation and Legal Foundations. 3 Credit Hours.
This course provides the student with an overview of the legal foundations for Emergency Medical Services. Topics include concepts of malpractice, litigation, consent and refusal of medical treatment, advanced directives, patient confidentiality, and expert and factual witness preparation.

EMSP 3014. Interprofessional Health Care Teams. 3 Credit Hours.
Healthcare is a volatile, uncertain, complex, and ambiguous system involving groups and teams of professionals. In an effort to improve general patient population health, the overall health care experience, and reduce the per capita cost of care, this class will explore relational leadership that promotes interdisciplinarity, interprofessionalism, and productive teamwork. During this course, learners will review theories and rich references while participating in activities and stimulating discussions to think differently about their roles and styles as leaders or members of a team.

EMSP 3015. Multicultural Health. 3 Credit Hours.
Cultural competence is essential to healthcare professionals. Medical professionals interact daily with diverse groups of people. This course will focus on differences in cultural beliefs about health, wellness, illness, and death, as well as cross-cultural health models and effective communications with the goal of developing and evaluating health promotion programs within the community. Learners will participate in online activities, case studies, and activities.

EMSP 3031. Directed Study. 1-4 Credit Hours.
This course is available to the learner to allow for a voluntary course of independent study in a clinical/advanced provider concentration.
EMSP 3041. Current Research In Emergency Health Sciences. 3 Credit Hours.
This course is a seminar designed to encourage the learner to discover research and research trends in the field of EMSP. Basic concepts in research methods will be discussed. The learner will have the opportunity to discover methods, procedures, and ways of analysis for examining research.

EMSP 3100. Orientation to Online Learning. 1 Credit Hour.
A course designed to provide the student with necessary information, tools, and strategies to enhance and facilitate learning at a distance at the Health Science Center.

EMSP 4001. Physical Examination and History Taking. 3 Credit Hours.
This course is designed to assist students in refining history taking, psychosocial assessment, and physical assessment skills. Emphasis is placed on detailed health history taking, differentiation, interpretation, and documentation of normal and abnormal findings. Learners are given the opportunity to study methods for understanding disease processes through proper techniques for eliciting a complete patient history and performing a thorough physical examination. Open for Cross Enrollment on Space Available Basis.

EMSP 4002. Pathophysiology for EMS Providers. 3 Credit Hours.
This course is designed to introduce the student to pathophysiologic concepts related to altered biological processes affecting individuals across the lifespan. It includes basic mechanisms of disease, the immune response, and selected disorders of the following systems: neurologic, endocrine, reproductive, musculoskeletal, cardiovascular, hematologic, respiratory, urinary, and digestive.

EMSP 4003. Flight Medicine. 3 Credit Hours.
This course is designed to provide the learner with general physics of flight as well as the effect that flight has on patients and equipment utilized in patient care. Additionally, general aviation guidelines and safety protocols will be introduced as well as the regulatory structure of flight medicine. Open for Cross Enrollment on Space Available Basis.

EMSP 4004. Management of Disasters and Hazard Materials. 3 Credit Hours.
This course discusses considerations of the theoretical and practical foundations necessary to manage multi-casualty and multi-agency incidents, including planning, response, triage, and scene control. Medical, surgical, mental health, and public health views are discussed along with the resolution phases of disaster.

EMSP 4005. EHS Systems Management and Budget. 3 Credit Hours.
This course is designed to identify and discuss various forms and trends of EHS Systems management. From the volunteer service to the large, urban EHS system, the learner will have the opportunity to become familiar with the various aspects of America's EHS services. Budgeting and financial management skills and understanding necessary to manage emergency health systems will be emphasized.

EMSP 4006. Educational Issues in Emergency Health Sciences. 3 Credit Hours.
This course analyzes educational and training needs relating to EMS agencies. Principles of adult teaching and learning are presented.

EMSP 4007. Human Resource Development. 3 Credit Hours.
This course reviews the policies necessary to ensure that properly prepared and motivated personnel are available to carry out the mission and daily operations of an EMS organization and to gain a scholarly understanding of and familiarity with foundational HRD theory and research. Topics include methods of hiring staff, performance appraisal processes, legal requirements around health and safety, union matters, and sexual harassment in the workplace. Open for Cross Enrollment on Space Available Basis.

EMSP 4008. Leadership Development. 3 Credit Hours.
This course is a study and application of contemporary leadership theories and conceptual, skill-building, feedback, and personal growth approaches for the development of effective organizational leadership behaviors and practices. Open for Cross Enrollment on Space Available Basis.

EMSP 4009. Pediatric Advanced Life Support (PALS). 1 Credit Hour.
Instruction presented satisfies guidelines published by the American Heart Association's ECC for the PALS core curriculum. The focus is on the initial management of the cardiopulmonary arrest pediatric patient including advanced airway management techniques, cardiovascular pharmacology, defibrillation, and arrhythmia analysis. The student must review the current AHA PALS text prior to class. Successful completion results in PALS Provider Course Completion certification.

EMSP 4010. Emer Med Serv-Ambulance. 4 Credit Hours.
Orientation to the San Antonio Fire Department Standard Medical Operating Procedures (SMOPs) and EMS Organization is followed by assignment to SAFD Paramedic Ambulance teams. The student experiences emergency patient encounters involving on-the-scene pre-hospital management of medical, surgical, pediatric, psychological, obstetrical, and social emergencies. Experiences include vehicle extrication, full range of pre-hospital medical and trauma patients, EMS communication procedures, medical-legal situations, conflict resolution, EMS-Police cooperation, BLS/ACLS, hospital diversions experience and patient access to care problems peculiar to EMS. During 40 requisite patient encounters, the student makes brief assessment notes, assists in the care and transportation of patients to the 20 San Antonio Emergency rooms. The rotation also includes EMS Case Discussions, formal classes in comparative EMS organizations, methods of emergency triage, introduction to disaster medicine, management of mass casualties, and a survey of weapons of mass destruction. Prerequisite: Current BLS Certification and successful completion of third year of medical school is required.

EMSP 4011. Contemporary Ethical Dilemmas. 3 Credit Hours.
Contemporary Ethical Dilemmas in Health Professions with special emphasis on out-of-hospital and EMS medical care. This course provides the knowledge necessary to understand ethical behaviors and decision-making in health care and is an introduction to various ethical-legal issues.

EMSP 4012. Pharmacology 2 for EMS Providers. 3 Credit Hours.
This course is designed to provide a fundamental knowledge of the actions and therapeutic uses of drugs. Topics covered include: fluid and electrolyte balance, bone and joint disorders, nutrition, infectious diseases, and cardiovascular and parasitic diseases. Online course. Note: EMSP 3004 Pharmacology I is not a prerequisite for this course.

EMSP 4021. Internship. 6 Credit Hours.
This course is a semester internship/capstone experience by arrangement.
EMSP 4023. Mobile Integrated Healthcare Paramedicine. 3 Credit Hours.
From managing chronic disease to providing preventive care to coordinating health services, the Mobile Integrated Healthcare Paramedic (MIHP)/Community Paramedic (CP) collaborates with a team of health care professionals to address health problems within their communities, reduce hospital readmissions, prevent unnecessary ambulance transports, and help patients manage their medical needs to achieve the best possible long-term outcome. The MIHP course will consist of lessons developed to equip experienced paramedics with the skills they need to succeed in a Mobile Integrated Healthcare program.

EMSP 4031. Independent Study 2-Clinical. 3 Credit Hours.
This course is available to the learner to allow for a voluntary course of independent study in a clinical/advanced provider concentration.

EMSP 4100. Advanced Cardiac Life Support. 1 Credit Hour.
The focus of this course is the initial management of the cardiopulmonary-arrest patient including advanced airway management techniques, cardiovascular pharmacology, defibrillation, and arrhythmia analysis. The student must review the current AHA ACLS text prior to class. Successful completion results in an ACLS Provider Course Completion Card. Instruction presented satisfies guidelines published by the American Heart Association's ECC for their ACLS core curriculum.

EMSP 5001. Basic Cardiac Life Support. 0 Credit Hours.
Course instruction satisfies AHA guidelines for Basic Cardiac Life Support (BCLS). Successful completion merits AHA BLS Provider course completion card. Topics include basic airway and ventilatory management of the choking and/or unconscious infant, child, or adult victim; cardiac chest compression techniques; automated external defibrillation (AED). AHA standard written and skills exams administered.

EMSP 5100. Advanced Cardiac Life Support. 0 Credit Hours.
The focus of this course is the initial management of the cardiopulmonary-arrest patient including advanced airway management techniques, cardiovascular pharmacology, defibrillation, and arrhythmia analysis. The student must review the current AHA ACLS text prior to class. Successful completion results in an ACLS Provider Course Completion Card. Instruction presented satisfies guidelines published by the American Heart Association's ECC for their ACLS core curriculum.

EMSP 6135. Advanced Cardiac Life Support. 1 Credit Hour.
Theory and skills necessary for the management of cardiovascular emergencies as specified by the American Heart Association (AHA) guidelines. This course was designed to be repeated multiple times to improve student proficiency and available for Master’s level of higher programs.

EMSP 7001. Basic Cardiac Life Support. 0 Credit Hours.
Course instruction satisfies AHA guidelines for Basic Cardiac Life Support. Successful completion merits AHA BLS Healthcare Provider course completion certification. Topics include basic airway and ventilatory management of the choking and/or unconscious infant, child or adult victim, cardiac chest compression techniques, and automated external defibrillation (AED). AHA standard written and skills exams administered.

Emergency Medicine (EMED)

Courses

EMED 3005. Emergency Medicine Clerkship. 4 Credit Hours.
This four-week core clerkship introduces the 3rd year medical students to the specialty of emergency medicine and reviews principles of emergency care that will benefit a graduate entering any specialty.

EMED 4002. Topics in Emergency Medicine. 2 Credit Hours.
This elective will allow students to create, implement, and/or complete special clinical, research and/or educational projects in the specialty of Emergency Medicine. Specific learning objectives will be written and tailored to the project by the supervising faculty member with approval by the course director prior to the start of the elective.

EMED 4005. Emergency Medicine Selective. 4 Credit Hours.
This sub-internship is designed to prepare students for the intense and responsible role of the intern. The sub-intern is an integral member of the team and will participate in all team activities and medical care for his/her patients, under the supervision of the Emergency Medicine attending. In addition to working clinical shifts, students are expected to participate in didactic sessions and perform ambulance ride-alongs to successfully complete the course. This course is an outpatient selective. Prerequisite: EMED 3005.

EMED 4006. Toxicology and Poison Center Clinical Elective. 4 Credit Hours.
The Toxicology & Poison Center rotation is a 4-week, on-campus, pass-fail elective in the MS-4 year. This rotation is designed to develop fundamental knowledge and skills necessary to evaluate and treat patients experiencing a wide range of poisonings, envenomations, and toxicological exposures. The learner will develop skills to diagnose and manage acute and chronic poisoning in adults and children, covering the spectrum of not sick to critically ill patients. Participants will learn about the major classes of intoxication/poisoning, as well as relevant antidotes and supportive care. Environmental and occupational toxicology are also emphasized, along with terrorist toxicological weapons of destruction. The concentrated experience of lectures, case discussion rounds, webinars, simulation scenarios, hands-on toxicology lab, journal club discussion, telephone consultations, teaching by Specialists in Poison Information, and occasional patient encounters will provide an educationally rich and productive experience. Students have the opportunity to participate in a wide variety of educational experiences including toxicology case rounds, topic presentations, conferences, informal teaching sessions reviewing interesting cases with toxicology faculty, poisoning prevention, and community educational outreach activities.

EMED 4051. Emergency Ultrasound. 4 Credit Hours.
Senior (4th year) medical students will be instructed in the basic use of ultrasound equipment and its application in the emergency department. Topics to be covered during this elective include ultrasound equipment and knobology, basic ultrasound physics, ultrasound-guided vascular access, extended focused assessment with Sonography for Trauma (E-Fast), aortic ultrasound, pelvic ultrasound, biliary ultrasound, bedside echocardiography, musculoskeletal ultrasound, deep venous thrombosis evaluation, ocular ultrasound, ultrasound guided regional anesthesia, thoracic ultrasound, renal and bladder ultrasound, ultrasound-guided procedures. This training will be accomplished with a combination of didactic lectures, extensive supervised bedside ultrasound training on emergency department patients, independent student ultrasound scanning sessions, required textbook reading, weekly video review sessions and weekly literature review. Each student will be required to complete a minimum of 100 complete ultrasound examinations covering the scope of the course material. This elective is designed to provide a base knowledge in emergency ultrasound for students interested in pursuing an emergency medicine residency.
EMED 4076. Emergency Medicine Rotation - Brooke Army Medical Center. 4 Credit Hours.
BAMC is a Level 1 Trauma Center seeking approximately 50,000 patients per year. All patient types are seen: trauma victims, complicated medical patients, children, OB/GYN patients and psychiatric patients. There is no "compartmentalization" of the Emergency Department. Students work on average of 5 eight-hour shifts per week with a mixture of days, evenings, nights and weekends. Students work one-on-one with staff physicians or senior emergency medicine residents. There are five hours of Grand Rounds per week. There is Morning Report every Monday, Tuesday, Wednesday and Thursday. Each student has the opportunity to participate in a procedure lab, DPL, chest tubes, thoracotomy, transvenous pacing and cricothyroidotomy. This rotation must be arranged through Vanessa Soto, even if you are a HPSP student. No late Drops will be accepted.

EMED 7000. Off Campus Rotation in Emergency Medicine. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty member prior to the beginning of the rotation (at least one week before the course begins). Credit will not be given for any rotation that has not been approved in advance. Required paperwork includes: "Course Approval" form, a written letter or email of acceptance from the physical preceptor with the start and ending dates of the course/rotation, and a course description of your learning objectives and responsibilities during the rotation. Forms must include a complete address and telephone number for the off campus location or residence address for the student while at the off campus site. Forms will not be approved after the rotation has already begun.

Endodontics (ENDO)

Courses

ENDO 5010. Clinical Endodontics 1. 2.5 Credit Hours.
An extensive clinical experience in the broad spectrum of endodontic practice is offered on the graduate level. Each student has the opportunity to maintain a comprehensive endodontic practice under the supervision of the director and staff of the postdoctoral program in endodontics.

ENDO 5011. Clinical Endodontics 1. 3 Credit Hours.
An extensive clinical experience in the broad spectrum of endodontic practice is offered on the graduate level. Each student has the opportunity to maintain a comprehensive endodontic practice under the supervision of the director and staff of the postdoctoral program in endodontics.

ENDO 5015. Dental Photography. 0.5 Credit Hours.
This course is designed to expose the student to the principles of effective dental photography. Students are given the opportunity to make clinical photographs that are critiqued in class.

ENDO 5017. Clinical Seminar 1. 2 Credit Hours.
These seminars provide the opportunity to discuss matters pertaining to clinical endodontics by exposing the student to a wide variety of clinical cases. The seminars provide information to give students the opportunity to become sophisticated diagnosticians and skillful clinicians. Students are provided the opportunity to achieve these goals through student case presentations, faculty case presentations, topical lectures by faculty, and consultant visits. Prerequisites: ENDO 5018.

ENDO 5018. Clinical Seminar 1. 2 Credit Hours.
These seminars provide the opportunity to discuss matters pertaining to clinical endodontics by exposing the student to a wide variety of clinical cases. The seminars provide information to give students the opportunity to become sophisticated diagnosticians and skillful clinicians. Students are provided the opportunity to achieve these goals through student case presentations, faculty case presentations, topical lectures by faculty, and consultant visits. Prerequisite: ENDO 5017.

ENDO 5020. Introduction to Advanced Endodontics. 2.5 Credit Hours.
This course is a laboratory and lecture review of endodontic concepts and techniques starting at the basic level and progressing to the advanced. Various techniques of access preparation, chemomechanical canal preparation, and obturation will be taught. Students will have an opportunity to prepare and obturate the root canal system using a variety of techniques and materials. Procedures are performed under simulated clinical conditions in a mannequin. Following completion of obturation, students dissect and photograph tooth roots under a dissecting microscope to evaluate the effectiveness of the various canal preparation and obturation techniques.

ENDO 5052. Endodontic Surgical Anatomy. 1.5 Credit Hour.
This course consists of a series of four-hour seminar sessions devoted to an in-depth discussion of endodontic surgical anatomy, surgical indications and techniques, and wound healing. This is followed by twenty hours of laboratory during which students practice actual surgical procedures on anterior, premolar, and molar teeth in teeth mounted on manikins using contemporary endodontic microsurgery techniques. Emphasis is given to the correct use of the surgical microscope for these procedures and adequate management of soft and hard tissues.

ENDO 5060. Current Concepts in Endo. 1 Credit Hour.
Modern thoughts and concepts in endodontics will cover diagnosis, the dental pulp and periapex, pulpalgia, and referred pain; vital pulp therapy; treatment of the acute apical abscess, cellulitides, restorative considerations for the endodontically treated tooth, endodontic surgery, and the cracked tooth. Other topics include avulsions, endodontic-periodontic interrelationships, current concepts in endodontics and an overview of endodontic research.

ENDO 5071. Supervised Teaching. 1 Credit Hour.
The goal of this course is to teach the student how to be an effective teacher. This course involves the student in teaching a sophomore lecture and laboratory course where dental students receive their initial exposure to endodontics. The student is given the opportunity to be actively involved in laboratory supervision of a small group of sophomore students as they perform specific endodontic procedures on extracted teeth. The student functions as an instructor side by side with endodontic faculty members who observe and critique the student’s performance.

ENDO 5073. Literature Review 1. 5 Credit Hours.
This course is designed to familiarize the student with pertinent articles, both topical and current, related to endodontics. The articles, selected from the dental, medical, and basic science literature, are assigned to the student to critically abstract and evaluate for research design, findings, and conclusions.

ENDO 5075. Literature Review 1. 4 Credit Hours.
This course is designed to familiarize the student with pertinent articles, both topical and current, related to endodontics. The articles, selected from the dental, medical, and basic science literature, are assigned to the student to critically abstract and evaluate for research design, findings, and conclusions.
Endodontics.

An extensive clinical experience in the broad spectrum of endodontic practice is offered on the graduate level. Each student has the opportunity to maintain a comprehensive endodontic practice under the supervision of the director and staff of the postdoctoral program in endodontics.

ENDO 6012. Clinical Endodontics 2. 5 Credit Hours.
An extensive clinical experience in the broad spectrum of endodontic practice is offered on the graduate level. Each student has the opportunity to maintain a comprehensive endodontic practice under the supervision of the director and staff of the postdoctoral program in endodontics.

ENDO 6013. Clinical Endodontics 3. 0.5 Credit Hours.
An extensive clinical experience in the broad spectrum of endodontic practice is offered on the graduate level. Each student has the opportunity to maintain a comprehensive endodontic practice under the supervision of the director and staff of the postdoctoral program in endodontics.

ENDO 6031. Hospital Endodontics Rotation. 1 Credit Hour.
Conducted at the Audie L. Murphy Memorial Veterans Affairs Hospital (“VA”), this rotation consists of the diagnosis, treatment planning, and clinical treatment of endodontically involved teeth and supporting structures. This rotation provides the second-year postdoctoral endodontics student the opportunity to diagnose and treat endodontic problems on all types of inpatients and outpatients in the hospital setting.

ENDO 6032. Hospital Endodontics Rotation. 1 Credit Hour.
Conducted at the Audie L. Murphy Memorial Veterans Affairs Hospital (“VA”), this rotation consists of the diagnosis, treatment planning, and clinical treatment of endodontically involved teeth and supporting structures. This rotation provides the second-year postdoctoral endodontics student the opportunity to diagnose and treat endodontic problems on all types of inpatients and outpatients in the hospital setting.

ENDO 6060. Pulp Biology and Pain Pharmacology. 1.5 Credit Hour.
This purpose of this course is to provide the solid foundation knowledge in the biology of dental pulp and periradicular tissues necessary for appropriate clinical decision making in endodontic and restorative diagnosis and treatment, and to ensure that residents are prepared for future change in therapy or understanding new risk factors in disease.

ENDO 6071. Supervised Teaching. 1 Credit Hour.
The goal of this course is to teach the student how to be an effective teacher. This course involves the student in teaching a sophomore lecture and laboratory course where dental students receive their initial exposure to endodontics. The student is given the opportunity to be actively involved in laboratory supervision of a small group of sophomore students as they perform specific endodontic procedures on extracted teeth. The student functions as an instructor side by side with endodontic faculty members who observe and critique the student’s performance.

ENDO 6073. Literature Review 2. 5 Credit Hours.
This course is designed to familiarize the student with pertinent articles, both topical and current, related to endodontics. The articles, selected from the dental, medical, and basic science literature, are assigned to the student to critically abstract and evaluate for research design, findings, and conclusions.

ENDO 6075. Current Literature Review. 1.5 Credit Hour.
These courses are designed to familiarize the student with pertinent endodontic literature published during the academic year. Students will be assigned specific articles for review and literature will be critically evaluated in a seminar format.
ENDO 6077. Current Literature Review. 1 Credit Hour.
The goal of this course is for the student to develop a biological understanding and scientific basis for the diagnosis and treatment of various endodontic subjects by a review of current literature articles. Each resident will be assigned specific articles for review. Residents will be required to prepare written abstracts of these articles and orally present them to the class.

ENDO 6078. Literature Review. 4 Credit Hours.
This course is intended to introduce the endodontic resident application manuscripts related to our specialty. The articles are selected according to their impact on clinical and biological considerations pertinent to the understanding of the endodontic practice. Subjects will be broad in scope and will cover the majority of topics and treatment alternatives of classic, relevant and contemporary literature. These manuscripts will be discussed and evaluated, placing emphasis on their strength to already existing endodontic comprehension.

ENDO 6080. Focused Regendo Research. 4 Credit Hours.
This course is intended to provide a focused review on the most relevant scientific evidence on regenerative endodontics. Emphasis will be given on the critical appraisal of existing scientific evidence on stem cell biology and tissue engineering related to regenerative endodontics. The articles are selected according to their impact on clinical and biological considerations pertinent to the understanding of the endodontic practice.

ENDO 6083. Case Presentations 2. 1 Credit Hour.
This course is designed to provide faculty evaluation of endodontic cases treated by students. Critical evaluation will be made of the diagnosis, treatment plan, and treatment methodology. Differential diagnosis will be considered along with alternate treatment plans, and treatment methods. Reasons for any complications will be determined, and methods for preventing them will be discussed. The need for post-treatment follow-up examinations will be determined. The positive feedback provided by these courses is intended to increase student confidence and competence.

ENDO 6084. Case Presentations 2. 4 Credit Hours.
This course is designed to provide faculty evaluation of endodontic cases treated by students. Critical evaluation will be made of the diagnosis, treatment plan, and treatment methodology. Differential diagnosis will be considered along with alternate treatment plans, and treatment methods. Reasons for any complications will be determined, and methods for preventing them will be discussed. The need for post-treatment follow-up examinations will be determined. The positive feedback provided by these courses is intended to increase student confidence and competence.

ENDO 6085. Case Presentations 2. 4 Credit Hours.
This course is designed to provide faculty evaluation of endodontic cases treated by students. Critical evaluation will be made of the diagnosis, treatment plan, and treatment methodology. Differential diagnosis will be considered along with alternate treatment plans, and treatment methods. Reasons for any complications will be determined, and methods for preventing them will be discussed. The need for post-treatment follow-up examinations will be determined. The positive feedback provided by these courses is intended to increase student confidence and competence.

ENDO 6086. Case Presentations 3. 2 Credit Hours.
This course is designed to provide faculty evaluation of endodontic cases treated by students. Critical evaluation will be made of the diagnosis, treatment plan, and treatment methodology. Differential diagnosis will be considered along with alternate treatment plans, and treatment methods. Reasons for any complications will be determined, and methods for preventing them will be discussed. The need for post-treatment follow-up examinations will be determined. The positive feedback provided by these courses is intended to increase student confidence and competence.

ENDO 6087. Case Presentations 3. 1 Credit Hour.
This course is designed to provide faculty evaluation of endodontic cases treated by students. Critical evaluation will be made of the diagnosis, treatment plan, and treatment methodology. Differential diagnosis will be considered along with alternate treatment plans, and treatment methods. Reasons for any complications will be determined, and methods for preventing them will be discussed. The need for post-treatment follow-up examinations will be determined. The positive feedback provided by these courses is intended to increase student confidence and competence.

ENDO 6094. Research. 4 Credit Hours.
The course requires the student to formulate a protocol for the purpose of conducting an original investigation. Following a critical evaluation and acceptance of the protocol, the student conducts a research project, suitable for publication, under the guidance of a mentor. The completed research paper is presented to the Endodontics Department research Committee, staff, and guests for evaluation and critique.

ENDO 6095. Research. 4 Credit Hours.
The course requires the student to formulate a protocol for the purpose of conducting an original investigation. Following a critical evaluation and acceptance of the protocol, the student conducts a research project, suitable for publication, under the guidance of a mentor. The completed research paper is presented to the Endodontics Department research Committee, staff, and guests for evaluation and critique.

ENDO 6098. Thesis. 4 Credit Hours.
Completion of an acceptable thesis is required for the Master of Science degree. Registration in this course for at least one semester is required of all degree candidates. Admission to candidacy for the Master of Science degree is required in order to enroll in this course.

ENDO 7041. Junior Endodontics Lecture. 1 Credit Hour.
This course enhances the cognitive skills attained by the student that has successfully completed ENDO 6041 and ENDO 6142 in the Sophomore year. Topics covered include: endodontic radiography, endodontic diagnosis, endodontic irrigants and medicaments, evaluation of endodontic outcomes and retreatment, management of endodontic emergencies including pain control, diagnosis and management of tooth root resorption, endodontic treatment risk assessment, management of the immature root apex and management of traumatic tooth injuries including tooth fracture, luxation and avulsion. The importance of the inter-relationships with other dental disciplines such as periodontics and restorative dentistry are also emphasized.

ENDO 7043. Endodontics Clinic. 1 Credit Hour.
Students perform endodontic diagnosis and treatment procedures necessary to provide endodontic treatment as part of overall comprehensive clinical patient care.
Enrichment Elective (ELEC)

Courses

ELEC 4077. Wilderness Medicine Enrichment Elective. 0 Credit Hours.  
The curriculum consists of lectures, hands-on scenarios and case-based learning. Students will work as a team to care for patients in the backcountry. All scenarios will conclude with a debriefing by the faculty. Lecture content will include an introduction to Wilderness Medicine and medical content topics including tick bites, hyperthermia, hypothermia and infectious diarrhea, splinting, envenomations, lightning injuries and animal bites. Other educational activities will include safe water procurement, map utilization, patient extrication from the wilderness and basic camping skills. The scenarios will consist of role playing by participating faculty and will include different cases encountered in the wilderness. The medical students will work together as a team to find, care for and extricate the patient as necessary. During the three-day trip we will spontaneously role play during other wilderness activities such as hiking, building a fire or even during a lecture. Patients become ill at any point and we try to maintain some element of surprise with the scenarios. Students will be evaluated on their participation in group-based scenarios and a short quiz administered at the conclusion of the course. This is an enrichment elective and "credit" will be given to the students who showed active participation in the learning sessions.

ELEC 5004. Surgical Oncology Service. 0 Credit Hours.  
Purpose and objective of this elective is to expose the student to the current and multi-modal approach in the diagnosis and management of cancer. Students will observe and monitor all activities directed to the workup, treatment, and follow-up of patients with cancer. Students will have the chance to observe and participate in the different surgical procedures, specifically those related to the treatment of cancer. He or she will be introduced to and familiarized with the principles and concepts of adjuvant chemotherapy, immunotherapy, and hormonal therapy before and after surgical treatment of different diseases. They will also have the opportunity to observe and partake in the different activities in the conduct of clinical trials as sponsored by the different national cooperative groups, i.e. the Southwest Oncology Group and the National Surgical Adjuvant Breast and Bowel Program. The students will learn the necessity for establishing different protocols in the quest for a greater understanding and improvement in the management of malignant diseases and will participate in the discussion of problems related to cancer patient care during rounds and more didactic teachings during Grand Rounds and the regular conferences of the service. Upon completion of this elective, students will have a fairly significant introduction and familiarization into clinical surgical oncology.

ELEC 5006. Beginning Medical Spanish. 0 Credit Hours.  
This is not a Spanish language course, per se, but is designed to teach medical students how to perform specific tasks in Spanish. As such, there is no specific Spanish prerequisite to enroll in this course. Students who are interested in acquiring Spanish language in general are invited to enroll in a traditional Spanish course.

ELEC 5022. History Of Anatomy. 0 Credit Hours.  
This course is designed to acquaint medical, dental and graduate students with the history of medicine and especially with the physicians and scientists who made essential discoveries in human anatomy. Using a biographical approach, the course is presented as a seminar with lectures, assigned readings and student presentations.

ELEC 5023. Sports Medicine Perspectives. 0 Credit Hours.  
Course will expose students to the clinical practice of orthopaedic sports medicine. This includes exposure to high school, collegiate and professional sports. Emphasis will be on injury evaluation, prevention and treatment. Sports may include football, basketball, track and field, baseball, soccer, gymnastics and water sports.

ELEC 5027. Family Violence Education. 0 Credit Hours.  
The course will analyze the dynamics of family violence, including the statistics, myths, types of abuse, characteristics of battered persons, the effect of violence on children, characteristics of batterers, treatment programs, the skills needed for intervention and the responsibilities of the medical profession, the legal profession and law enforcement in family violence.

ELEC 5029. Environmental Medicine/Border Health. 0 Credit Hours.  
The South Texas Environmental Education and Research (STEER) program gives participants the opportunity to learn about environmental and public health using an in vivo approach "Show, don't tell". During this month-long elective, participants learn about indoor and outdoor air quality, wastewater treatment, food sanitation, heavy metals, pesticides, international health programs, risk management, epidemiology, and zoonosis control, focusing on border health concerns. Participants will learn from local experts about water pollution, tuberculosis, dengue fever, rabies and traditional health practices such as consulting folk healers. This elective is taught in Laredo, Texas. Participants receive free housing and free transportation to and from activities. This opportunity is open to medical students, residents, nursing students, public health students and health care professionals.

ELEC 5030. Advanced Neuroanatomy. 0 Credit Hours.  
This enrichment elective is intended to reinforce basic principles learned in Medical Neuroscience and to explore in greater depth current research and thought in neuroanatomy. Clinical relevance will also be stressed whenever applicable. The instructor will meet with the student(s) 2-3 hours per week for 4 weeks. A 20-page library research paper is also required. The course will be subdivided into the following components - 1) Essential Concepts - Cell Biology of Neurons & Glia, Neurochemical Basis of Neuronal Integration, Development of the Nervous System & Its Disorders; 2) Regional Neuroanatomy- Ventricles and Meninges, Cerebrovascular System, Spinal Cord, and Brainstem Anatomy; 3) Systems Neurobiology - Somatosensory System Chemosenses, Special Senses, Motor System, Extrapyramidal System, Cerebellum, Limbic System; and 4) Homeostatic Mechanisms.

ELEC 5031. Introduction To Emergency Medicine. 0 Credit Hours.  
Students will be exposed to clinical emergency medicine in an extracurricular setting by working with assigned preceptors in the University Hospital Emergency Department (with the possible addition of BAMC ED or a community ED experience, including toxicology experience). Students will learn about the specialty of Emergency Medicine and its subspecialties. Students will also receive lectures on core emergency medicine topics and attend case presentations.
ELEC 5040. Trauma Enrichment Elective. 0 Credit Hours.
This course is designed to give first- and second-year medical students an introduction to the exciting field of trauma and trauma surgery. It will offer students the opportunity to observe how attendings, medical residents, medical students, and hospital staff work towards caring for patients who suffer from traumatic injury. Students may also have the opportunity to observe the surgeries if approved by the attending on duty.

ELEC 5041. Homelessness, Addiction, & How To Better Care For Patients. 0 Credit Hours.
The goals and objectives of this course are to increase awareness about homelessness and addiction and how they relate to healthcare; to prepare first and second-year students for working at student-run clinics; and encourage student teaching within all four years of medical school. This a student-run courses, led by MS4 students in the Humanism fellowship, for MS1 and MS2 students with a special interest in learning about issues of homelessness and addiction, and how these relate to the provision of healthcare.

ELEC 5042. Enrichment Elective in Ethics. 0 Credit Hours.
In this longitudinal course, students will be required to undertake an independent study into a specific issue in medical ethics or medical humanities. Students will be required to read on research methods in medical ethics as well as literature in their issue of interest, and then to propose and conduct an original study project, a literature review, a position paper, or an ethical analysis of a particular topic or case. Students will be expected to write an academically rigorous final research report of 10 to 15 pages. Students will be encouraged to produce a final paper that can be submitted for publication in a peer-reviewed bioethics or medical humanities journal. Students will be required to meet with the instructor and/or chosen faculty advisor over the course for assistance, guidance, and discussion.

ELEC 5043. Public Health And The Physician. 0 Credit Hours.
The purpose of this course is to provide a basic understanding of some of the important health issues faced by modern physicians. Each hour of this survey course covers a different public health topic. Half of the class hours will be discussion and education on reading assignments of public health topics. Guest speakers from the university and San Antonio will complement lecture and discussion.

ELEC 5044. Enrichment Elective in Interprofessional Community Service Learning. 0 Credit Hours.
This innovative inter-professional community service learning (CSL) course, offered in partnership with the UT School of Pharmacy, PHR 2705, to allow medical students to integrate meaningful community service with instruction, preparation, and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities. Students will have the opportunity to examine social justice and social determinant of health issues and apply these principles in a structured service learning practicum. The student-led service learning project will address the social and health needs of a community partner and will be conducted with a partner agency in a culturally competent manner. Through online learning modules, readings and discussion; monthly class sessions; a group service learning project; and a structured service learning practicum, this course combines community service with preparation and reflection to help foster civic responsibility in the health professions. Open for Cross Enrollment on Space Available Basis.
ELEC 5047. Global Health Enrichment Elective. 0 Credit Hours.
The course is a longitudinal enrichment elective for first- and second-year medical students who are planning to pursue global health experiences during winter, spring, or summer breaks. This elective will utilize a community-service learning module, in which preparation, mentorship, evaluation, reflection, and reporting are essential in meeting the expressed need of a particular community. The elective will provide an opportunity to learn a foundation of practical knowledge in global health and to optimize the students’ overseas experiences, maximize the safety of their travel, facilitate their adaptation to working in different cultural settings, and maximize their impact in communities where they serve. Course material will be presented through a variety of approaches, including lectures, small-group case discussions, laboratory sessions, practical workshops, and online learning modules. Open for Cross Enrollment on Space Available Basis.

ELEC 5048. Enrichment Elective in Art. 0 Credit Hours.
This is an interactive, interprofessional course that takes students to the McNay Art Museum to learn physical observation skills. Studies demonstrate that increased observational skills translate to improved physical examination skills. Using artwork as patients, students will have the opportunity to learn how to observe details and how to interpret images based on available evidence. Taught jointly by Health Science Center faculty and McNay museum educators, students will have the opportunity to develop and hone their observation, problem solving, and assessment skills. They will also observe, interpret, and give case reports on the original works of art to teach them the skill of verbalizing descriptions of what is seen, and not to accept assumptions made with a first impression. Open for Cross Enrollment on Space Available Basis.

ELEC 5049. Health, Human Rights and the Physician. 0 Credit Hours.
This is a survey course in which each hour covers a different Health and Human Rights topic. The course is designed to present an understanding of what are human rights and what human rights issues are relevant to the practice of medicine and delivery of appropriate healthcare. Students will have the opportunity to gain a better understanding of the ever increasingly apparent global problems that exist. This course aims to better equip students to address these relevant health and human rights issues as future physicians.

ELEC 5051. Applied Neuroanatomy. 0 Credit Hours.
This course is aimed at students and faculty who are interested in understanding applied neurosensory pathways. The purpose of the course is to reinforce the neurosensory material in the MSI Neuroanatomy course by applying the material to real world situations via interactive activities and clinical vignettes. Additionally, this course would allow students to use different types of art media to express themselves as they learn the material through different types of art media. The course content and schedule is constructed to correspond with the material and schedule of the MSI Neuroanatomy course. This elective will explore four neurosensory modalities: proprioception/balance, vision, auditory and taste/olfaction. Each modality will be covered in one two-hour class session that will be comprised of a lecture component and its corresponding laboratory component. The course will be open to 15 students.

ELEC 5052. Healthcare Practice and The Business Of Medicine. 0 Credit Hours.
This elective will complement the spring Health Care Reform Forum, which focuses in-depth on issues related to the cost of care and healthcare forum, primary care and access, and graduate medical education.
ELEC 5106. Intermediate Medical Spanish. 0 Credit Hours.
This course is designed to offer first- and second-year medical students the opportunity to acquire important skills to communicate with Spanish-speaking only patients in a culturally sensitive environment. This class is restricted to students who have an intermediate level of written and conversational Spanish and/or have reached at least a Beginner level.

ELEC 5206. Advanced Medical Spanish. 0 Credit Hours.
This course is designed to provide students with the specific medical vocabulary and terminology necessary to communicate with and help treat Latino patients with limited English proficiency. This class is restricted to students who have a previous knowledge of the Spanish language and have reached at least a conversational level. The course will include specific vocabulary groups relating to assessment and care of patients, vocabulary to establish rapport, and discussions leading to cultural competencies. Students will have the opportunity to ask questions and provide answers in common medical situations in Spanish, conduct patient interviews, write medical histories, learn how to conduct physical exams in Spanish, and discuss readings related to the field.

ELEC 6067. Fundamentals of Neuroethics. 0 Credit Hours.
Recent advances in neuroscience have considerably improved our understanding of brain function. However, the fascinating examination of brain's mysteries often intersects with the concerns of ethics and public policy. This course aims at presenting and discussing philosophical and scientific perspectives on major bioethical issues pertinent to neuroscience research. Several subjects will be covered in the course, including the effects of pharmacological and surgical interventions on the brain/min binomial, therapy versus enhancement, brain imaging and mental privacy, neurobiology of decision making, consciousness, and death.

Family Medicine (FMED)

Courses

FMED 3005. Family Medicine Clerkship. 6 Credit Hours.
The family medicine clerkship introduces students to the principles, philosophy, and practice of family medicine, including fundamental concepts of comprehensive, continuous, cost-effective, family-oriented medical care. Students participate in the care of patients in various outpatient and inpatient settings. Students will have the opportunity to practice clinical problem solving in the undifferentiated patient and to improve their basic clinical skills. Students are expected to gain basic knowledge in the diagnosis and management of common family medicine problems, health promotion/disease prevention, and geriatrics. Prerequisites: Successful completion of all required preclinical courses is prerequisite to enrollment in any of the clinical clerkships.

FMED 4000. Special Topics in Family Medicine. 4 Credit Hours.
This is a self-designed course created by both the student and the preceptor to cover a specific topic within Family Medicine. The student is required to work closely with the preceptor in a clinical and/or non-clinical setting. A Course Approval Form must be completed along with documentation of the designed course description and confirmation of appointment with preceptor. Objectives are to be designed by student and preceptor. Student must submit a prepared outline of course activities that is signed by their preceptor prior to the beginning of the course.

FMED 4008. Research in Family Medicine. 4 Credit Hours.
At least 8 weeks before the elective's starting date the student must submit a completed course approval form and a written document that includes: the research topic; a printed literature search on that topic; readings on research design and/or statistical analysis that will be read as part of the course activities; the dates and times and locations of meetings between the student and the faculty member; expected course outcomes (e.g. presentations).

FMED 4011. Community Geriatrics. 4 Credit Hours.
Interdisciplinary approach to acute care of elderly patients. At the completion of the selective, the student will be able to evaluate an elderly patient to include history and physical examination, and problem list; administer geriatric assessments for dementia, depression, and function; interpret assessment findings in the context of a patient's functional level; make a comprehensive geriatric treatment plan; target and prevent functional decline; determine capacity for decision making; identify and describe the geriatric syndromes; utilize home health services appropriately; make referrals for outpatient rehab and for consultants; utilize geriatric principles in all specialty areas. Curriculum includes supervised clinical experience in a geriatric ambulatory care clinic; read assigned articles on geriatric topics encountered in the clinic; experiences in long term care and hospice may be arranged on request.

FMED 4012. Sub-Intern Family Medicine In-Patient Services. 4 Credit Hours.
The objectives of this course are for the student to have the opportunity to learn to be able to perform initial patient history and physical, and develop comprehensive assessment and management plan of patients admitted to the hospital; efficiently conduct the initial evaluation of a patient for admission, including documenting the history and physical, writing admission orders, and initiating the appropriate paperwork and calls needed for indicated diagnostic studies; participate in all aspects of inpatient care including daily visits, writing progress notes, attending patient and family discussions, and planning patient discharge; under the supervision of the faculty and upper level residents, maintain daily responsibility for care of a panel of hospitalized patients.
FMED 4015. Clinical Experience in Military Medicine. 4 Credit Hours.
The Department of Family and Community Medicine (FCM) and the Department of Family Medicine at Wilford Hall, Lackland AFB are collaborating to provide third and fourth year medical students with interest in military family medicine exposure to an active duty patient-centered medical home (PCMH) model of care. The Clinical Experience in Military Family Medicine Clinical Elective is aimed at providing Health Professions Scholarship Program (HPSP) and other interested 3rd and 4th year medical students an opportunity to rotate in a successful active duty PCMH primary care clinic at Lackland AFB. At the completion of the elective, the student will be able to: evaluate ambulatory pediatric and adult medicine patients with a variety of chronic illnesses, develop appropriate patient-centered management plans, and incorporate a multidisciplinary approach to care, evaluate acute ambulatory pediatric and adult medicine patients including the development of appropriate differential diagnoses and initial management plans for acute complaints, incorporate patient-centered health maintenance plans into both chronic and acute outpatient visits, improve understanding of health conditions affecting the active duty and veteran population, including Post-Traumatic Stress Disorder (PTSD), Traumatic Brain Injury (TBI), and other acute and chronic post-deployment clinical manifestations, develop an understanding of cultural issues that affect active duty airmen, soldiers, sailors, and troops including awareness of psychosocial influences of family support networks, and develop an awareness of healthcare management within the Department of Defense. This course is available to MS2, MS3, and MS4 students after successful completion of Family & Community Medicine Clerkship.

FMED 4018. Office Procedures. 4 Credit Hours.
The objectives of this course are for the student to have the opportunity to learn to be able to conduct an informed consent for common ambulatory procedures; perform with assistance and supervision laceration repairs, skin lesion removal, wedge ingrown toenail removal, and cast/splint placement; assist with circumcisions, colposcopies, vasectomies, and flex sigmoidoscopies.

FMED 4020. Family Medicine Preceptorship with Clinical Faculty. 4 Credit Hours.
The objectives of this course are for the student to have the opportunity to learn to be able to evaluate known patients of all ages presenting in an ambulatory setting and develop management plans for chronic as well as acute illnesses; evaluate new patients of all ages presenting in an ambulatory setting and develop differential diagnoses and management plans for chronic as well as acute illnesses; corporate appropriate prevention and anticipatory guidance into chronic and acute patient visits; optimize management plans for minority and uninsured patients by collaborating with members of the health care team, identifying community resources, developing management plans that consider the costs of medications and interventions; understand how physicians contribute to improving the quality of patient care, access to care, and navigation through the health care system for traditionally underserved populations.

FMED 4022. Spanish Speaking Patient Clinic. 4 Credit Hours.
Objectives include at the end of this selective, the student will have had the opportunity to learn to and be required to evaluate and develop management plans with primarily Hispanic, Spanish-speaking patients under the supervision of family physicians at the Barrio Comprehensive Health Clinic; develop and present culturally appropriate patient education materials for Hispanic, Spanish-speaking patients; discuss public health initiatives including Healthy People 2010, HHS Hispanic Health Initiative, and the President's Initiative on Ethnic Health Disparities; discuss Institute of Medicine reports such as "Unequal Treatment" and "Health Literacy" concerning health care disparities for Hispanic and other minority patients; increase proficiency in Spanish in particular Medical Terminology. Curriculum includes direct patient care under the supervision of the medical director of the Barrio Comprehensive Clinic (7 half-days per week); development and presentation of patient education session (1 half day per week); self-directed study (2 half days per week).

FMED 4030. The Patient-Centered Medical Home in Family Medicine. 4 Credit Hours.
This unique course for 4th year students provides an in-depth experience in the Patient-Centered Medical Home within the context of a multi-specialty practice. This model emphasizes care coordination and care transitions in the Southeast Texas Medical Associates, LLP Model of Care and features provider transparency public reporting of provider performance by provider name. Experiences include participating in a learning organization with collegial relationships with primary care and specialty physicians, nurse practitioners, nurses, support staff and other members of the healthcare team. Students will also learn to design and sustain quality improvement projects and see the place and power of informatics in primary care. The course is conducted in Beaumont, TX and housing is provided.

FMED 4107. Sports Medicine In Family Medicine. 4 Credit Hours.
This interprofessional Sports Medicine clinical elective focuses on the outpatient evaluation of sports-related injuries, overuse injuries, and chronic debilitating orthopedic conditions. Students will have the opportunity to work with musculoskeletal radiologists, orthopedic surgeons, and physical therapists as scheduled by the Family Medicine/ Sports Medicine faculty. Students also have the opportunity to work in the athletic training room setting and cover athletic events with supervisory faculty. This course is open to MS2-MS4 students that have successfully completed the Family Medicine core clerkship.

FMED 4205. Medicine and the Environment. 2 Credit Hours.
In this course students will read and view assigned and selected materials on environmental health and discuss the role of environmental factors in the diagnosis and treatment of patients. Objectives 1) Understand how environmental exposures in the personal environment and the community have an impact on health; 2) describe how sociocultural and economic factors influence the risk for and from common environmental exposures; 3) evaluate how characteristics such as age/development state, gender, genetics, and prior/concurrent exposures may affect individual susceptibility to exposures; 4) list 10 important areas to consider in performing and Environmental House Call to improve air quality and home safety; 5) obtain an exposure history for an adult or child; 6) demonstrate the ability to continue improving environmental health knowledge and skills.
FMED 4206. Health Policy- Longitudinal Elective. 2 Credit Hours.
Health Policy is a course that teaches students about the United States health care system. Our health care system is complex leading to few physicians understanding it and few patients easily navigating it. In this course we will discuss the history of the US health care system, the various types of health insurance in the US, the broad types of health care systems in other countries, access to care issues, and how to advocate for health care issues. The objectives will be accomplished through readings, group discussions, and a final presentation. Students will have the opportunity to meet lobbyists with the Texas Academy of Family Medicine and witness testimony at the Texas Legislature. Students will be encouraged to apply for scholarships to attend the Society for Teachers of Family Medicine Advocacy Summit in Washington DC in May.

FMED 7000. Off Campus. 4 Credit Hours.
In this course, the student is required to work closely with the preceptor in a clinical setting that can be either in-patient/outpatient or both. The physician can work either in private practice or a residency program setting. The preceptor must be board-certified in family medicine and have a clinical faculty appointment with a LCME-Accredited Medical School. The student must not be a relative of the preceptor. Students must arrange the preceptorship directly with the family physician. Course Approval Form must be completed along with documentation of the designed course description and confirmation of appointment with preceptor.

FMED 7004. Family Medicine Preceptorship-External. 4 Credit Hours.
This is a full-time outpatient family medicine clinical experience with a board-certified family physician in either a private practice or residency program setting. Only a board certified family physician is acceptable for this course. The physician supervisor does not have to have an HSC faculty appointment but must have an affiliation with a LCME-accredited Texas Medical School. This elective can be arranged directly between the student and the family physician. Student must not be a relative of the preceptor.

**Foundations of Restorative Dentistry (DFRD)**

**Courses**

**DFRD 5001. Introduction to Restorative Dentistry (Lecture). 4.5 Credit Hours.**
Foundation of Restorative Dentistry (FRD) 1 (Introduction to Restorative Dentistry), is a lecture-based course where first year dental students acquire foundation knowledge necessary to perform laboratory and clinical tasks that will be required for clinical practice. Students apply foundational concepts in a companion preclinical lab course (FRD 2) that runs concurrent with FRD 1 lecture. The primary goals of FRD 1 are to build the students’ foundation knowledge related to restoring form, function, and esthetics of the human dentition, to develop the students’ foundation knowledge related to the dentition’s occlusion, and to establish the students’ foundation knowledge related to important properties of biomaterials relevant to restorative dentistry. Registration for this course requires to be enrolled as a DS1 student.

**DFRD 5002. Introduction to Preclinical Restorative Dentistry (lab). 3 Credit Hours.**
During FRD 2 (Preclinical Introduction to Restorative Dentistry), conducted in a dental simulation lab, first year dental students apply the concepts presented in the companion lecture course FRD 1, which is scheduled concurrently. In FRD 2, students develop the manual dexterity and hand-eye coordination necessary to perform laboratory and clinical tasks that will be required for clinical practice. The primary goals of this course are to build the students foundational knowledge and skills related to restoring form, function, and esthetics of the human dentition, and develop the students foundational knowledge and skills relating to the dentition’s occlusion. During FRD 2, students also complete a series of Handskill Development Labs to facilitate development of technical skills that are foundational for dental practice, and develop capacity to use the high-speed dental handpiece effectively. Registration for this course requires to be enrolled as a DS1 student.

**DFRD 5003. Basic Restorative Procedures-lecture. 1 Credit Hour.**
During FRD 3 (Basic Restorative Procedures), first year dental students are introduced to the foundation knowledge and skills necessary to perform laboratory and clinical tasks required for performing basic restorative procedures to resolve patients’ dental problems. Students apply foundational concepts acquired in this lecture-based course in a companion preclinical lab course (FRD 4) that runs concurrent with FRD 3. The primary goal of the FRD 3 course is to build the students’ foundation knowledge of the principles of tooth preparation and restoration using direct and indirect restorative materials. Registration for this course requires to be enrolled as a DS1 student.

**DFRD 5004. Preclinical Basic Restorative Procedures (PCL). 1 Credit Hour.**
During FRD 4 (Preclinical Basic Restorative Procedures), conducted in a dental simulation laboratory, first year dental students apply the concepts presented in the companion lecture course, FRD 3. In FRD 4, students develop the manual dexterity and hand-eye coordination necessary to perform laboratory and clinical tasks that will be required for performing basic restorative procedures during patient care. The combined goal of the FRD 3 and 4 courses are to build students’ foundation knowledge of the principles of tooth preparation and restoration using direct and indirect restorative materials, and develop students’ capacity to use these principles during patient treatment in the third year dental clinic. Registration for this course requires to be enrolled as a DS1 student.

**DFRD 6005. Advanced Restorative Procedures (Lecture). 5 Credit Hours.**
During DFRD 6005 (Advanced Restorative Procedures), second year dental students are introduced to more advanced knowledge and skills necessary to perform laboratory and clinical tasks required in complex restorative procedures. Students apply concepts acquired in the lecture-based course in a companion preclinical laboratory course (DFRD 6006) that runs concurrent with DFRD 6005. The primary goal of the DFRD 6005 course is to build upon the students’ knowledge of the principles of tooth preparation and restoration using direct and indirect restorative materials in more complex clinical situations. Successful completion of all DS 1 courses is required to enroll in this course.
DFRD 6006. Advanced Restorative Procedures (Lab). 2.5 Credit Hours.
During DFRD 6006 (Advanced Restorative Procedures), conducted in a dental simulation laboratory, second year dental students apply the concepts presented in the companion lecture course, DFRD 6005. In DFRD 6006, students continue to develop the manual dexterity and hand-eye coordination necessary to perform laboratory and clinical tasks that will be required for performing complex restorative procedures during patient care. The combined goal of the DFRD 6005 and 6006 courses are to build upon the students’ knowledge of the principles of tooth preparation and restoration using direct and indirect restorative materials, and develop students’ capacity to use these principles during patient treatment. Successful completion of all DS I courses is required to enroll in this course.

DFRD 6007. Replacement of Teeth (Lecture). 3 Credit Hours.
During DFRD 6007 (Replacement of Teeth), second year dental students are introduced to the knowledge and skills necessary to perform laboratory and clinical tasks required in basic prosthodontics procedures to replace missing teeth. Students apply concepts acquired in the lecture-base course in a companion preclinical laboratory course (DFRD 6008) that runs concurrent with DFRD 6007. The primary goal of the DFRD 6007 course is to build student’s knowledge of the principles of tooth replacement using complete dentures, removable partial dentures, and implants prosthodontics. Successful completion of all DS I courses is required to enroll in this course.

DFRD 6008. Preclinical Replacement of Teeth (Lab). 2.5 Credit Hours.
DFRD 6008 (Preclinical Replacement of Teeth), conducted in a dental simulation laboratory, second year dental students apply the concepts presented in the companion lecture course, DFRD 6007. In DFRD 6008, students develop the manual dexterity and hand-eye coordination necessary to perform laboratory and clinical tasks that will be required in basic prosthodontic procedures during patient care. The combined goals of the DFRD 6007 and DFRD 6008 courses are to build student’s foundation knowledge of the principles of tooth replacement using complete dentures, removable partial dentures, and implant prosthodontics, and develop students capacity to use these principles during patient treatment in the third year dental clinic. Successful completion of all DS I courses is required to enroll in this course.

General Dentistry (GEND)

Courses

GEND 5027. Pain Control & Sedation. 3.5 Credit Hours.
The course is an in-depth, comprehensive assessment of pain control in dentistry. Beginning with neuroanatomy and pain, the course builds a valid foundation in basic science before advancing to a panoramic discussion of techniques in anxiety management and pain control. Behavioral management and conscious sedation techniques review are the major emphasis and are accompanied by demonstrations.

GEND 6000. Introduction to Advanced General Dentistry for Interns. 1 Credit Hour.

GEND 7001. General Dentistry Clinic. 4 Credit Hours.
The Junior General Dentistry Clinic course oversees student progress towards competency in: patient assessment and diagnosis, comprehensive treatment planning and assessment of outcomes, management of periodontal and pre-implant tissues, and management of malocclusion and occlusal disorders as described in Statements 01, 02, 07, and 13 of the HSC Dental School Competencies for Graduating Dentists. Junior students will be evaluated by GPG faculty on their independent efforts in satisfying the educational outcomes described for each of the four component competencies included in the course. Results of the evaluation will be kept in the student portfolio by the group leader. Unsuccessful attempts will be repeated until the student demonstrates adequate progress towards competency. A final grade at the end of the junior year will be Pass or Fail. Each component of the course must be passed to receive a passing grade.

GEND 7011. AEGD Fall Clinic 1. 4.5 Credit Hours.
AEGD students will gain clinical experience as they treat patients in the Advanced General Dentistry Clinic. Cases gradually increase in complexity and include treatment of medically compromised patients, implant cases, and interdisciplinary cases.

GEND 7012. AEGD Spring Clinic 1. 8 Credit Hours.
AEGD students will gain clinical experience as they treat patients in the Advanced General Dentistry Clinic. Cases gradually increase in complexity and include treatment of medically compromised patients, implant cases, and interdisciplinary cases.

GEND 7026. Practice Administration. 2.5 Credit Hours.
This course presents the various career choices available in dentistry and presents material to aid students in the career decision-making process. An introduction to the basic principles of beginning and managing a dental practice with emphasis on establishing a philosophy of practice, establishing goals, selecting practice modes, and choosing a location. The principles of office design and equipment selection also are covered.

GEND 8011. AEGD Fall Clinic 2. 7 Credit Hours.
AEGD students will gain clinical experience as they treat patients in the Advanced General Dentistry Clinic. Cases gradually increase in complexity and include treatment of medically comprised patients, implant cases and interdisciplinary cases.

GEND 8012. AEGD Spring Clinic 2. 7 Credit Hours.
AEGD students will gain clinical experiences as they treat patients in the Advance General Dentistry Clinic. Cases gradually increase in complexity and include treatments of medically compromised patients, implant cases, and interdisciplinary cases.

GEND 8026. Practice Administration. 1.5 Credit Hour.
This series of lectures deals with the business aspects of conducting a practice. Consideration of establishing and administering a practice, estate planning, bookkeeping methods, banking, marketing, management and utilization of personnel, and completion of a prospectus and office design project also are presented.
GEND 8077. General Dentistry Clinic. 26.5 Credit Hours.
Clinical experience for senior students under supervision of the
Department of General Dentistry emphasizes comprehensive patient care
in an atmosphere that closely simulates the private practice environment.
Providing students an opportunity to accomplish procedures from each
discipline of dentistry is the goal; therefore, students receive instruction
from a faculty of general dentists. Various specialty departments provide
didactic material, rotations in specialty clinics, and consultation. Senior
Seminars, conducted by the Department of General Dentistry, entail
lectures, problem-solving sessions, and presentations of selected cases
designed to enhance the students’ knowledge of comprehensive clinical
dentistry.

GEND 8078. General Dentistry Seminar. 2 Credit Hours.
This seminar presents topics relevant to clinical practice including
application and selection of dental materials, an overview of dental
equipment, and clinical techniques. It is intended to reinforce
philosophies presented by the specialty disciplines, to provide the
opportunity to discuss dental topics of current interest, and to promote
dialogue between students and faculty.

Human Health and Disease (DHHD)

Courses

DHHD 5001. Foundations of Tooth Development, Oral Health and Dental Disease. 3.5 Credit Hours.

HHD 1 (Foundations of Tooth Development, Oral Health and Dental Disease) provides dental students with foundational knowledge in tooth development, cariology, and oral health. Students learn about basic biology and the growth and development of the oral cavity and explore genetic and other abnormalities in tooth development. The scientific background of the epidemiology, microbiology, risk factors, prevention and treatment of dental caries is presented. Students learn strategies to reduce oral disease in patients, including behavioral approaches, and learn the impact of nutrition on oral health. Finally, risk-assessment and risk-based prevention for oral diseases are introduced. Registration for this course requires to be enrolled as a DS1 student.

DHHD 5002. Craniofacial Complex. 6.5 Credit Hours.
The overall goal of HHD 2 (Craniofacial Complex) is to ensure that the student develops a solid foundation and fundamental understanding of the basic sciences related to the head and neck regions of the body. This course integrates basic concepts of human macroscopic and microscopic anatomy, neuroscience, embryology, physiology, growth and development, pharmacology and radiology of the head and neck as they relate to the clinical practice of dentistry. Registration for this course requires to be enrolled as a DS1 student. Course Fees: Human Materials: $1,246 Gross Anatomy Lab: $30.

DHHD 5003. Periodontium and Pulp. 4.5 Credit Hours.

HHD 3 (Periodontium and Pulp) provides students with an overview of the development of the periodontium and dental pulp. Students learn foundational principles of immunology, inflammation, and bacteriology, which are essential for comprehension of periodontal and endodontic disease processes. The appearance and functions of clinically normal tissues is contrasted to tissues affected by disease. Students learn basic therapies for periodontal and endodontic conditions and management of patients typically treated in a general practice. Students learn periodontal and pulpal diagnostic methods and diagnoses, non-surgical treatment of disease, and assessment of treatment outcomes. Treatment planning fundamentals are emphasized. Students gain the knowledge, skills, and values necessary to begin management of patients with these diseases including treatment or appropriate referral. Registration for this course requires to be enrolled as a DS1 student.

DHHD 5004. Biological Foundations. 4.5 Credit Hours.

HHD 4 (Biological Foundations) introduces first year dental students to the fundamental biologic principles and processes that influence wellness and how and why people get sick. These principles provide a platform for exploration of normal and abnormal functions of human organ systems during the second year of the curriculum. The students’ learning process begins with investigation of basic cell structure and physiology, which sets the stage for learning the mechanisms of reversible and irreversible injury to cells, tissues, and organs, and factors that promote and influence tissue healing. Students then explore a variety of important contributors to health and disease including hemodynamics, principles and mechanisms of immunology, processes of infection and inflammation, genetic influences on human health, and the causes and modulators of abnormal cell growth neoplasia. The course concludes with review of the aging process and age-linked disorders. Registration for this course requires to be enrolled as a DS1 student.

DHHD 6005. Cardiovascular and Pulmonary Systems. 3.5 Credit Hours.

During DHHD 6005 (Cardiovascular and Pulmonary Systems), second year dental students learn the cardiovascular and pulmonary problems that are related and relevant to dental care. Emphasis is placed on the normal physiological functions of the heart and the lung, the pathophysiological basis of concurrent cardiac and/or respiratory diseases, and the usual medical management, including pharmacological therapies, for these conditions. Students learn the implications of pathophysiological changes and associated medical managements for dental care, and the appropriate dental management considerations for patients with cardiac and/or respiratory diseases. Successful completion of all DS I courses is required to enroll in this course.

DHHD 6006. Renal, Gastrointestinal & Liver. 2.5 Credit Hours.

During DHHD 6006 (Renal, Gastrointestinal and Liver), second year dental students learn the disorders in these systems that are related and relevant to dental care. Emphasis is placed on the normal physiological functions of the kidneys, components of the gastrointestinal system and the liver and gall bladder, the pathophysiological basis of diseases and abnormalities that occur in these systems, and contemporary medical management, including pharmacological therapies, for these conditions. Students learn the implications of pathophysiological changes and associated medical management for dental care, and the appropriate dental management considerations for patients with renal, gastrointestinal, liver and gall bladder diseases. Successful Completion of all DS I courses is required to enroll in this course.
DHHD 6007. Hematopoietic / Lymphoid and Musculoskeletal Systems; Orofacial Pain. 3 Credit Hours.
During DHHD 6007 (Hematopoietic / Lymphoid and Musculoskeletal Systems), second year dental students learn the disorders in these systems that are related and relevant to dental care. Emphasis is placed on the normal physiological functions of these systems, the pathophysiological basis of diseases and abnormalities that occur in these systems, and contemporary medical management, including pharmacological therapies, for these conditions. Students learn the implications of pathophysiological changes and associated medical management for dental care, and the appropriate dental management considerations for patients with hematopoietic / lymphoid and musculoskeletal diseases and disorders. DHHD 6007 concludes with an Orofacial Pain section where students learn to evaluate patients’ pain and determine the best approach for treating it. Successful Completion of all DS I courses is required to enroll in this course.

DHHD 6008. Endocrine, Reproductive, Nervous System and Mental Health. 4 Credit Hours.
DHHD 6008 (Endocrine, Reproductive, Nervous System, Mental Health) provides students with an overview of development of the endocrine, reproductive, and nervous systems with an emphasis on the basic structure and function of these organ systems. The clinical appearance of common diseases, along with the medical and dental management of disorders seen in these organ systems, will be reviewed. Specific sexually transmitted disease with oral/dental implications will be presented. The course concludes with a discussion of the epidemiology and medical management of patients with common mental health disorders. Case scenarios are used to present dental management considerations for endocrine, reproductive, and nervous system disorders, sexually transmitted diseases, and mental health disorders. Successful completion of all DS I courses is required to enroll in this course.

DHHD 6009. Advanced Head & Neck/Oral. 3.5 Credit Hours.
DHHD 6009 (Advanced Head & Neck/Oral) provides students with an overview of the basic structure and function of salivary glands, mucosa, and skin. The clinical appearance of common diseases and tumors, along with the medical management of disorders seen in these tissues, will be reviewed. A discussion of common odontogenic cysts and tumors will be discussed. Case exercises will be used to present dental management considerations for salivary gland diseases, soft tissue tumors, mucosa and skin disorders, and odontogenic cysts and tumors. Successful completion of all DS I courses is required to enroll in this course.

DHHD 6100. Patient-Centered Oral Health Care: Behavioral, Ethical, and Evidence-Based Dentistry. 3 Credit Hours.
DHHD 6100 (Patient-Centered Oral Health Care) provides dental students with learning experiences in important components of professional practice that support students’ capacity to deliver evidence-based, ethically sound, and patient-centered oral health care. Specifically, dental students explore ethical influences on dental practice, learn and apply foundational principles of evidence-based clinical decision-making, and learn strategies that promote patient-centered and culturally sensitive health care. Students also learn population-based strategies for promoting oral health. Successful Completion of all DS I courses is required to enroll in this course.

Integrated Biomedical Sciences (IBMS)

Courses

IBMS 5000. Fundamentals Of Biomedical Sciences. 8 Credit Hours.
This core course covers the fundamentals of biochemistry, molecular biology, cell biology, organismal and systems biology, and microbiology and immunology. The course is designed for first-year graduate students matriculating into the Integrated Biomedical Sciences Program (IBMS).

IBMS 5008. Lab Rotations. 1-3 Credit Hours.
This course provides an opportunity for students to participate in research activities in the laboratories of faculty members in different disciplines to learn laboratory skills and to gain an introduction to the research fields of faculty members.

IBMS 6090. Seminar. 1.5 Credit Hour.
This course is required of all students in the IBMS program, except of those who have signed up for Final Hours. Students are required to attend a minimum of 16 seminars per semester and to complete a requirement to demonstrate their attendance and participation. To fulfill the minimum number of seminars, students may include seminars offered by disciplines other than their own in which they are enrolled. However, to enroll, students should obtain permission from the course Section Director affiliated with the appropriate discipline. The course numbers of the individual course sections are INTD 6090-1GEN, 6090-2BA, 6090-3CB, 6090-4CGM, 6090-5MIM, 6090-6MBB, 6090-7NS and 6090-8PP for the IBMS Disciplines: Biology of Aging (BA), Cancer Biology (CB), Cell Biology, Genetics & Molecular Medicine (CGM), Molecular Biophysics & Biochemistry (MBB), Molecular Immunology & Microbiology (MIM), Neuroscience (NS), and Physiology & Pharmacology (PP). Some students who have not declared a discipline, and have obtained the approval of their academic advisor and the Senior Associate Dean of the GSBS, may sign up for INTD 6090-1GEN. Grading will be Satisfactory or Unsatisfactory. A list of seminars from all disciplines will be posted on the Graduate School Web site. Each Section Director will determine, for the relevant IBMS-6090 section, the policy for tracking student’s attendance and participation in seminars.

IBMS 6090. Research. 0.5-12 Credit Hours.
This course is required of all students in the IBMS program, except of those who have signed up for Final Hours. Students are required to attend a minimum of 16 seminars per semester and to complete a requirement to demonstrate their attendance and participation. To fulfill the minimum number of seminars, students may include seminars offered by disciplines other than their own in which they are enrolled. However, to enroll, students should obtain permission from the course Section Director affiliated with the appropriate discipline. The course numbers of the individual course sections are INTD 6090-1GEN, 6090-2BA, 6090-3CB, 6090-4CGM, 6090-5MIM, 6090-6MBB, 6090-7NS and 6090-8PP for the IBMS Disciplines: Biology of Aging (BA), Cancer Biology (CB), Cell Biology, Genetics & Molecular Medicine (CGM), Molecular Biophysics & Biochemistry (MBB), Molecular Immunology & Microbiology (MIM), Neuroscience (NS), and Physiology & Pharmacology (PP). Some students who have not declared a discipline, and have obtained the approval of their academic advisor and the Senior Associate Dean of the GSBS, may sign up for INTD 6090-1GEN. Grading will be Satisfactory or Unsatisfactory. A list of seminars from all disciplines will be posted on the Graduate School Web site. Each Section Director will determine, for the relevant IBMS-6090 section, the policy for tracking student’s attendance and participation in seminars.
IBMS 6098. Thesis. 1-9 Credit Hours.
Registration for at least one term is required for M.S. candidates.
Prerequisite: Admission to candidacy for the Master of Science degree is required.

IBMS 7001. Qualifying Exam. 1 Credit Hour.
The objective of the Qualifying Examination (QE) is to determine if a student has met programmatic expectations with regard to: i) Acquiring a level of scientific reasoning and a knowledge base in his/her field of study appropriate for a graduate student at the current stage of training; ii) Demonstrating skills of problem-solving and development of experimental strategies designed to test hypotheses associated with a specific scientific problem; and iii) Demonstrating the ability to defend experimental strategies proposed for solving scientific problems. Successful completion of the QE is required for Advancement to Candidacy and continuation in the IBMS Ph.D. program. During the Spring semester of Year 2 (4th semester overall) of the student’s program, the QE will be administered by a faculty committee approved by a student’s Discipline leadership. Each IBMS discipline will administer the QE process for its students so as to achieve the goals of the discipline while satisfying the expectations of the IBMS graduate program. In general, the QE requires the solving of a relevant unsolved problem in the biomedical sciences by writing a research proposal based on an idea conceived and developed by the student, followed by an oral defense-of-proposal to explore the student’s problem-solving process, and the soundness of the student’s experimental design. Following the QE, a report will be submitted by the chair of the examination committee to the student’s Discipline leadership indicating the outcome of the exam and any recommendations that may be required to foster further academic progress by the student. IBMS 7001 is divided into 7 modules overseen by the 7 IBMS Disciplines, each that is responsible for providing its students with a detailed description of the examination process, and for ensuring that the programmatic expectations and goals of the QE are met.

IBMS 7010. Student Journal Club & Research Presentation. 1-2 Credit Hours.
This course is designed to provide graduate students with experience in critical reading of the primary literature, seminar preparation and presentation, data analysis and interpretation, and group-based learning as they relate to the graduate program in Integrated Biomedical Sciences. This course is required of all students in the IBMS program starting in their second year except of those who have signed up for Final Hours. Students are required to attend a minimum of 16 total presentations per semester (journal club or research presentations) and to complete a requirement to demonstrate their attendance and participation. Students are also required to present one journal club presentation per semester until they are Advanced to Candidacy. Once Advanced to Candidacy, the student will present one journal club presentation per academic year and one research presentation per academic year such that the student is giving at least one presentation in each semester. To enroll, students should obtain permission from the course Section Director affiliated with the appropriate discipline. The course numbers of the individual course sections are INTD 7010-1GEN, 7010-2BA, 7010-3CB, 7010-4CGM, 7010-5MIM, 7010-6MBB, 7010-7NS and 7010-8PP for the IBMS Disciplines: Biology of Aging (BA), Cancer Biology (CB), Cell Biology, Genetics & Molecular Medicine (CGM), Molecular Biophysics & Biochemistry (MBB), Molecular Immunology & Microbiology (MIM), Neuroscience (NS), and Physiology & Pharmacology (PP). Some students who have not declared a discipline, and have obtained the approval of their academic advisor and the Senior Associate Dean of the GSBS, may sign up for INTD 7010-1GEN. Grading will be by letter grade (A, B, C, etc). A list of journal clubs from all disciplines will be posted on the Graduate School Web site. Each Section Director will determine, for the relevant IBMS 7010 section, the policy for tracking student’s attendance and participation and will be responsible for assigning a final grade.

IBMS 7099. Dissertation. 1-12 Credit Hours.
This course is required of all students in the IBMS program, except of those who have signed up for Final Hours. Students are required to attend a minimum of 16 seminars per semester and to complete a requirement to demonstrate their attendance and participation. To fulfill the minimum number of seminars, students may include seminars offered by disciplines other than their own in which they are enrolled. However, to enroll, students should obtain permission from the course Section Director affiliated with the appropriate discipline. The course numbers of the individual course sections are INTD 6090-1GEN, 6090-2BA, 6090-3CB, 6090-4CGM, 6090-5MIM, 6090-6MBB, 6090-7NS and 6090-8PP for the IBMS Disciplines: Biology of Aging (BA), Cancer Biology (CB), Cell Biology, Genetics & Molecular Medicine (CGM), Molecular Biophysics & Biochemistry (MBB), Molecular Immunology & Microbiology (MIM), Neuroscience (NS), and Physiology & Pharmacology (PP). Some students who have not declared a discipline, and have obtained the approval of their academic advisor and the Senior Associate Dean of the GSBS, may sign up for INTD 6090-1GEN. Grading will be Satisfactory or Unsatisfactory. A list of seminars from all disciplines will be posted on the Graduate School Web site. Each Section Director will determine, for the relevant IBMS-6090 section, the policy for tracking student’s attendance and participation in seminars. Registration is only permitted following a student’s admission to candidacy for the PhD degree, approval of the dissertation research proposal and approval of the membership of the candidate’s Supervising Committee.
Interdisciplinary Course (INTD)

Courses

INTD 1091. Independent Study. 4 Credit Hours.
Students will work directly with a faculty advisor or assistant dean to develop an independent plan of study.

INTD 3001. International Elective. 0 Credit Hours.
Students will work with the course director and Assistant Director of Global Health to identify an appropriate international elective site, including established sites/programs or one that the student discovers on their own. All rotations must be vetted and approved by the course director and will adhere to a community service-learning model that is a structured educational experience combining community service with preparation and reflection. Students are expected to help shape the learning experience around community-identified needs and advance insight related to the context in which service is provided, the connection between service and academic coursework, and students’ roles as citizens and professionals. Students will spend 4 weeks living and working at an international service site. Sites may allow for a range of experiences, such as participating in patient care, conducting clinical or public health research, and/or participating in a language immersion program. There may also be opportunities for patient education and emphasis on efforts of local empowerment, aiming to build up the communities in a sustainable way. Regardless of the focus, all sites must be supervised by qualified health care providers. Students are encouraged to integrate themselves into the health care delivery system, to explore community needs that they could address, and when possible, to strive to make an impact through community education, home visits, and research. Reflection essays serve as a way to process experiences, including clinical cases, new perspectives gained, and analysis of health care disparities, and strategies for the overcoming poverty-related health problems. Students are encouraged to share their experiences upon return through a formal presentation.

INTD 3002. School of Medicine Research Elective. 0 Credit Hours.
Students will participate in basic or clinical research projects under the supervision of university faculty. The goal of this elective is to immerse students in a rich research environment and provide an opportunity to work with research mentors to fully engage in the research process from writing the proposal to collecting the data to disseminating research results. This elective is open to students who already have an established working relationship with a faculty member and who wish to continue their work, students who wish to establish a new project, and for students who are in the MD-MPH degree program and MD with Distinction in Research Program. Interested students must contact the course director prior to the enrollment date to express interest in the elective and receive further instructions on the application process for the research and identification/confirmation of the faculty mentor.

INTD 3030. Clinical Foundations. 3 Credit Hours.
The purposes of this completely on-line course are to: 1. Prepare early clinical students to increase knowledge in clinical settings including: a. Exposure to healthcare team members, b. Exposure to roles on clerkship (H&Ps, orders, SOAP notes, prescriptions, etc.), c. Interpretation of EKGs and radiographs, d. Interpretation of normal/abnormal lab values, e. Recognition of fatigue/strategies to combat fatigue in clinical settings, f. Basic understanding of ventilator management/ICU care, g. Patient insurance issues/patient health care financial resources, h. Avoidance of medical legal problems, i. Better success on exams, j. Performance of evidence-based searches in medical literature, k. Understanding fundamentals of translational research; 2. Assist students in developing new skills expected of early clinical students including: a. Intravenous catheter placement, nasogastric catheter placement, urinary catheter placement, and O2 management, b. Sterile gloving and sterile technique, c. Basic suturing/staple placement and removal, and 3. Prepare early clinical students for their roles in clinical settings including: a. Patient care under supervision, b. Patient privacy-HIPAA, c. Professionalism and responsibility to team and patients, d. Patient safety, e. Proper use of social media in patient care, f. Strategies to be best student on the first clerkship, g. OSHA and hand hygiene, h. Proper professional attire, i. Completion of evaluations on residents and faculty. The students will complete credentials for major clinical sites.

INTD 3058. Hospice and Palliative Medicine. 0 Credit Hours.
This rotation offers clinical experience in Hospice and Palliative Medicine (HPM). Palliative care provides treatment for seriously ill hospitalized and ambulatory patients and focuses on symptom management, enhancement of function, physical comfort, quality of life, psychosocial support, and communication about the goals of medical care for the patients as well as their families.

INTD 3091. Independent Study. 9 Credit Hours.
Students will work directly with a faculty advisor or assistant dean to develop an independent plan of study.

INTD 4007. Interprofessional Community Service Learning. 2 Credit Hours.
This is an innovative interdisciplinary service learning (CSL) course offered in partnership with the UT School of Pharmacy, PHR 270S, to allow medical students to integrate meaningful community service with instruction, preparation, and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities. This course will provide the opportunity for students to examine social justice and social determinant of health issues and apply these principles in a structured serviced learning practicum. The student-led service learning project will address the social and health needs of a community partner and will be conducted with the partner agency in a culturally competent manner. Through online learning modules, readings, and discussion; monthly class sessions; a group service learning project; and a structured service learning practicum, this course combines community service with preparation and reflection to foster civic responsibility in the health professions. Open for Cross Enrollment on Space Available Basis.

INTD 4008. Interprofessional Care in HIV. 0.5 Credit Hours.
Students will have the opportunity to learn how to function as a member of an interprofessional team in HIV case management. The objective is for students to become familiar with issues of patient safety, health literacy, medication reconciliation, and interprofessional teamwork in HIV care. This is an elective didactic course.
INTD 4009. Interprofessional Care in HIV. 2 Credit Hours.
Students will have the opportunity to learn how to function as a member of an interprofessional team in HIV care case management, and become familiar with issues of: patient safety, health literacy, medication reconciliation, treatment guidelines, and interprofessional teamwork in HIV care.

INTD 4015. Humanism in Medicine Fellowship. 2 Credit Hours.
This is a longitudinal 4th-year elective to support and nourish the inherent altruism of our students. This elective will bring together like-minded students and faculty who have a passion for caring for the medically underserved in their communities. The students will take a leadership role in managing and directing the student-run clinics at the Alpha Home, SAMM Transitional Living and Learning Center, Haven for Hope, Travis Park Dermatology (under faculty supervision). Clinical experiences will be at these clinics. This elective will include a few evening seminars throughout the year in which students and faculty meet to discuss social justice, how to start a free clinic, homelessness and topics chosen by the students. Every student will complete a project of their choice over the year.

INTD 4018. Independent Elective in Ethics. 2 Credit Hours.
In this longitudinal course, students will be required to undertake an independent study into a specific issue in medical ethics or medical humanities. Students will be required to read on research methods in medical ethics as well as literature in their issue of interest, and then to propose and conduct an original study project, a literature review, a position paper, or an ethical analysis of a particular topic or case. Students will be expected to write an academically rigorous final research report of 10 to 15 pages. Students will be encouraged to produce a final paper that can be submitted for publication in a peer-reviewed bioethics or medical humanities journal. Students will be required to meet with the instructor and/or chosen faculty advisor over the course for assistance, guidance, and discussion. (Center for Medical Humanities and Ethics).

INTD 4019. Clinical Ethics. 2 Credit Hours.
Students in this two-week course will have the opportunity to focus on work in clinical ethics consultation. The student will be required to participate in rounds as an ethicist, do in-depth reading on clinical ethics consultation, observe clinical ethics consults, attend ethics committee meetings, and provide an educational seminar to hospital staff on an issue of ethical significance.

INTD 4025. Healthcare Practice and Policy Elective. 0.5 Credit Hours.
The Healthcare Practice Elective is an introductory-level, discussion-based, eight-hour course targeted to fourth-year medical students. The course focuses generally on practice and policy issues of payment methodologies, cost-effectiveness, and access to care.

INTD 4030. Preparing for Global Health Work. 2 Credit Hours.
This is a 2-week multidisciplinary course for 4th-year medical students who are planning future global health experiences, arising in response to enormous interest in international medicine, with increasing numbers of students choosing to spend time overseas during medical school. This preparatory course aims to provide a foundation of practical knowledge in global health to optimize the students’ overseas experiences, facilitate their adaptation to working in different cultural settings, and maximize their impact in the communities where they serve. Topics include chronic and infectious disease, parasite infection, prioritizing community resources, health disparities, ethical dilemmas, cultural awareness, and professionalism. Course material is presented through a variety of approaches, including lectures, small-group case discussions, laboratory sessions, and online learning modules.

INTD 4045. Patient Notes- Enrichment Elective. 0 Credit Hours.
It is an interactive, inter-professional course that engages students in music listening sessions to teach students active listening skills. Through various forms of music, students will learn how to actively listen for specific details to gain insight on meaning, become comfortable with ambiguity and interpretation, and develop pattern recognition skills to quickly recognize deviation. Students will also develop stronger methodology for writing patients notes through conceptual practice of SOAP format notes for music pieces. Taught jointly by UTHSCSA faculty and professional musicians, this strategy of applying practical skills to an abstract concept such as music will refine these skills for students in clinical settings. Specifically, this course aims to improve interpersonal communication skills, and organizational note writing. This is also an opportunity for students to practice problems solving with other healthcare professionals.

INTD 4048. Art Rounds. 2 Credit Hours.
This is an interactive, interprofessional course that takes students to the McNay Art Museum to learn physical observation skills. Studies demonstrate that increased observational skills translate to improved physical examination skills. Using artwork as patients, students will have the opportunity to learn how to observe details and how to interpret images based on available evidence. Taught jointly by Health Science Center faculty and McNay museum educators, students will have the opportunity to develop and hone their observation, problem solving, and assessment skills. They will also observe, interpret, and give case reports on the original works of art to teach them the skill of verbalizing descriptions of what is seen, and not to accept assumptions made with a first impression. Open for Cross Enrollment on Space Available Basis.

INTD 4058. Hospice and Palliative Medicine Elective. 4 Credit Hours.
This rotation offers clinical experience in Hospice and Palliative Medicine (HPM). Palliative care provides treatment for seriously ill hospitalized and ambulatory patients and focuses on symptom management, enhancement of function, physical comfort, quality of life, psychosocial support, and communication about the goals of medical care for the patients as well as their families.

INTD 4103. Communication Skills. 0.5 Credit Hours.
To introduce fourth year medical students to the principles of conducting public interviews, presentations and effectively disseminating information to the communities they will serve.

INTD 4104. Improving Patient Outcomes. 0.5 Credit Hours.
This course is designed to increase a student’s knowledge of and skills in identifying systemic problems with health care delivery and patient safety, collecting and analyzing data, generating solutions, presenting results and evaluating peers. The course objectives include facilitating systems thinking, exposing students to the ACGME general competencies (with emphasis on practice-based learning and improvement and systems-based practice), increasing understanding of health care economics and working in teams.

INTD 4105. Medical Jurisprudence. 0.5 Credit Hours.
The course will center on the Texas Medical Practice Act and applicable federal laws.

INTD 4106. Practical Ethics For Healers. 0.5 Credit Hours.
The course is the capstone of the four-year longitudinal curriculum in humanities and ethics. The goals are to reflect upon 1) physician’s values, attitudes, and their intersection with cultural values and attitudes; 2) the historical and moral traditions of medicine in the context of society, politics, spirituality, and the health care system; and 3) the personal identity of a doctor. Open for Cross Enrollment on Space Available Basis.
INTD 4107. The Skin Around Us: A View of Skin Disease from a Humanities Perspective. 4 Credit Hours.
This elective is for fourth year medical students with a special interest in learning about skin diseases through a humanities perspective. Throughout the four week course, students will attend daily clinics, create a project and write an essay on activities encountered during the elective. The students will also complete brief writing assignments each week after watching videos, movies, and/or reading books.

INTD 4110. Getting Ready to Teach During Your Residency Program. 0.5 Credit Hours.
The goal of this 8-hour course is to help senior medical students, who will be residents in a few months, develop teaching skills that will enhance the quality of their interactions with students. The course will be conducted in an interactive workshop format to allow participants to practice important teaching skills for residents. These include 1) orienting and priming students to their responsibilities and roles and accepting the personal role of teacher and role model, 2) giving feedback to improve student performance, 3) helping students to improve their patient presentations-the use of questioning, and 4) coaching procedural and technical skills. The participants will practice these skills and receive feedback from their course peers and instructors based on the guidelines for clinical teachers in action with students and provide critiques. Large and small group discussions and role plays will be used to reinforce teaching principles.

INTD 4205. Veritas Mentors in Medicine Longitudinal Elective. 2 Credit Hours.
This is longitudinal elective and the course work requirements will be for 2 week credit and must be complete by March 1st. Evaluation of MiM performance will include feedback from faculty mentors and students.

INTD 4210. School of Medicine Research Elective Level 1. 4 Credit Hours.
Medical research is multidisciplinary and broad in scope. Students will participate in basic, clinical research, quality improvement, or patient safety research projects under the supervision of faculty in the Health Science Center. The goal of this elective is to immerse students in a rich scholarly environment and provide an opportunity to work with research/faculty mentors to fully engage in a scholarly research process from writing the proposal to collecting the data to disseminating results. This elective is open to students who already have an established working relationship with a faculty member and reflects their increasing experience with the research process. INTD 4210 Level 1 elective or evidence of past experience knowledge and/or skills is a prerequisite. The expectation is that enrolled students will continue with research experiences begun in INTD 4210 Level 1 including students pursuing the MD-MPH degree and MD with Distinction in Research. Interested students must submit a research elective application which includes the faculty mentor the student will work, to the office of UME, no later than 12 weeks before the research elective is to begin. Applications will be reviewed and confirmed or declined no later than 8 weeks prior to the proposed start date of the elective.

INTD 4212. School of Medicine Research Elective Level 3. 4 Credit Hours.
Medical research is multidisciplinary and broad in scope. Students will participate in basic, clinical research, quality improvement, or patient safety research projects under the supervision of faculty in the Health Science Center. The goal of this elective is to immerse students in a rich scholarly environment and provide an opportunity to work with research/faculty mentors to fully engage in a scholarly research process from writing the proposal to collecting the data to disseminating results. Students enrolled in this course will have prior experience with research and ongoing research activities. As such, this elective is open to students who already have an established working relationship with a faculty member and reflects their increasing experience with the research process. INTD 4211 Level 2 electives is a prerequisite. As with INTD 4211 Level 2, the expectation is that enrolled students will continue with research experiences begun in INTD 4210 Level 1 and INTD 4211 Level 2 including students pursuing the MD-MPH degree and MD with Distinction in Research or produce evidence of past experience knowledge and/or skills which are deemed equivalent to these prerequisites. Interested students must submit a research elective application which includes the faculty mentor the student will work, to the office of UME, no later than 12 weeks before the research elective is to begin. Applications will be reviewed and confirmed or declined no later than 8 weeks prior to the proposed start date of the elective. Students will be able to formulate a research question and identify a research methodology to answer that question; understand research ethics and apply an ethical approach to research design, implementation, and dissemination; design a research study and gather quality data; apply and interpret basic biostatistics relevant to the individual research project; write scientific reports. The supervising faculty member will evaluate the performance of the student using a standard, research specific, medical student evaluation form. Students will receive a Pass or Fail summative grade at the conclusion of the 4 week elective. Faculty will be expected to give the student formative feedback after two weeks to assist the student in meeting all expectations to pass the elective.

INTD 5005. Core Course 1: Biochemistry. 2 Credit Hours.
Topics to be covered include: protein structure; properties of enzymes; structure, biosynthesis, and function of lipids; pathways and regulation of carbohydrate metabolism and biosynthesis and regulation of amino acids, nucleotides, and related compounds. Prerequisites: consent of instructor.
INTD 5007. Advanced Cellular And Molecular Biology. 4 Credit Hours.
This course provides an in-depth learning experience that instructs students on the fundamentals of molecular biology and cell biology as well as prepares the student to evaluate and design new research in the cutting-edge areas of modern molecular biology and cell biology. The course combines a didactic program of lectures along with a small group discussion format in which students interact closely with a group of faculty who have active research programs. The course focuses on active areas of research in molecular biology: Chromatin structure, DNA Transcription, DNA Replication and Repair, Recombination, RNA processing and regulation, Protein processing, targeting and degradation and in cell biology: Cell Signaling and Communication, Cell Growth, and Cell Death. Each week, the faculty provide students with didactic lectures on a current research area. Students and faculty will then jointly discuss key publications that serve to bridge the gap between the fundamental underpinnings of the field and the state of the art in that area.

INTD 5013. Perio/Pros/Endo/Orth Interdisciplinary Course 1. 1 Credit Hour.
A seminar that brings together the residents and graduate staff from the periodontic, prosthodontic, endodontic and orthodontic postdoctoral programs to share clinically relevant multidisciplinary information. Patient diagnostic evaluations and treatment plans are evaluated in an interactive environment. Selected topics involving new advancements are presented and discussed.

INTD 5021. Dental Biomed Core 2. 1 Credit Hour.
This course is a continuation of MSDS 5020 Dental Biomedical Core Course 1.

INTD 5023. Research Ethics. 1 Credit Hour.
The goal of this course is to provide the Master's student an opportunity to gain the essential standards necessary for training and education approved by the National Institute of Health. This course links to the web-based NIH Clinical Research Training On-Line Course http://www.cc.nih.gov/training/training/crt/infor.html for Principal Investigators that is required for all individuals conducting research. This course is open to current Health Science Center students. Open for Cross Enrollment on Space Available Basis.

INTD 5035. UTeach. 2 Credit Hours.
The course is designed for post-doctoral fellows, senior graduate students, faculty members, research staff and residents who are interested in a career in teaching and desire to acquire knowledge about learning processes and to develop educational planning, teaching and assessment skills to enhance their “teaching toolkit.” UTeach (formerly University Teaching Excellence Course; UTEC) participants practice key skills needed for success in college-level teaching, working individually and in teams to accomplish course objectives. Classes will be supplemented by readings, worksheets and self-assessment inventories. Although the course will provide instruction in contemporary pedagogic techniques, it primarily emphasizes teaching science courses for undergraduates on campuses at predominantly undergraduate institutions (PUs), rather than teaching graduate students and medical / dental students at the health science center (HSC) or other academic HSCs. Course instructors include faculty from the Schools of Medicine, Dentistry and Nursing at UTHSCSA as well as visiting faculty from local PUs, St. Mary's University and Our Lady of the Lake University. UTeach has been offered for three consecutive fall semesters now (2015, 2016, 2017). It is sponsored by the San Antonio Biomedical Education and Research (SABER) Program that is supported by an Institutional Research and Academic Career Development Award (IRACDA) from the National Institute of General Medical Sciences of the NIH (PHS grant, K12 GM11726).

INTD 5040. Fundamentals Of Neuroscience1: Molecular, Cellular, & Developmental Neuroscience. 2 Credit Hours.
This course is intended to introduce students to a broad survey of the basics of molecular, cellular and developmental neuroscience. The course is organized into a series of three modules: biochemical and cellular properties of nervous system cells, development of neuronal systems, and neurotransmission and neuromodulation, which covers the fundamentals of these three areas. Current topics and concepts are discussed in discussion sessions that include student participation. Two components; Neuroscience students register for both PHYL 5041 and INTD 5040.

INTD 5043. Fundamentals Of Neuroscience 2: Systems Neuroscience. 3 Credit Hours.
This course, the second component of our broad survey of the basics of neuroscience, begins at the level of the neural circuit, and guides the students through an understanding of increasingly complex levels of organization and function in the brain. Topics include neurotransmitter systems, sensory and motor function, motivated behavior, regulation and integration of autonomic, behavioral, and emotional responses in the limbic system, higher order cognitive processes, and the neurobiological basis underlying some important psychiatric disorders and their treatment.

INTD 5046. Metanalysis In Cognitive Neuroimaging. 2.5 Credit Hours.
The objective of this course is to familiarize students with human functional brain imaging methods, experimental designs, statistical analyses, inferential strategies, and content. Students are guided through a literature-based research project that culminates in a quantitative metaanalysis of a set of studies using similar tasks.

INTD 5047. Neuroanatomy. 2 Credit Hours.
The purpose of this course is to provide students with a practical working knowledge of the structure of both the peripheral and central nervous system. The emphasis will be on the organization of the human brain, although the brains of other species may also be included if appropriate for a specific brain region. The course will look at each of the individual components of the central nervous system in some depth but will also emphasize the complex integration of these various components into a functional brain. The topics covered in the course are specifically designed to mesh in time with those covered in Fundamentals of Neuroscience 2 describing the function of these areas. For this reason, it would be best if these two courses were taken concomitantly. The course will be didactic with digital images, models, and wet specimens included in the course.

INTD 5051. Research Methodology and Evidence-Based Practice. 2 Credit Hours.
This course is designed to introduce dental residents and faculty to critical thinking, research methodology, and evidence-based practice skills.

INTD 5064. Applied Statistics for Health Care Practitioners. 3 Credit Hours.
This online course focuses on the application of descriptive and inferential statistics in research studies. Students are expected to gain knowledge and skills that will enable them to understand, interpret, and evaluate statistical results; work with a consultant statistician; and use software to enter, analyze, and summarize data. Course requirements include homework assignments, online discussions and/or chats, and periodic projects.
INTD 5066. Laughter is the Best Medicine: An Interdisciplinary Elective about Humor, Healing, and Healthcare. 1 Credit Hour.
This class is a serious look at humor! The physiological and psychological benefits of humor, as well as its therapeutic use with patient interactions, will be explored. Students will learn how to develop and improve their personal use of humor to combat burn out, through techniques to enhance coping skills and stress reduction. Student participation and interaction is integral to the content delivery.

INTD 5067. Introduction To Bioinformatics And Computational Biology. 2 Credit Hours.
The course will be taught by faculty from Biochemistry, Cellular & Structural Biology, CCRI, Periodontics, and faculty from UTSA. The course will be an introduction to methods and tools for working with DNA sequences and protein families, learning basic Unix networking, overview of numerical modeling, systems biology approaches to complex diseases, gene expression analysis, bioinformatics in clinical research, statistical tools for complex datasets, proteomics, structural methods for protein biology, chemoinformatics, molecular modeling, and mathematical model building.

INTD 5074. Topics In Translational Medical Product Development. 1 Credit Hour.
It is crucial to understand the intricate process of translating basic research into market driven products, navigate the complex pathways of intellectual property management and the regulatory affairs of agencies such as the FDA. This course will offer students in biomedical sciences the opportunity to integrate industry-relevant training and experience with their basic science education. The course will explore the marketing and regulatory process by which a biomedical product is developed and brought to commercialization.

INTD 5075. Complementary Healthcare for the Clinician. 0 Credit Hours.
The goal of this elective is to introduce future doctors to practices outside of the classical medical school curriculum that promote an evidence-based approach to wellness. This is so that the medical students of the UTHSC School of Medicine are informed about the reality, evidence and rumor surrounding a variety of commonly used alternative and supplementary healthcare practices. The of this class is not to make the student an expert in areas such as acupuncture or yoga, but to be well informed of the role of such practices as it relates to patient treatment and wellness. To this end, all the classes will have a practical component which will allow the students to experience the alternative modalities in a structured setting.

INTD 5081. Topics In Cardiovascular Research. 1 Credit Hour.
This course is designed to familiarize students with the current literature related to cardiovascular disease. Each week a different research topic selected from the recent literature is presented and discussed. Students are expected to attend and participate in the discussions. In addition, students are required to prepare and present once during the semester. A list of previous and current course presentations will be available online.

INTD 5082. Responsible Conduct of Research. 1.5 Credit Hour.
This foundational course introduces students to core ethical content necessary for responsible research conduct. Through interactive seminars, students will learn about (1) scientists as responsible members of society (contemporary ethical issues in biomedical research and environmental/social impacts of research), (2) policies for research with human subjects and vertebrate animals, (3) collaborative research, (4) conflicts of interest (personal, professional, financial), (5) data acquisition and laboratory tools (management, sharing, ownership), (6) responsible authorship and publication, (7) mentor/trainee responsibilities and relationships, (8) peer review, and (9) research misconduct (forms of misconduct and management policies).

INTD 5091. Special Topics. 1-4 Credit Hours.
This is a placeholder course, for which graduate students may register, if they are unable to select a specific track core course at the time of registration. Tracks are: Biology of Aging, Cancer Biology; Cell and Molecular Biology; Genetics, Genomics, & Development; Membrane Biology & Cell Signaling; Metabolism & Metabolic Disorders; Microbiology & Immunology; Molecular Biophysics & Biochemistry; Molecular, Cellular, & Integrative Physiology; Neuroscience; and Pharmacology. The course may be repeated for credit.

INTD 5094. Independent Study. 1-4 Credit Hours.
This elective allows for detailed in-depth study in a specific area of study. The area and mode of study are to be agreed upon by the student and instructor. The course may be repeated for credit when the area of study varies. Clock hours are to be arranged. Prerequisites: Graduate standing and consent of instructor.

INTD 6002. Ethics In Research. 0.5 Credit Hours.
This course covers topics relevant to ethics in scientific research. The course is taught on a case-study basis, dealing with real and hypothetical situations relevant to the conduct of scientific research. Topics discussed will include, but will not be limited to: data management, peer review, recognizing scientific misconduct, authorship, and The University of Texas regulations relevant to human and animal research. This course is required of all doctoral graduate students.

INTD 6007. Advanced Cell Biology. 2 Credit Hours.
This course provides an in-depth learning experience that instructs students on the fundamentals of cell biology as well as prepares the student to evaluate and design new research in the cutting-edge areas of modern cell biology. The course combines a didactic program of lectures along with a small-group discussion format in which students interact closely with a group of faculty who have active research programs. The course focuses on active areas of research in cell biology: Cell Signaling and Communication, Cell Growth, and Cell Death. Each week, the faculty jointly discuss key publications that serve to bridge the gap between the fundamental underpinnings of the field and the state of the art in that area. Students and faculty will then jointly discuss key publications that serve to bridge the gap between the fundamental underpinnings of the field and the state of the art in that area.

INTD 6008. Mitochondria & Apoptosis. 1 Credit Hour.
This course will focus in depth on Mitochondria and Apoptosis. Topics will include: Mitochondria and Respiration; Mitochondria and Reactive Oxygen Species; Mitochondria and Apoptosis. It will provide an opportunity for a unique learning experience where the student can prepare to evaluate and design new research in the cutting-edge areas of modern cell biology and molecular biology. Instead of a didactic program of lectures, the entire course comprises a small-group format in which students interact closely with a group of faculty who have active research programs. Each week, faculty will provide students with a brief overview of the research area. Students and faculty will then jointly discuss key publications that serve to bridge the gap between the student’s prior understanding of the field and the state of the art in that area.
INTD 6009. Advanced Molecular Biology. 2 Credit Hours. 
This course will provide an in-depth learning experience on the fundamentals of molecular biology as well as prepare the student to evaluate and design new research in the cutting-edge areas of modern molecular biology. The course combines a didactic program of lectures along with a small-group discussion format in which students interact closely with a group of faculty who have active research programs. The course focuses on active areas of research in molecular biology: Chromatin structure, Transcription, DNA Replication and Repair, Recombination, RNA processing and regulation, Protein processing, targeting and degradation. Each week, the faculty provide students with didactic lectures on a current research area. Students and faculty then jointly discuss Key publications that serve to bridge the gap between the fundamental underpinnings of the field and the state of the art in that area.

INTD 6011. Introduction To Science Of Teaching. 1 Credit Hour. 
This course will provide insight into the basic skills of learning and teaching. Faculty from the Academic Center for Excellence in Teaching and the Graduate School will provide the opportunity to learn the skills, strategies, and experiences for a future in academia and teaching. Topics include lecture presentations on why scientists choose to teach, planning a student learning experience in addition to developing a lecture syllabus, curriculum and teaching portfolio and philosophy. The course is recommended for Supervised Teaching Course INTD 6071.

INTD 6014. Perio/Pros/Endo/Orth Interdisciplinary Course 2. 1 Credit Hour. 
This seminar brings together the residents and graduate staff from the periodontic, prosthodontic, endodontic and orthodontic postdoctoral programs to share clinically relevant multidisciplinary information. Patient diagnostic evaluations and treatment plans are evaluated in an interactive environment. Selected topics involving new advancements are presented and discussed.

INTD 6019. Pharmacotherapeutics. 1 Credit Hour. 
This course is designed to review general principles of pharmacology; current and accepted pharmacotherapy for the medical management of pain, infection, and selected systemic diseases; and associated adverse drug events. It is based on the top 200 drugs dispensed by U.S. community pharmacies for the prevention, diagnosis, and/or treatment of disease with special reference to dentistry.

INTD 6040. Resident Lecture Series in Psychiatric Disorders and Psychopharmacology. 1 Credit Hour. 
This is an interdisciplinary advanced elective in which students attend lectures from the Psychiatry Year One Residents’ lecture series. These lectures focus on the psychopathology, epidemiology, and pharmacological treatments for illnesses such as schizophrenia, anxiety disorders, trauma related disorders, eating disorders, and sleep disorders.

INTD 6041. Basic Science Resident Lecture Series In Neurology. 1.5 Credit Hour. 
This is an interdisciplinary advanced elective in which students attend 20 lectures, selected from the full offering of daily one-hour lectures comprising the Neurology Residents’ Basic Sciences lecture series. These lectures cover a range of topics, such as Epilepsy, Movement Disorders, the Thalamus, Parkinson’s Disease, Alzheimer’s Disease, Stroke, Sleep, etc., all given from a clinical perspective. In addition, graduate students will have the opportunity to observe or participate in at least two enrichment activities related topically to the lectures they attend, which may include such settings as case presentations, diagnostic training sessions, or clinical observations, again selected from the list of offerings included in the “Neurology Residents” series.

INTD 6045. Clinical Practicum In Neuroscience. 1 Credit Hour. 
This course will provide students with a brief, but intense and very focused exposure to clinical practice in a relevant area of their choosing, designed and coordinated to best match their interests in close individual collaboration with a clinical mentor in one of the participating components: Neurosurgery, Neurology, Psychiatry, or Endodontics. Representative activities could include participation in case presentation and treatment planning, attending rounds with physicians and residents, direct observation of clinical procedures, patient interviews, follow-up care and outcome review. Potential venues may include inpatient psychiatric ward, sleep clinic, epilepsy clinic, stroke clinic, neurosurgical theater and surgical ICU. In consultation with the course director, students will first select one of the following sub-sections, then design their individually tailored clinical practicum experience with the coordinator for that section.

INTD 6046. Resident Lecture Series in Psychiatric Disorders and Psychopharmacology II. 1 Credit Hour. 
This is an interdisciplinary advanced elective in which students attend lectures, selected from the full offering of weekly two-hour lectures comprising the Psychiatry Year One Residents’ lecture series. These lectures cover a range of topics, such as Substance Abuse, Depression, Bipolar Disorder, etc., all given from a clinical perspective.

INTD 6070. Teaching Excellence And Academic Skills (Texas). 1 Credit Hour. 
This course, designed to assist graduate students and faculty in acquiring teaching skills, is composed of four modules, each covering a range of topics from lecture and clinical teaching to instructional development to assessing student achievement.

INTD 6097. Research. 0.5-12 Credit Hours. 
This course is intended for first-year IMGP students only. Students will be required to attend a minimum of 10 departmental (any) seminars during the semester and submit a 100-150 word synopsis of each seminar within two weeks of the seminar.

INTD 6115. Perio/Pros/Endo/Ortho Interdisciplinary Course 3. 1 Credit Hour. 
This is a seminar that brings together the residents and graduate staff from the periodontic, prosthodontic, endodontic and orthodontics postdoctoral programs to share clinically relevant multidisciplinary information. Patient diagnostic evaluations and treatment plans are evaluated in an interactive environment. Selected topics involving new advancements are presented and discussed.

INTD 7002. Neurobiology Of Learning And Memory. 1 Credit Hour. 
This course will focus on recent findings and topics related to the underlying aspects of the neural basis of learning and memory. Students will have the opportunity to learn about: molecular basis of memory formation, consolidation and retrieval, memory and emotion, associative learning, memory and amnesia, and recognition memory and the medial temporal lobe. The lectures will be interactive and driven by discussions of key journal articles. Each week the first hour will be reserved for lecturing and the second hour will be reserved for a discussion of a journal article.
INTD 7003. Elective in International Medicine. 4 Credit Hours.
This elective serves as a vehicle for students to participate in international medicine rotations. Students will work with a faculty sponsor to identify a program, either a pre-established site or a site discovered by the student which requires faculty approval. This elective includes: 1) The Center for Medical Humanities and Ethics International Scholars Program in India, a competitive program requiring a separate application through the department of Medicine, 2) Shoulder to Shoulder program in Latin America, which requires a separate application process and some cost (airfare and small project fee), and is available October, January, and April, 3) Programs in Nicaragua, Mexico, Panama, and Guatemala, and 4) Other sites available through online directory: http://www.globalhealth-cc.org/GHEC/Resources/GHonline.htm. All rotations share a commitment to service learning - medical education and self-reflection that arises out of service to needy populations. Students spend up to 4 weeks (or possibly longer) living in an international site and participating in the care of patients, under the supervision of local and visiting health care providers. The clinical settings and caseload will vary based on the location. There may be opportunities for patient education and emphasis on efforts of local empowerment, aiming to build up the communities in a sustainable way. Students will be expected to integrate themselves into the health care delivery system, and when possible, to strive to make an impact through community education and home visits. For certain Latin American sites, fluency in Spanish is a prerequisite. Students are encouraged to seek similar service learning experiences with underprivileged populations in San Antonio and Border communities prior to or after the rotation. End of rotation "reflection essays" are required and will serve to process student experiences.

INTD 7005. Indian Health Care Preceptorship. 4 Credit Hours.
This elective offers the opportunity for an experience in the health care of Native Americans, coordinated through the Indian Health Service. Most experiences involve both inpatient and outpatient care under direct supervision of board certified family physicians or internists. Educational activities such as conferences, teaching rounds, etc., may vary from site to site. All clinical sites are located outside the state of Texas, including sites in New Mexico, Arizona and Alaska. Early application is recommended. Students completing appropriate application forms may be reimbursed for transportation costs and provided room and board by the Indian Health Service.

INTD 7007. Literature and Medicine. 2 Credit Hours.
In this course you are required to read short stories, poems, and a book of nonfiction. While many of the stories or poems directly address medical or ethical issues, the primary purpose is not to enhance your store of knowledge in these areas, but to promote your appreciation of these works through discussions with other students (online via Blackboard and in class) and with authors and lecturers. Your own contributions to the course - not just the insights you've gained as medical students but the wisdom you bring to the class as human beings - will be critical to its success. We hope that the readings will help you prepare for and process your clinical experiences, furthering your development as a person as well as physician. There will be no "right" or "wrong" answers in this course; rather, our goal is to encourage thoughtful and serious responses to the readings and a lively and fulfilling conversation about them and the issues they raise. Students from Christian Medical College in Vellore, India, will join in our discussion online. MSIV students will receive two credits for completion of this longitudinal elective. All students are expected to participate in class discussions. Grades are earned by reading assignments, attendance at class meetings, and posting primary and secondary responses to posted discussion questions. Open for Cross Enrollment on Space Available Basis.

INTD 7020. Clinical Patient Management. 5 Credit Hours.
This course is designed to help students develop skills in clinical behavioral dentistry through small group discussions, lectures, and routine patient treatment by application of the principles of coordinating patient care; communicating effectively with colleagues, staff, and faculty; and managing time, records, and environment. The students are required to manage their comprehensive care patients in the Junior Clinic following the principles presented in this course.

INTD 7074. Topics In Translational Medical Product Development. 1 Credit Hour.
It is crucial to understand the intricate process of translating basic research into market driven products, navigate the complex pathways of intellectual property management and the regulatory affairs of agencies such as the FDA. This course will offer students in biomedical sciences the opportunity to integrate industry-relevant training and experience with their basic science education. The course will explore the marketing and regulatory process by which a biomedical product is developed and brought to commercialization.

INTD 7091. Independent Studies. 1-9 Credit Hours.
Students will have the opportunity to use this course to study for the National Board, Part II examination, according to their own need. This course also will serve as a framework for a student returning from a leave of absence or from other protracted time away from classes or clinic. At the conclusion of the course, the enrolled student must demonstrate knowledge and/or skills and/or values consistent with the expectations for entering the level of course study from which the student left. An individualized course of study will be developed once the student is enrolled.

International Dentistry Program (IDEP)

Courses
IDEP 5000. IDEP Prep Course. 23.5 Credit Hours.
This second year Dental Science course prepares students from diverse backgrounds, training and experience levels for integration into the third and fourth year. This hybrid course consists of online training followed by customized hands-on training taught by specialists and content experts, geared to maximize clinical skills.
Introduction to Patient Care (DIPC)

Courses

DIPC 5001. Patient Care Foundations. 12 Credit Hours.
In IPC 1 (Patient Care Foundations), students gain familiarity with the patient care environment and acquire a variety of non-invasive clinical skills. The heart of IPC 1 is a series of 12-hour rotations throughout the first year where students learn and practice, in lab and clinical settings, fundamental patient care skills in the sequence they will use them in the clinic to assess patient’s oral health. IPC 1 begins with a 4 week component addressing foundational aspects of patient care including ethical issues, Introduction to radiology and physical examination, infection control (room wrapping, personal protective equipment and management of blood borne pathogens), CPR, ergonomics and electronic patient records. Students then complete a series of three day (12 hour) rotations that parallel the patient assessment process: Health History, Head & Neck Exam & Radiographic Anatomy (fall semester), Periodontal Examination and Instrumentation (fall and spring semesters), Clinical Prevention and Hard Tissue Examination (fall and spring semesters), Intraoral Radiographic Technique (fall semester), Health History and Head & Neck Exam - Application (spring semester), Radiographic Interpretation (spring semester), Community Based Prevention at Head Start Preschool Program (fall and spring semesters). Students must be enrolled as DS 1 students.

DIPC 6002. 2nd Year Patient Care Foundations. 13 Credit Hours.
Patient Care Foundations (DIPC 6002), is a clinic centered course that serves as the hands-on companion to knowledge and skills taught in concurrent didactic courses of the 2nd year. The heart of the course is a series of structured rotations where students are given an opportunity to contribute to patient care under close supervision of faculty and senior mentors. Students build upon the first-year skills in assessing patients, forming diagnosis, managing oral health and providing limited dental therapy on patients and standardized patients or simulations. Students expand concepts of patient care experiences to include: community health care, vulnerable populations, pediatric populations, special needs, risk prevention, esthetics, medical and dental emergencies, as well as strategies for dental practice management. As students build knowledge and skills they maintain a portfolio of accomplishments called badges. Fundamental badges are a baseline of expected D2 (sophomore students) skills need to pass the course. Once these badges have been successfully earned, students can be credentialed to challenge higher-level badges and experiences, and gain more clinical privileges. The year concludes with a credentialing comprehensive OSCE and national board preparation review, culminating in full patient care under faculty supervision with a peer assistant. Successful completion of all DS I courses is required to enroll in this course.

DIPC 6003. Periodontal and Endodontic Therapy. 1.5 Credit Hour.
During DIPC 6003 (Periodontal and Endodontic Therapy), second year dental students acquire knowledge and skills needed for management of patients with gingival and periodontal disease encountered by dentists in general practice. In the periodontics component, students learn how to conduct a comprehensive examination of the periodontium and how to chart findings in AxiUm (the clinical database). Students learn and practice skills necessary for performing and assessing non-surgical periodontal therapy for patients with plaque-induced gingivitis and patients with slight to moderate chronic periodontitis. Techniques for preventing periodontal disease and maintaining periodontal health are emphasized. In the endodontics component, students learn basic concepts of prevention, diagnosis and management of diseases of the pulp and related diseases of the periradicular tissues. In preclinical labs, students practice the technique skills necessary to perform successful root canal treatment for uncomplicated single and multi-rooted teeth. Students also learn diagnosis of pulpal and periapical disease, root canal system anatomy, coronal access technique, root canal instrumentation and obturation. Successful completion of all DS I courses is required to enroll in this course.

DIPC 6004. Developmental Dentistry Year 2 Fall Semester. 2.5 Credit Hours.
DIPC 4 (Developmental Dentistry) introduces second year dental students to the specialties of Pediatric Dentistry and Orthodontics. During the Pediatric Dentistry module, students learn foundational concepts that are essential to the provision of dental care for infant, child, and adolescent patients. During the Orthodontic module, students learn the problem-oriented approach to diagnosis and treatment planning for the correction of malocclusion in children and adults in a general dentistry practice. Students learn the biology of tooth movement, orthodontic force systems, the biomechanical principles of appliance design, and modifications unique to providing dental care for the pediatric patient. During DIPC 6004, students have a diverse learning experience including lectures, interactive online modules, and cooperative learning in small groups. Successful completion of all DS I courses is required to enroll in this course.

DIPC 6005. Oral and Maxillofacial Surgery, Management of Pain, Anxiety and Medical Emergencies. 2.5 Credit Hours.
The purpose of DIPC 6005 is to prepare second year students for initial clinical experiences in basic outpatient oral and maxillofacial surgical procedures. Students learn fundamental concepts for preoperative patient evaluation, postoperative patient evaluation, basic surgical protocols and techniques, strategies for prevention, recognition of management of medical emergencies, and administration of local anesthetics and nitrous oxide sedation for management of patients’ pain and anxiety. Successful completion of all DS I courses is required to enroll in this course.
Medical Laboratory Sciences (MLSC)

Courses

MLSC 3010. Body Fluids. 2 Credit Hours.
This is a study of selected body fluids including urine, amniotic fluid, cerebrospinal fluid, pleural fluid, peritoneal fluid, pericardial fluid, and synovial fluid. Renal physiology and the physical and chemical properties of urine and cellular elements of the urine in healthy and diseased states are studied. The formation and function of cerebrospinal fluid and amniotic fluid will be discussed. The anatomy and physiology of pleural, peritoneal, and pericardial cavities will be presented. Attention is given to the cellular and formed elements found in these body fluids. In addition, this course includes the performance of various laboratory procedures utilized in the analysis of each of these fluids. Case studies will be used to emphasize the changes in laboratory results associated with various disease states. Principles and applications of quality control procedures are practiced.

MLSC 3011. Quality Assurance in the Clinical Laboratory. 1 Credit Hour.
This course presents the principles, statistics, and applications of quality assurance as it pertains to the clinical laboratory. The course will emphasize the statistics that are needed to evaluate a quality control system, the rules that are necessary for interpreting the quality control results, and the role of quality control in a quality assurance program. The impact of federal and state regulatory agencies on the clinical laboratory and its quality assurance program will be discussed. A large part of this course is via computer-assisted instruction.

MLSC 3033. Medical Microbiology. 3 Credit Hours.
This is a comprehensive study of medically important microorganisms including their composition, morphology, and growth requirements. Methods for identification including biochemical reactions of significant pathogens and their role in infectious disease will be stressed.

MLSC 3034. Medical Microbiology Lab. 2 Credit Hours.
This is a laboratory course emphasizing diagnostic clinical microbiology. Examination of samples from different body sites provides students the opportunity to recognize and identify organisms that comprise the normal flora and those that are potential pathogens. This course includes conventional and rapid biochemical methods for detection and identification of significant organisms. Principles and application of quality control procedures are practiced. Corequisites: MLSC 3033.

MLSC 3040. Special Topics in Microbiology. 3 Credit Hours.
This lecture and laboratory course will focus on the transmission, pathophysiology, clinical sites of infection, clinical presentation, life cycles, and identification of infrequently isolated bacterial pathogens, anaerobes, mycobacteria, viruses, parasites and fungal agents. Specimen collection techniques and methods of processing specimens for each group of organisms will be included. Laboratory sessions will focus on microscopic identification as well as classic and rapid methods of detection and identification of these etiologic agents. Prerequisites: MLSC 3033 and MLSC 3034.

MLSC 3051. Hematology. 3 Credit Hours.
This is a study of the normal production, maturation, and function of erythrocytes, leukocytes, and platelets. Common disorders involving such cells will be discussed with emphasis on the pathogenic mechanisms. Hematologic laboratory tests and their correlations with disease states will also be examined. Normal hemostasis will be considered including pertinent laboratory tests used in diagnosis of coagulation problems.

MLSC 3052. Hematology Laboratory. 2 Credit Hours.
This is a clinical laboratory course emphasizing manual and semi-automated cell counting techniques and other basic hematologic tests. Time is devoted to the examination of normal and abnormal blood smears with emphasis on identification of cells and their relationships to various disease processes. An introduction to quality control methods in the hematology laboratory will also be included. Corequisites: MLSC 3051.

MLSC 3060. Immunohematology. 2 Credit Hours.
This is a study of the major blood groups of humans including the red cell antigen systems, alloantibodies, and non-immune stimulated antibodies. The relationship of blood group systems to compatibility testing, transfusion reactions, and hemolytic disease of the newborn will be discussed.

MLSC 3064. Immunohematology Laboratory. 2 Credit Hours.
This is a laboratory course emphasizing basic bloodbanking techniques including blood typing, identification of alloantibodies, and resolution of typing discrepancies. Techniques used in resolution of compatibility testing, investigation of transfusion reactions, and hemolytic disease of the newborn are practiced. Principles and applications of quality control are introduced. Corequisites: MLSC 3060.

MLSC 3065. Clinical Immunology. 3 Credit Hours.
This course will discuss the principles of innate and acquired immunity. Emphasis will be placed on the cell-mediated immune response and humoral immune response to immunogens. The cells of either response, their development, and their role in the specific immune response will be discussed. Soluble mediators of the immune response will be covered including immunoglobulins, cytokines, and complement. Finally, disorders of impaired immune function and infectious diseases will be discussed including autoimmunity, hypersensitivity, transplantation and tumor immunology, immunodeficiency, syphilis, infectious mononucleosis, etc. Laboratory testing for these disorders will be described.

MLSC 3071. Diagnostic Immunology Laboratory. 1 Credit Hour.
This laboratory course introduces students to basic laboratory concepts and skills. Safety regulations and procedures will be covered. Specimen collection, handling and storage are discussed in relation to the reliability of a laboratory test result. Students will perform immunologic procedures commonly used in the diagnosis of infectious and autoimmune diseases. Principles and applications of quality control procedures are integrated throughout. Corequisites: MLSC 3065.

MLSC 3081. Clinical Chemistry. 2 Credit Hours.
The study of carbohydrates, enzymes, proteins and other chemicals routinely analyzed in clinical chemistry laboratories. Emphasis is placed upon principles of testing, methods of analysis, data interpretation, and clinical significance of results. Laboratory mathematics, quality control, safety, and instrumentation also are topics covered.

MLSC 3082. Clinical Chemistry Laboratory. 2 Credit Hours.
This is a laboratory course emphasizing biochemical analysis of body fluids utilizing manual procedures and semi-automated instrumentation. Students are given the opportunity to develop motor skills and organizational techniques in biochemical procedures. Principles and applications of quality control procedures are practiced. Corequisites: MLSC 3081.

MLSC 3085. Principles of Biochemistry. 3 Credit Hours.
This course is a discussion of the basic biomedical processes that occur in the human body. Topics that will be covered include the molecular basis of life, molecular structure, bioenergetics, enzymes, and metabolism.
MLSC 4006. Professional Issues. 1 Credit Hour.
This interdisciplinary course will provide an overview of professional and ethical issues facing allied health professionals. Topics to be discussed include responsibilities of the health care practitioner, life and death decisions, patient confidentiality, substance abuse, whistle blowing, and informed consent. Ethics in research and other critical issues related to health care problems will also be addressed. Collaborative activities and simulated cases will be used to enhance discussion among students.

MLSC 4033. Advanced Medical Microbiology. 2 Credit Hours.
This course will discuss etiology of infectious diseases in different body sites. Laboratory identification of suspected etiologic agents, using conventional methods, will be emphasized. Recent developments in microbiology and new rapid methods in the identification of bacterial agents of infectious disease will also be presented. One section of this course is in a distance-learning format offered via the Web. Students wanting to enroll in the Web section must receive permission from the instructor.

MLSC 4037. Microbiology Practicum. 4 Credit Hours.
Under the supervision and direction of a clinical instructor in the hospital setting, the student is introduced to the functional roles of the clinical microbiology laboratory. Emphasis is on the practical application of microbiological principles in the areas of bacteriology, parasitology, mycology, and mycobacteriology. Students have the opportunity to gain experience in the isolation and identification of both indigenous microflora and potential disease producing organisms of man. Concepts of Total Quality Management (TQM) are emphasized.

MLSC 4053. Advanced Hematology. 2 Credit Hours.
Using problem-based learning approach, this advanced course presents the pathogenic mechanisms of disorders involving erythrocytes, leukocytes, platelets, and coagulation factors. The methodology for detection of diseases of the blood and blood forming organs is examined. The peripheral blood and bone marrow findings in relation to various hematopoietic disease processes will be emphasized. Abnormalities of hemostatic mechanisms and their correlation with laboratory tests will be presented.

MLSC 4054. Advanced Hematology/Web-Based. 2 Credit Hours.
This advanced course in hematology/hemostasis presents the pathogenic mechanisms of disorders involving erythrocytes, leukocytes, platelets, and coagulation factors. The methodology for detection of diseases of the blood and blood forming organs is examined with emphasis on the interpretation of the findings and determination of appropriate reflex testing. Morphologic changes in the peripheral blood and bone marrow will be emphasized. This is a Web-based course. Enrollment is open to clinical laboratory technicians/medical laboratory technicians or military-trained laboratory personnel who have been accepted into the CLS program or by special permission from the course director.

MLSC 4055. Advanced Immunohematology. 2 Credit Hours.
This is a lecture course which uses case studies to emphasize theory and principles and develop problem solving skills. Major areas of focus include collection, processing and therapeutic use of blood components; investigation of autoantibodies and alloantibodies as detected in hemolytic disease of newborns, transfusion reactions, and autoimmune hemolytic anemias. The HLA system and applications in transplantation and paternity testing will also be discussed. One section of this course is in a distance-learning format offered via the Web. Students wanting to enroll in the Web section must receive permission from the instructor.

MLSC 4057. Hematology Practicum. 5 Credit Hours.
Under the direction and supervision of a clinical instructor, the student will have the opportunity to gain expertise and confidence working in the hematology section of the clinical laboratory. Students will perform hemolytic and coagulation tests as well as "troubleshoot" automated hematology and coagulation instruments. An opportunity to gain proficiency in morphologic evaluation of normal and abnormal cellular morphology, including peripheral blood and bone marrow examination, will be offered. The student will be introduced to the technology of flow cytometry and interpretation of results including scattergrams/ scatterplots in the diagnosis of hemolytic disease. Knowledge of internal and external quality control methods in the hematology laboratory will be emphasized. Students will also have the opportunity to learn the principles of interfacing laboratory instrumentation with the laboratory information system as well as the role of the LIS in test ordering, specimen processing, and reporting of results.

MLSC 4067. Immunohematology Practicum. 4 Credit Hours.
Under the supervision and direction of a clinical instructor in the hospital setting, the student will be given the opportunity to perform routine blood grouping and typing, compatibility testing, and donor unit processing. Experience in solving antibody problems, HLA testing, and preparing components will also be offered. Quality assurance procedures are practiced on a daily basis.

MLSC 4083. Advanced Clinical Chemistry. 3 Credit Hours.
This is an advanced clinical lecture course emphasizing abnormalities in liver, cardiac, renal, and endocrine systems and their effect on chemical blood constituents. The theories and use of complex biochemical methodologies including immunochemical assays, chromatography, and electrophoresis also will be discussed. One section of this course is in a distance-learning format offered via the Web. Students wanting to enroll in the Web section must receive permission from the instructor.

MLSC 4087. Chemistry Practicum. 5 Credit Hours.
Under the direction and supervision of a clinical instructor, the student is introduced to the delivery of patient care as it relates to the clinical chemistry laboratory. The student will gain experience in laboratory testing using automated chemistry instrumentation. The student will perform a variety of laboratory tests including general chemistry tests, immunochemical assays, therapeutic drug monitoring, toxicology, urinalysis, and special chemistry procedures. In addition, the student will perform routine and reflex serological tests using immunoassay-based methods to facilitate the diagnosis of certain disease states. Knowledge of internal and external quality control methods will be emphasized.

MLSC 4091. Independent Study. 1-12 Credit Hours.
A plan of study is determined by the supervising faculty. The participating student and supervising faculty develop the course requirements and forms of evaluation. Credit hours are determined by the scope of the project.

MLSC 4095. Management. 2 Credit Hours.
This course is designed to present the principle of group dynamics, human resources management, and financial analysis to students in laboratory medicine. Topics include leadership style, staffing, and laboratory information systems (data management, analysis, selection). Writing resumes and laboratory procedures and developing job performance criteria are included. Interviewing techniques and performance evaluations are practiced. Current issues in managed care including outcomes assessment, evidence-based medicine, infection control, CLIA regulations, point of care testing, onsite surveys of the laboratory and medical necessity are discussed.
MLSC 4101. Honors CLS Course. 2.5-5 Credit Hours.
This is an elective course for students who want to study a CLS discipline in more depth or breadth, participate in a research project, study a professional issue, or work on a laboratory-related problem. This course is open only to students who have the permission of the Department Chair, are in good standing in the CLS Program, have a minimum GPA of 2.5, and a letter of recommendation from a CLS faculty member. The student is responsible for selecting an area of interest and securing the approval of a faculty mentor who will supervise the student's work.

MLSC 4102. Honors CLS Practicum. 1-5 Credit Hours.
This elective course is for students who are interested in completing clinical practicums in specialized areas not included in the required clinical practicums. This may include laboratory management, molecular diagnostics, virology, etc. Certified clinical laboratory technicians who have extensive experience in the laboratory and who have completed the objectives of required practicums may choose to enroll in this practicum. A special clinical experience in the South Texas Environmental Education and Research (STEER) Program may be available to select students. This program is open to sophomores and juniors as well as seniors. The STEER Program is five weeks long and takes place in Laredo, Texas. Housing is provided. To enroll in this course, students must have the permission of the Department Chair, a minimum 2.5 GPA, and letters of recommendation from two faculty members. The student must be in good standing in all coursework. In addition, to enroll in the STEER Program, students must apply, be accepted, and complete a one-page statement of interest.

MLSC 4189. CLS Senior Seminar. 1 Credit Hour.
Integrated study of selected topics in clinical laboratory science.

MLSC 4190. Research. 2 Credit Hours.
This course is an introduction to the components of medical research, the different types of clinical research trials, the purpose of the institutional review board and the informed consent procedure. Characteristics of the ethical researcher will be described. An overview of appropriate research design and data collection, sample size determination, and statistical evaluation of the results will be discussed. Students will have the opportunity to develop group research projects, write a proposal, develop a PowerPoint presentation, and present the proposal to faculty and students.

MLSC 5000. Immunodiagnostics. 3 Credit Hours.
This course focuses on principles of innate and acquired immunity. Emphasis will be placed on the cell-mediated immune response and antibody-mediated immune responses to immunogens. The cells of either response, their development, and their role in the specific immune response will be discussed. Soluble mediators of the immune response will be covered including immunoglobulins, cytokines, and complement. Finally, disorders of impaired immune function and infectious diseases will be discussed including autoimmunity, hypersensitivity, transplantation and tumor immunology, immunodeficiency, syphilis, infectious mononucleosis, etc. Laboratory testing for these disorders including the most current recommendations for tests will be described. Students will be expected to integrate the role of specific immune responses, current research findings, and the laboratory testing used in diagnosis and treatment of the specific condition. Open for Cross Enrollment on Space Available Basis.

MLSC 5001. Immunodiagnostics Laboratory. 1 Credit Hour.
This laboratory course introduces students to basic laboratory concepts and skills. Safety regulations and procedures will be covered. Specimen collection, handling and storage are discussed in relation to the reliability of a laboratory test result. Students will perform immunologic procedures commonly used in the diagnosis of infectious and autoimmune diseases. Principles and applications of quality control procedures are integrated throughout. Students are expected to troubleshoot and resolve testing discrepancies and suggest reflex testing based on initial test results. Corequisite: MLSC 5000.

MLSC 5002. Clinical Applications of Quality Assessment. 1 Credit Hour.
This course presents the CLIA requirements for quality assessment that apply to the clinical laboratory. The principles, statistics, and applications of quality assessment will be discussed. A major emphasis of the course will be the internal quality control system including the statistics that are necessary for interpreting the quality control results, and the role of quality control in a quality assessment program. The impact of federal and state regulatory agencies on the clinical laboratory related to its quality assessment program will be discussed. This course uses blended learning format with instructional components given in the classroom setting and online.

MLSC 5003. Diagnostic Hematology. 3 Credit Hours.
This course is a study of the normal production, maturation, and function of erythrocytes, leukocytes, and platelets. Common disorders involving such cells will be discussed with emphasis on the pathogenic mechanisms. Hematologic laboratory tests and their correlations with disease states will also be examined. Normal hemostasis will be considered including pertinent laboratory tests used in diagnosis of coagulation problems. Using case studies, students will be expected to analyze the laboratory data to determine differential diagnosis and suggest appropriate reflex testing to confirm diagnosis. Open for Cross Enrollment on Space Available Basis.

MLSC 5004. Diagnostic Hematology Laboratory. 2 Credit Hours.
This is a clinical laboratory course emphasizing automated cell counting techniques and basic hematologic tests. Test results are critically evaluated to determine their reportability. Normal and abnormal blood smears are examined with emphasis on identification of cells and their relationships to various disease processes. Recognition of maturing hematopoietic cells will be studies using normal bone marrow smears. Students will apply quality control methods throughout the hematology laboratory experience. Corequisite: MLSC 5003.

MLSC 5005. Diagnostic Immunohematology. 2 Credit Hours.
This is a study of the major blood groups of humans including the red cell antigen systems, alloantibodies, and non-immune stimulated antibodies. The relationship of blood group systems to compatibility testing, transfusion reactions, and hemolytic disease of the fetus and newborn will be discussed. Students will be expected to analyze and resolve complex cases and prepare a report on specific blood group systems. Open for Cross Enrollment on Space Available Basis.

MLSC 5006. Diagnostic Immunohematology Laboratory. 2 Credit Hours.
This laboratory course emphasizes basic blood banking techniques including blood typing, identification of alloantibodies, and resolution of typing discrepancies. Techniques used in resolution of compatibility testing, investigation of transfusion reaction, and hemolytic disease of the newborn are practiced. Principles and applications of quality control are introduced. Students are expected to be able to resolved cases involving multiple alloantibodies and complex patient histories. Corequisite: MLSC 5005.
MLSC 5007. Diagnostic Chemistry. 2 Credit Hours.
The study of carbohydrates, enzymes, proteins, electrolytes and other chemicals routinely analyzed in clinical chemistry laboratories. Emphasis is placed upon principles of testing, methods of analysis, data interpretation, and clinical significance of results. Through case study analysis, students will be expected to correlate the laboratory results with pertinent disease states and explain how the laboratory results support the diagnosis. Aspects of the laboratory’s quality assessment program will be discussed including method evaluation, determination of reference intervals, and selection of new methods. Open for Cross Enrollment on Space Available Basis.

MLSC 5008. Diagnostic Chemistry Laboratory. 2 Credit Hours.
This is a laboratory course emphasizing biochemical analysis of body fluids using automated instrumentation and manual procedures. Assessment of test results by applying quality control methods and review of patient result protocol is stressed. Students are expected to correlate test results with pertinent disease states and suggest appropriate reflex testing to confirm diagnosis. Method evaluation studies are performed and evaluated. Corequisite: MLSC 5007.

MLSC 5009. Laboratory Analysis of Body Fluids. 2 Credit Hours.
This course focuses on the analysis and findings of selected body fluids including urine, amniotic fluid, cerebrospinal fluid, pleural fluid, peritoneal fluid, pericardial fluid and synovial fluid in health and disease states. Anatomy and physiology of the kidney, pleural, pericardial and peritoneal cavities are studied. Topics include: physical and chemical properties as well as cellular elements of urine; formation and function of cerebrospinal fluid and amniotic fluid as well as cellular and formed elements. In addition this course includes the performance of various laboratory procedures utilized in the analysis of each fluid. Case studies and literature review will be used to emphasis of each fluid. Case studies and literature review will be used to emphasize correlation of the changes in laboratory results with various disease states. Principles and applications of quality control procedures are practiced.

MLSC 5010. Diagnostic Microbiology. 3 Credit Hours.
This is a comprehensive study of medically important microorganisms including their microscopic and colony morphology, and growth requirements. Methods of detection, identification and susceptibility pathogens and their role in infectious disease will be stressed. Antimicrobials, their mechanisms of action and resistance mechanisms will be included. Open for Cross Enrollment on Space Available Basis.

MLSC 5011. Diagnostic Microbiology Laboratory. 2 Credit Hours.
This is a laboratory course emphasizing diagnostic microbiology. Examination of specimens from different body sites provides students the opportunity to recognize and identify organisms that comprise the normal flora and those that are potential pathogens. This course includes conventional and rapid methods for detection, identification, and susceptibility testing of significant organisms. Principles of quality control procedures are practiced. Rarely encountered and fastidious microorganisms are additional challenges of this course. Corequisite: MLSC 5010.

MLSC 5012. Advanced Special Topics in Microbiology. 3 Credit Hours.
This lecture and laboratory course will focus on the transmission, pathophysiology, clinical sites of infection, clinical presentation, life cycles, and identification of anaerobes, mycobacteria, parasites and fungi. Specimen collection techniques and methods of processing specimens for each group of organisms will be included. Laboratory sessions will focus microscopic identification was well as classic and rapid methods of detection and identification. Prerequisites: MLSC 5010 and MLSC 5011.

MLSC 5013. Medical Toxicology/Therapeutic Drug Monitoring. 3 Credit Hours.
This course provides the student with the knowledge of the major classes of drugs and bioactive compounds, their mode of action and the concept of toxidromes. This course will concentrate on the role of the laboratory in personalized medicine (effect of individual genetics on the response to drugs and the production of toxicity in pain management and drug addiction) and the parts genomic testing and therapeutic drug monitoring should play.

MLSC 5040. Laboratory Medicine. 3 Credit Hours.
This course is offered to students in the Physician Assistant Studies Program at the Health Science Center. The course is designed to provide the student with the opportunity to gain information on the profession of CLS including history and job characteristics. Relationships between abnormal physiology and laboratory testing will be emphasized. Basic lab and math statistics will be taught. Part of the course is Web-based.

MLSC 5085. Organ System Biochemistry. 3 Credit Hours.
This course provides an advanced understanding of the biochemical processes that drive proper functioning of the major organs in the body, including the gastrointestinal tract, the liver and biliary system, cardiovascular, pulmonary, respiratory, renal, pancreas and endocrine systems. The course also provides the biochemical of micronutrients, including vitamins, and the three macronutrients- carbohydrates, lipids, and proteins. The metabolic processes that integrate these systems are stressed.

MLSC 6000. Advanced Diagnostic Microbiology. 2 Credit Hours.
This course will discuss etiology of infectious diseases in different patient populations, different body sites and organ systems in a case-based approach. Appropriate specimens and laboratory tests based on patient signs and symptoms will be emphasized. Recent developments in microbiology and new methods in the identification of bacterial agents of infectious disease will also be presented. The course will explore the public health and infection control aspects of infectious diseases.

MLSC 6001. Advanced Diagnostic Hematology. 2 Credit Hours.
This lecture course uses a case-based approach to study the pathogenic mechanisms of disorders involving erythrocytes, leukocytes, platelets, and coagulation factors. The peripheral blood and bone marrow findings in relation to various hematopoietic disease processes will be emphasized. Abnormalities of hemostatic mechanisms and their correlation with laboratory tests will be presented. Using case studies, students will analyze laboratory results ad discuss relevant and irrelevant results.

MLSC 6002. Principles of Laboratory Management. 3 Credit Hours.
This course focuses on general management and laboratory-specific management topics. The areas of human resource management, organizational behavior, financial analysis, as well as compliance and regulatory issues will be incorporated into the course. Reimbursement issues and CPT coding, principles and development of reflex testing and critical pathways will be covered. Job specific skills such as resume writing and interviewing will be addressed. Assignments and projects will allow students to integrate these principles and topics in laboratory related scenarios.
MLSC 6003. Evidence-based Medicine in Medical Laboratory Science. 3 Credit Hours.
This course introduces the principles of, rationale for use of, and the process employed in evidence-based medicine in laboratory medicine. Topics include: basic principles of evidence based medicine, development of focused questions, identification and use of the hierarchy of information, critical appraisal of literature, and application to laboratory practice scenarios.

MLSC 6004. Diagnostic Hematology Practicum. 5 Credit Hours.
Students will perform hematologic tests on quality control and patient samples using automated hematology and hemostasis instruments. Emphasis is on evaluation of quality control and patient results and troubleshooting un-reportable results. An opportunity to gain proficiency in morphologic evaluation of normal and abnormal cellular morphology, including peripheral blood and bone marrow, will be offered. In addition the student will have the opportunity to practice flow cytometry techniques and evaluate results characteristic of specific hematologic disorders. Students will gain experience with the laboratory information system as well as the role of the LIS in test ordering, specimen processing, and reporting results.

MLSC 6005. Advanced Diagnostic Immunohematology. 2 Credit Hours.
Advanced study in specific applications of clinical immunohematology including: collection, processing and therapeutic use of blood components, investigation of autoantibodies and alloantibodies as detected in hemolytic disease of newborns, transfusion reactions, and autoimmune hemolytic anemias. Molecular testing and HLA system applications in transplantation and paternity testing will also be discussed. This course utilizes complex and unusual case studies as a means to integrate theory and principles and develop problem solving and critical thinking skills.

MLSC 6006. Advanced Diagnostic Chemistry. 3 Credit Hours.
This course prepares the student with advanced clinical chemistry knowledge underlying the rapidly growing laboratory tests. The course emphasizes the test abnormalities associated with routine tests such as the comprehensive metabolic panel, as well as emerging tests in the areas of tumor markers, care of the infertile couple, pregnant woman and newborn screening tests, clinical toxicology and therapeutic drug monitoring. This is a problem-solving course that is heavily driven by case studies.

MLSC 6007. Seminar in Laboratory Medicine. 3 Credit Hours.
This course discusses the value of conducting medical research, the historical events leading to the development of the Nuremberg code and the Belmont Report, benefits of including all races, both genders and all ages in medical research (and the disadvantages of excluding some). This course also exposes the student to different styles of scientific writing and publication, and guides the students on how to interpret and critique scientific publications and case reports. Each student will be required to critique/discuss about ten scientific publications in front of peers.

MLSC 6008. Professional Issues in Healthcare. 1 Credit Hour.
This interdisciplinary course will provide an overview of professional and ethical issues facing allied health professionals. Topics to be discussed include responsibilities of the health care practitioner, life and death decisions, patient confidentiality, substance abuse, whistle blowing, and informed consent. Ethics in research and other critical issues related to health care problems will be also be addressed. Collaborative activities and simulated cases will be used to enhance discussion among students.

MLSC 6009. Diagnostic Immunohematology Practicum. 4 Credit Hours.
Students will perform routine blood grouping and typing, compatibility testing, and alloantibody detection and identification using multiple methods. Advanced techniques for investigation and resolution of discrepancies and complex problems such as autoantibodies will be included. Students will practice HLA testing, quality assessment procedures are practiced on a daily basis. Investigation and methods to resolve quality assessment problems will be addressed.

MLSC 6010. Diagnostic Microbiology Practicum. 4 Credit Hours.
Under the supervision and direction of a clinical instructor in the hospital setting, the student is introduced to the functional roles of the clinical microbiology laboratory. Emphasis is on the practical application of microbiological principles in the areas of the bacteriology, parasitology, mycology, and mycobacteriology. Students have the opportunity to gain experience in the isolation and identification of both indigenous microflora and potential disease producing organisms of man. Students will gain an appreciation of the healthcare regulatory environment, workflow, and day-to-day operations of a busy microbiology laboratory.

MLSC 6011. Diagnostic Immunology Practicum. 2 Credit Hours.
The student will perform routine and reflex testing for specific disease states that are primarily diagnosed by serologic techniques. In addition they will have the opportunity to practice flow cytometry techniques and evaluate results characteristic of specific hematologic disorders.

MLSC 6012. Independent Study. 1-12 Credit Hours.
A plan of study is determined by the supervising faculty. The participating student and supervising faculty develop the course requirements and forms of evaluation. Credit hours are determined by the scope of the project.

MLSC 6013. Diagnostic Chemistry Practicum. 5 Credit Hours.
The student is introduced to the role of the clinical chemistry laboratory in patient care. Students have the opportunity to gain experience with laboratory automation including general chemistry instruments, immunochemical instruments, and urinalysis instruments. Emphasis will be placed on troubleshooting instrumentation problems and patient sample issues. The student will also perform urinalysis, special chemistry procedures, therapeutic drug monitoring, and toxicology procedures. In addition students will perform routine and reflex testing for specific disease states that are primarily diagnosed by serologic tests using immunoassay-based techniques. Internal and external quality control methods will be practiced and external quality control results (i.e., proficiency testing reports) will be analyzed to determine if corrective action is required.
Medicine (MEDI)

Courses

MEDI 3105. Medicine Clerkship. 8 Credit Hours.
The objectives of this clinical experience are to provide opportunities for students to develop patient evaluation skills, productive self-learning techniques, a sound pathophysiological approach to medical disease, a concern and awareness for the patient’s needs, and personal professional behavior. The student spends eight weeks, divided into two 4-week blocks, assigned to the inpatient General Medicine Service. An additional four weeks are spent in outpatient services. Bedside clinical teaching is emphasized by asking the student to perform patient evaluations, to contribute to the care of selected patients, and to participate in the clinical rounds of the services. During this clerkship the student receives intensive instruction from the Internal Medicine house staff and faculty. In addition, the student is expected to undertake independent patient-oriented reading and to systematically review pertinent information introduced during the preclinical years. Finally, students attend a series of clinical conferences including medical grand rounds, morbidity and mortality conferences, clinical subspecialty conferences, and organized courses in electrocardiography and nutrition. Successful completion of all required preclinical courses is prerequisite to enrollment in any of the clinical clerkships. The student spends eight weeks, divided into two 4-week blocks, assigned to the inpatient General Medicine Service. An additional four weeks are spent in outpatient services. Bedside clinical teaching is emphasized by asking the student to perform patient evaluations, to contribute to the care of selected patients, and to participate in the clinical rounds of the services. During this clerkship the student receives intensive instruction from the Internal Medicine house staff and faculty. In addition, the student is expected to undertake independent patient-oriented reading and to systematically review pertinent information introduced during the preclinical years. Finally, students attend a series of clinical conferences including medical grand rounds, morbidity and mortality conferences, clinical subspecialty conferences, and organized courses in electrocardiography and nutrition.

MEDI 4000. Special Topic. 4 Credit Hours.
This is a self-designed course created by both the student and the department to cover a specific topic. A Course Approval Form must be completed along with documentation of the designed course description.

MEDI 4002. Clinical Cardiology. 4 Credit Hours.
Students are required to participate in inpatient consultations and outpatient clinics evaluating patients with cardiovascular disease. Students are required to perform inpatient consultations at University Hospital and Audie L. Murphy V. A. Hospital. Students are required to perform appropriately focused history and physical exam, prepare written and verbal presentations, interpret laboratory data, and develop differential diagnosis and management plan on each assigned patient. Students are required to also have learning opportunities in ECG interpretation, the cardiac catheterization laboratory, and non-invasive test interpretation such as exercise treadmill testing and echocardiograms. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to “pass” course.

MEDI 4004. Cardiovascular Research. 4 Credit Hours.
Students can participate in original research, basic or clinical, in collaboration with a faculty member of the Division of Cardiology. Students must meet expectations of research responsibilities based on School of Medicine evaluation for fourth year students to “pass” course.

MEDI 4006. Coronary Care Unit - Subinternship - VA. 4 Credit Hours.
This subinternship is designed to prepare students for the intense and responsible role of the intern. The subintern is an integral member of the team and is required to participate in all team activities and participate in all medical care for his/her patients, under the supervision of the Internal Medicine resident, Cardiology fellow, and Cardiology attending. Students are required to care for patients in the CCU and Telemetry ward. The student will be involved in the inpatient care of patients with cardiac disease, including critically ill patients needing hemodynamic and respiratory monitoring and ventilation support. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to “pass” course.

MEDI 4007. Cardiology Care Unit Sub-Internship-SAMMC. 4 Credit Hours.
This subinternship is designed to prepare students for the intense and responsible role of the intern. The subintern is an integral member of the team and is required to participate in all team activities and participate in all medical care for his/her patients, under the supervision of the Internal Medicine resident, Cardiology fellow, and Cardiology attending. Students are required to care for patients in the CCU and Telemetry ward. The student’s clinical performance will be evaluated by the supervising attending. Students are required to participate in the care of patients with a wide spectrum of acute and chronic cardiovascular problems. Emphasis is placed on mastering basic physical assessment through history and detailed cardiovascular physical examination and the interpretation of non-invasive and invasive cardiac testing. Students will have exposure to the catheterization laboratory, M-mode, 2-D, and Doppler echocardiography, color flow imaging, exercise testing, and 24-hour dynamic ECG rhythm monitoring and analysis. No late drops will be accepted. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to “pass” course.

MEDI 4008. Clinical Endocrinology. 4 Credit Hours.
Students are required to participate in inpatient consultations and outpatient clinics evaluating patients with pituitary and hypothalamic disease, adrenal disease, diabetes mellitus, thyroid disorders, and lipid disorders. Students are required to perform inpatient consultations at Audie Murphy VA Hospital and University Hospital. Outpatients will be evaluated in weekly endocrine clinics at the VA Hospital and Texas Diabetes Institute. Students will be responsible for the initial evaluation of assigned patients, presentation of findings from the history and physical exam, interpretation of endocrine testing, and formation of differential diagnosis. If rotation is done as the Ambulatory selective, the student is required to prepare a written essay based upon specific course objectives concerning systems of care. Essays must be submitted on the last day of the rotation and are required to receive a passing grade in the course. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to “pass” course.

MEDI 4009. Calcium & Bone Metabolism Research. 4 Credit Hours.
This research elective is recommended for students with serious research interests. It offers the opportunity to participate in ongoing projects under the supervision of division faculty. Students must meet expectations of research responsibilities based on School of Medicine evaluation for fourth year students to “pass” course.
MEDI 4010. Clinical Dermatology. 4 Credit Hours.
This elective is recommended for students with a serious interest in Dermatology, and for those intent upon further training in Internal Medicine, Family Medicine, and Pediatrics. It offers considerable clinical experience in both outpatient clinics and supervised inpatient consultations. Students rotating at UTHSCSA are required to attend teaching conferences every Wednesday (all day) and Friday afternoons. This didactic time for students and residents includes lectures, journal reviews, text reviews, and clinical Kodachrome sessions. Didactic sessions will be held separately at WHMC and BAMC. Each student is required to do a 10-minute PowerPoint presentation on a topic of choice that is both dermatology related and fits in with choice of residency. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4012. Clinical Endocrinology - WHMC. 4 Credit Hours.
Students will have exposure to a very active clinical endocrinology consultation service, outpatient endocrine clinic, and the performance and interpretation of diagnostic procedures in endocrinology. Students must perform appropriately focused history and physical exams, prepare written and verbal presentations, interpret laboratory data, and develop differential diagnosis and management plan on all assigned patients. Clinical performance will be evaluated by supervising attending. No late drops will be accepted. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4014. Gastrointestinal Research. 4 Credit Hours.
Students are required to participate in ongoing research projects under the supervision of division faculty. Supervising faculty will complete evaluations at end of the project. Students must meet expectations of research responsibilities based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4015. Clinical Gastroenterology. 4 Credit Hours.
Students are required to participate in inpatient consultations at Audie L. Murphy V. A. Hospital (ALMVAH) and University Hospital, outpatient clinics at ALMVAH and University Health System, and special gastrointestinal diagnostic testing under the supervision of Internal Medicine residents, GI fellows, and GI Faculty. Students are required to participate in the independent evaluation of patients with disorders of the gastrointestinal tract, pancreas, and liver. Students are required to become familiar with the application, indications, contraindications, and complications of gastrointestinal procedures, as well as the proper preparation of the patient for the procedure. Students are required to perform appropriately focused history and physical exams, prepare written and verbal presentations, interpret laboratory data, and develop differential diagnosis and management plans on all assigned patients. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4017. Gastroenterology - SAMMC. 4 Credit Hours.
Students will be exposed to clinical gastroenterology with didactic instruction, and will work in conjunction with house staff as part of the primary care team. Students are required to perform appropriately focused history and physical exams, prepare written and verbal presentations, interpret laboratory data, and develop differential diagnosis and management plan on all assigned patients. Students will have exposure to the full range of special diagnostic procedures including observation of upper endoscopy, endoscopic ultrasound, colonoscopy, flexible sigmoidoscopy, endoscopic retrograde cholangiopancreatography (ERCP), percutaneous liver biopsy, laparoscopy, and related techniques. No late drops will be accepted. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4018. Clinical Hematology. 4 Credit Hours.
The consultation service includes clinical exposure to inpatient consultations, conferences, and outpatient clinics. There is opportunity for training in blood and marrow morphology, observation, and performance of special clinical and laboratory procedures. Students are responsible for the following on all assigned patients: history and physical examination, admission/progress notes, doctor’s orders, interpretation of laboratory data, formation of differential diagnosis, assessment, and management plan. Students on both services are required to attend conferences including Hematology Clinical Conference, Hematology/Pathology Conference, Bone Marrow Transplant Conference, and Coagulation Conference. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4019. Hematology Research. 4 Credit Hours.
Students are required to participate in ongoing clinical or basic research; individual projects encouraged with written report or results required. Opportunity may be provided for combined clinical and research experience in individual cases by special arrangement. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4022. Infectious Disease Research. 4 Credit Hours.
For the students who wish to learn research techniques in Infectious Disease, an individual project will be designed that may involve studies of antimicrobial activity, animal models of infection, host defense mechanisms, immunologic aspects of infectious diseases, or application of molecular biology to studies of pathogens. We are prepared to teach research methodology pertinent to measurement of antigens and antibodies; and the molecular biology and immunobiology of fungal, bacterial, and chlamydia infections. Research may be directed toward in vitro work, work with laboratory animals, or direct clinical investigation. In addition, students may review local clinical experience with a given infectious disease process (e.g. tuberculosis, meningitis, amebiasis, endocarditis, etc.) with the goal of preparing a paper for publication. Students must meet expectations of research responsibilities based on School of Medicine evaluation for fourth year students to "pass" course.
MEDI 4023. Clinical Infectious Disease. 4 Credit Hours.
Infectious diseases cross all subspecialty lines, especially because antibiotics and antifungal and antiviral agents are employed widely throughout medical practice. This elective will provide practical experience in the diagnosis and management of patients with infectious diseases. There will be particular emphasis upon the pharmacology and pharmacodynamics of antimicrobial agents, selection of appropriate diagnostic tests and therapeutic agents, and the appropriate orientation of the clinician to hospital microbiology laboratories. Students are required to participate in outpatient clinics and inpatient consultations at University Hospital and Audie L Murphy V. A. Hospital and the associated clinics. Students will be responsible for the following in all assigned patients: history and physical examination, written and verbal patient presentations, interpretation of laboratory testing, participation in applicable procedures, development of differential diagnosis, assessment, and management plans. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4024. Infectious Disease - SAMMC. 4 Credit Hours.
The course will provide students the opportunity to obtain a broad experience in the management of infectious diseases. The spectrum of illness ranges from HIV infection to chronic osteomyelitis. Students are required to care for patients with primary infectious disease problems, or patients with major illnesses in whom an infectious complication has arisen, under the direction of the consultation resident, with supervision from the fellow and staff on the Infectious Disease Service. Students are required to perform appropriately focused history and physical exams, prepare written and verbal presentations, interpret laboratory data, and develop differential diagnosis and management plans on all assigned patients. Basic bacteriological techniques and specific techniques of bacteriological identification and sensitivity testing are reviewed. No late drops will be accepted. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4025. Clinical Nephrology. 4 Credit Hours.
Students are required to participate in the consultation service, outpatient clinics, conferences, acute dialysis unit, and renal biopsy program. A variety of acid-base fluid and electrolyte disorders are seen in addition to the entire spectrum of renal diseases. Student exposure to chronic dialysis and renal transplantation programs is also possible. Students perform appropriately focused history and physical exam, prepare written and verbal presentations, interpret laboratory data, and develop differential diagnosis and management plans on all assigned patients. If rotation is done as the Ambulatory Selective, the student is required to prepare a written essay based upon specific course objectives concerning systems of care. Essays must be submitted on the last day of the rotation and are required to receive a passing grade in the course. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4026. Nephrology Service - SAMMC. 4 Credit Hours.
The Nephrology Service offers students training and experience in the broad field of clinical nephrology. This consult rotation provides exposure to ambulatory and hospitalized patients with a variety of renal diseases including hypertension, glomerulonephritis, acute and chronic renal failure, exposure to problems of fluid, electrolyte, and acid-base disturbance. While on the service, students will be able to observe acute and chronic hemodialysis. Students are required to perform initial evaluations, including history and physicals, and will, under appropriate supervision, perform selected diagnostic procedures. A didactic lecture series, covering the broader topics of nephrology, is repeated on a monthly basis and the students are expected to attend. No late drops will be accepted. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4028. Renal Research. 4 Credit Hours.
Students are required to participate in ongoing research with the opportunity to learn some of the fundamental techniques of renal physiology and cell biology. Major focus of research is the role of peptide growth factors in mediating hemodynamic and metabolic events in the kidney. Independent research encouraged if student spends two or more selective periods in the laboratory. Students must meet expectations of research responsibilities based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4034. Oncology Consultation Service. 4 Credit Hours.
The students are required to participate in the clinical activities of the Medical Oncology Section of the Division of Hematology/Oncology, with experience on the consultation service at both University Hospital and the VA Hospital, plus intensive outpatient experience in the Oncology Clinics. The inpatient consultation experience provides exposure to management of complex oncology problems. The clinic experience provides exposure to a variety of clinical medical oncology problems and their management in the outpatient setting. The student is required to become familiar with all aspects of supportive care for the oncology patient. Students are required to perform appropriately focused history and physical exams, prepare written and verbal presentations, interpret laboratory data, and develop differential diagnosis and management plans on all assigned patients. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4042. Coronary Intensive Care Unit - Subinternship - UH. 4 Credit Hours.
The objective of this subinternship is to prepare students for the intense and responsible role of the intern. The subintern is an integral member of the team and are required to participate in all team activities and participate in all medical care for his/her patients, under the supervision of the Internal Medicine resident, Cardiology fellow, and Cardiology attending. The student is required to become proficient in the work-up, diagnosis, and management of patients with acute myocardial infarction, acute respiratory failure, and other commonly encountered acute crises; develop expertise at arrhythmia recognition/ therapy, principles involved with airways management/mechanical ventilation. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.
MEDI 4043. Clinical Chest Disease Consultation Service. 4 Credit Hours.
Students are required to work in the inpatient and outpatient settings, participating in clinics, inpatient consultations, and division conferences. Students are required to perform appropriately focused history and physical exams, prepare written and verbal presentations, interpret laboratory data, and develop differential diagnosis and management plans on all assigned patients. Students are required to actively participate in the work-up and management of patients with acute and chronic lung diseases seen by the Consultation Service and attend Pulmonary clinics at the VA Hospital and UHC-D. Students will be exposed to various diagnostic methods including radiographic, radionucleotide, bronchoscopy, and pleural biopsy techniques. Through active participation, the student should become proficient in interpreting commonly used pulmonary function tests and chest x-rays. Principles and methods involving respiratory therapy, antimicrobial therapy, and evaluation of common pulmonary disorders will be emphasized. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4045. Pulmonary Medicine - SAMMC. 4 Credit Hours.
Students are required to learn the recognition and treatment of acute and chronic pulmonary problems on a consult service with selection and implementation of appropriate treatment modalities. Students also are required to become familiar with pulmonary function testing to include interpretation and application of pulmonary physiology to a clinical setting. Principles of respiratory therapy will be emphasized to include the utilization of respirators and oxygen delivery systems. Clinical projects may be assigned to stress key teaching points. An active pulmonary clinic and complete pulmonary function laboratory will be available for students to gain clinical experience. No late drops will be accepted. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4046. General Medicine Ward Subinternship-UH/VA. 4 Credit Hours.
The goal of this subinternship is to prepare students for the intense and responsible role of the intern. The subintern is an integral member of the team and is required to participate in all team activities and participate in all medical care for his/her patients, under the supervision of the Internal Medicine resident, Critical care fellow and attending. Familiarization with pulmonary and hemodynamic physiology, as it applies to intensive care medicine, as well as the use and interpretation of data obtained from monitoring instruments, will be covered. No late drops will be accepted. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4047. General Medicine Ward Subinternship-SAMMC. 4 Credit Hours.
This subinternship is designed to prepare students for the intense and responsible role of the intern. The subintern is an integral member of the team and is required to participate in all team activities and participate in all medical care for her/his patients, under the supervision of the Internal Medicine resident and attending. No late drops are accepted. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4048. Medical ICU Subinternship - SAMMC. 4 Credit Hours.
The goal of this subinternship is to prepare students for the intense and responsible role of the intern. The subintern is an integral member of the team and is required to participate in all team activities and participate in all medical care for his/her patients, under the supervision of the Internal Medicine resident, Critical care fellow and attending. Familiarization with pulmonary and hemodynamic physiology, as it applies to intensive care medicine, as well as the use and interpretation of data obtained from monitoring instruments, will be covered. No late drops will be accepted. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4049. Clinical Rheumatology. 4 Credit Hours.
The differential diagnosis and treatment of rheumatic and autoimmune diseases are taught through active student participation in outpatient clinics, consultation rounds, journal clubs, and division conferences. Students are required to evaluate patients at University Hospital, Audie Murphy VA Hospital, and UHC-D. Students are required to perform appropriately focused history and physical exams, prepare written and verbal presentations, interpret laboratory data, and develop differential diagnosis and management plans on all assigned patients. Students will also have exposure to community resources for the special problems encountered by the patients in this clinic and be able to identify different types of medical delivery systems. If rotation is done as the Ambulatory Selective, the student is required to prepare a written essay based upon specific course objectives concerning systems of care. Essays must be submitted on the last day of the rotation and are required to receive a passing grade in the course. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4062. Allergy-Immunology - WHMC. 4 Credit Hours.
The student will be a member of the Allergy-Immunology Ward Consult Team, along with a staff member, first-year fellow, and usually a resident. Students are required to assist in the evaluation of the inpatient consultations, and in addition see outpatients and attend all Allergy-Immunology Service educational activities. Students are required to perform appropriately focused history and physical exam, prepare written and verbal presentations, interpret laboratory data, and develop differential diagnosis and management plan on all assigned patients. No late drops will be accepted. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.
MEDI 4066. Medical ICU Subinternship - UH/VA. 4 Credit Hours.
This subinternship is designed to prepare students for the intense and responsible role of the intern. The subintern is an integral member of the team and is required to participate in all team activities and participate in all medical care for his/her patients, under the supervision of the Internal Medicine resident, Pulmonary fellow, and Pulmonary/Critical care attending. Students are expected to participate in daily hospital rounds, morning report, Grand Rounds, Morbidity and Mortality conference, IM Housestaff conferences. The students are required to actively participate in the work-up and management of patients with critical illnesses under close supervision of the housestaff, fellows, and faculty. During this rotation, the student will be exposed to the fundamentals of ventilation support, airway management, respiratory and hemodynamic monitoring, stabilization and support of the critically ill patient. Emphasis is placed upon a system approach to patient evaluation and will include didactic sessions with critical care faculty in addition to daily rounds. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4068. Geriatric Medicine. 4 Credit Hours.
This rotation offers clinical experience in geriatric internal medicine. The student is required to participate in the Section’s outpatient clinic, academic nursing home, and didactic educational activities. The student also has the opportunity for exposure to other multidisciplinary programs in geriatric medicine, including hospital-based home care. Students are required to perform appropriately focused history and physical exams, prepare written and verbal presentations, interpret laboratory data, and develop differential diagnosis and management plans on all assigned patients. Students will also have exposure to community resources for the special problems encountered by geriatric patients and have the opportunity to learn to be able to identify different types of medical delivery systems. If the rotation is done as the Ambulatory selective, the student will be required to prepare a written essay based upon specific course objectives concerning systems of care. Essays must be submitted on the last day of the rotation and are required to receive a passing grade in the course. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4069. Research in Aging. 4 Credit Hours.
This research elective offers the opportunity to participate in ongoing basic and clinical research on aging, including basic mechanisms of aging, nutritional modification of the aging process, gerontologic aspects of hormone action and hepatic glucose metabolism, clinical geriatric issues of long-term care interventions, ethics, and health services for the elderly under the supervision of faculty in the Department of Medicine (Division of Geriatrics) and the Department of Physiology. Students must meet expectations of research responsibilities based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4074. AHEC Clinic Experience. 4 Credit Hours.
Under the auspices of the UT Health Science Center’s South Texas Program, this experience exposes students to primary care of ambulatory patients at various clinical training sites in South, East, West, and the Coastal area of Texas. The goals are to expose you to 1) primary care, 2) community-based practice, and 3) delivery of medical care to underserved/rural populations and health disparities. Please reference the link http://southtexas.uthscsa.edu for more information. The student must spend time working in the office practice of a physician who is board certified in Internal Medicine and/or one of its specialties. In addition, the student can gain experience in preventive services applicable to infectious diseases, tuberculosis, diabetes, etc., and work with health professionals to gain a broader understanding of health care needs and services depending upon the area in which he/she is working. The student will be required to prepare a written essay based upon specific course objectives concerning systems of care. Essays must be submitted on the last day of the rotation and are required to receive a passing grade in the course. Student housing expenses may be covered by the AHEC, but there will be no reimbursement for travel costs. No late drops will be accepted. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4077. EKG Interpretation. 2 Credit Hours.
This rotation is designed for students who have basic to intermediate expertise in reading ECG’s and who are motivated to enhance this expertise through independent study. Students have the opportunity to become proficient in the interpretation of ECG’s through daily self-study of electrocardiograms. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4078. HIV/AIDS Inpatient Service. 4 Credit Hours.
This elective on the HIV/AIDS Medicine Team 6 at University Hospital offers the opportunity to assume direct patient responsibility under the supervision of a resident, Infectious Disease fellow, and attending faculty. This subinternship is for persons interested in obtaining extensive teaching in HIV disease. It provides practical experience in the diagnosis and treatment of HIV complications such as PCP, CMV, toxoplasmosis, invasive fungal infections, mycobacterial disease, and oncological and neurological complications of this disease. These objectives will be obtained through a team approach to patients with HIV infection involving nurses, physicians, and other staff, and also will include a formal didactic teaching series. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.
MEDI 4079. Clinical Preceptorship in General Internal Medicine. 4 Credit Hours.
The student will join the practice of a clinical faculty member practicing general internal medicine in an internal medicine subspecialty in the local community. Activities include hospital rounds, office visits, hospital committee meetings, and an introduction to practice management. Students are required to perform appropriately focused history and physical exams, prepare written and verbal presentations, interpret laboratory data, and develop differential diagnosis and management plans on all assigned patients. Students will also have exposure to community resources for the special problems encountered by patients in the ambulatory setting, and be able to identify different types of medical delivery systems. If rotation is done as the Ambulatory Selective, the student will be required to prepare a written essay based upon specific course objectives concerning systems of care. Essays must be submitted on the last day of the rotation and are required to receive a passing grade in the course. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4086. Mindfulness in Medicine. 0.5 Credit Hours.
Mindfulness is important in one's personal life as well as professional work. It supports the physician in successfully caring for patients, connecting to colleagues and patients, and maintaining personal satisfaction. There is some evidence that mindfulness training in the professional development of physicians helps with effective decision making and reducing medical errors, increases sensitivity to feelings, improves attention and memory, decreases stress, and enhances reflective consideration in problem solving and decision making. Senior students are facing the formative transition to residency training, which is laden with new challenges and stressors such as work demands that conflict with emotional and physical availability for family and friends, an immense amount of new knowledge and skill to acquire, increased work hours in a complex health care system, and coping with death and the potential for errors in patient care. New interns are fearful of making mistakes that harm a patient and worry about their work-life balance. The goal of this course is to provide and apply skills in mindfulness for everyday practice so that learners are armed with the knowledge and techniques to improve their attention, renew their perspective during times of stress, build resiliency, and prevent errors and harm in their professional practice. Learning Objectives: By the end of this course, students should be able to: 1. Identify personal characteristics of leadership, bias, and resiliency and use this self-awareness to enhance professional relationships. 2. Integrate techniques of mindfulness into daily life to improve attention to personal well-being, reduce stress, and avoid burnout during residency training. 3. Use self-reflective writing to increase self-awareness, broaden perspectives, and cultivate empathy. 4. Apply mindfulness to clinical practice to improve patient communication, recognition of error-prone situations, and quality of medical care. Course topics include: 1) Self-awareness and Resiliency; 2) Leadership, Bias, and Collaboration; 3) Mindfulness in Patient Care: Self-care and preventing medical errors; and 4) Narrative Medicine. Learning of course topics will be accomplished with a combination of self-study educational resources and assigned readings, didactic lecture, skills workshops, writing exercises, and small group discussion. Each student will be required to complete a portfolio of reflective writing and surveys, which will be used in small group discussions. To monitor the effectiveness of the course content and teaching methods, students will complete pre- and post-course surveys. Prerequisites: Completion of all core clerkships.

MEDI 4087. Point of Care Ultrasound. 4 Credit Hours.
This elective is designed to introduce students to the use of diagnostic bedside ultrasound in the care of hospitalized medicine patients, and is paired with the Internal Medicine Residency Point of Care Ultrasound Elective. In addition to review of ultrasound physics and machine controls/transducers, students will obtain knowledge and skills in image acquisition, image interpretation and pitfalls/limitations of various cardiac, pulmonary, abdominal and vascular diagnostic ultrasound applications. Other topics include clinical integration of ultrasound skills into patients with shock, cardiac arrest, respiratory failure, and volume status abnormalities. Training will be accomplished with a combination of didactic lectures, provided self-study educational resources, image acquisition skills workshops at the Center for Clinical Ultrasound Education, supervised bedside ultrasound exams of hospitalized medicine/ICU patients and independent ultrasound scanning sessions. Each student is required to complete a portfolio of ultrasound examinations covering the scope of the course material, which will be reviewed with expert faculty on a weekly basis for quality assessment, image interpretation practice and further teaching. The elective is primarily designed for students pursuing residency with an adult inpatient focus. Students must have successfully completed Internal Medicine, Family Medicine, Surgery and Emergency Medicine clerkships before taking this elective.

MEDI 4103. Hematology for the Intern. 0.5 Credit Hours.
The Advanced Hematology course will be taught using care-based discussion. The first session will be a review of red blood cell and white blood cell abnormalities. The remainder of the sessions will focus on two to three specific cases of red blood cell or white blood cell disorders. Discussion will cover differential diagnosis, appropriate laboratory studies, clinical findings, and prognosis. Discussions will include adult and pediatric cases of various types of anemia, leukemia, myeloproliferative disorders, myelodysplastic states, plasma cell disorders, and lymphoma. The pass/fail grade will be determined by attendance and participation in group discussions.

MEDI 4114. Combined Consultation Service In Geriatrics & Palliative Medicine. 0.5 Credit Hours.
This elective didactic course will introduce the basic elements of assessing a geriatric patient or a patient in need of palliative care in the in-hospital setting.

MEDI 4115. Palliative Care. 0.5 Credit Hours.
This MS4 didactic elective will focus on the main beliefs of palliative care, which include symptom control and end-of-life care in general and in specific populations, fulfilling the following educational principles, applicable to many other areas in medicine: * Communication skills instruction for medical students * Exposure to interdisciplinary teams (IDT) * Instruction in the multicultural practice of medicine.

MEDI 4120. Interpretation of Electrocardiograms. 0.5 Credit Hours.
This course consists of eight one-hour seminar sessions with active student verbal participation. Topics will include ECG basics, axis determination, analysis of rhythms, atrial arrhythmias, ventricular arrhythmias, conduction abnormalities, hypertrophy, ischemia, infarction, and vector analysis. The course will include examples of multiple ECG tracings for discussion, which will be moderated by the course director. Students will be called upon during the sessions to help interpret ECG tracings using the knowledge gained during the course didactics. The grade is based on student participation.
MEDI 4121. Intermediate Bedside Cardiac Exam. 0.5 Credit Hours.
Course consists of 8 one hour sessions. Each session will include demonstrations of physical findings and their elucidation in patients with cardiovascular disease. Topics will include brief review of cardiac cycle, characteristics of innocent murmurs, systolic murmurs, diastolic murmurs, evaluation of arterial and venous pulsations, congestive heart failure, and self assessment. Grade based on class participation.

MEDI 4150. Tropical Medicine & International Health. 0.5 Credit Hours.
Course consists of 10 contact hours and will cover topics specifically related to health in the tropics and developing world. The course will consist of an introductory lecture and nine 1 hour small group case-based discussions. Students will prepare for the small group discussions through self-initiated study of the provided syllabus and faculty will lead the case-based discussion groups. Student grades will be determined by participation in the small group discussions (50%) and a final exam (50%).

MEDI 4151. Poverty, Health, And Disease Elective. 0.5 Credit Hours.
This elective course is offered to students who wish to gain insight into the complex interplay between poverty and health, both in the United States and in resource-limited settings around the world. The purpose of the course is to expose the students to several thought leaders and appropriate published literature, including books written to address these concepts. The course will explore the problems of inequality of access to health care and its impact on health delivery systems with examples from Guatemala, Haiti, and New Orleans. Open for Cross Enrollment on Space Available Basis.

MEDI 4153. Informatics and Advanced Evidence-Based Medicine. 0.5 Credit Hours.
The course is for students who want to master information and evidence. We will use the computer lab to learn advanced skills in: 1) retrieving information, 2) storing and filing information, 3) assessing information, and 4) keeping up with new advances. The skills will include both strategies and techniques. To pass the course, students must complete a small final project that previous students have enjoyed. In their project, they will publish on Wikipedia a short, structured summary of one article for a clinical topic. I will walk you through creating the edits. The edit can be done anonymously if the student prefers. By completing the project, the students learn the goals of the course. Credit for successful completion of the course requires active participation in class activities, a minimum of 100% attendance, and successful completion of final project.

MEDI 4155. Clinical Epidemiology for the Intern. 0.5 Credit Hours.
Clinical epidemiology -- the basic science of clinical medicine that makes predictions about individual patients based on the occurrence of clinical events in groups of similar patients and using strong scientific methods to ensure that the predictions are accurate -- is especially powerful in situations of medical uncertainty. Essential concepts and methods of clinical epidemiology are presented as they pertain to obtaining answers to clinical questions and guiding clinical decision-making with the best available evidence. A case-based approach is used to illustrate the relevance of clinical epidemiological approaches to decision-making about the care of individual patients. Learning activities incorporate both didactic, small-group problem solving approaches, and procedure skills (e.g., central venous line placement, incision and drainage of abscesses, lumbar puncture, and thoracentesis). Credit for successful completion of the course will be based on attendance.

MEDI 4170. Internal Medicine Internship Readiness Elective. 4 Credit Hours.
This rotation (Internal Medicine Boot Camp) is a 4-week elective restricted to students who will begin a categorical internal medicine residency in July of that same academic year. The purpose of the course is to present the diagnosis and management of common medicine topics that an IM intern can expect to encounter during residency, enhance differential diagnosis skills of common chief complaints seen on a medicine service, and develop procedural skills and patient evaluation skills. Students are expected to attend all scheduled conferences and interactive laboratory and clinical sessions focused on procedural skills and clinical assessment of standardized patients. Clinical skills labs will include heart sounds using Harvey manikin, intubation, mechanical ventilation, PFT, joint aspiration and placement of central lines. Students will receive training in BLS and ACLS and can receive certification if all classes are attended and performance is satisfactory. Students are required to give an oral presentation on a medicine topic/clinical question. Students must meet expectations of clinical performance and professional behavior based on School of Medicine evaluation for fourth year students to "pass" course.

MEDI 4208. Compassionate Care for the Seriously Ill Longitudinal Elective. 2 Credit Hours.
This rotation offers exposure to the aging and seriously ill population through a longitudinal service-learning elective providing community service engagement through the "No one dies alone" volunteer program (NODA) at University Health System (UHS) and South Veterans Health Care System (STVHCS). Course participants will provide volunteer-role compassionate care to hospitalized aging and seriously ill patients in need through the NODA program; complete on-line learning modules to improve knowledge of the aging and seriously ill patient population; participate in debriefing sessions to integrate volunteer experience with course learning.

MEDI 4450. Compassionate Care for the Seriously Ill Longitudinal Elective. 2 Credit Hours.
This rotation offers exposure to the aging and seriously ill population through a longitudinal service-learning elective providing community service engagement through the "No one dies alone" volunteer program (NODA) at University Health System (UHS) and South Veterans Health Care System (STVHCS). Course participants will provide volunteer-role compassionate care to hospitalized aging and seriously ill patients in need through the NODA program; complete on-line learning modules to improve knowledge of the aging and seriously ill patient population; participate in debriefing sessions to integrate volunteer experience with course learning.

MEDI 7000. Off Campus. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty member prior to the beginning of the rotation (at least one week before the course begins). Credit will not be given for any rotation that has not been approved in advance. Required paperwork includes: "Course Approval" form, a written letter or email for acceptance form the physician preceptor with the start and end dates of the course/rotation, and a course description of your learning objectives and responsibilities during the rotation. Forms must include a complete address and telephone number for the off campus location or residence address for the student while at the off campus site. Forms will not be approved after the rotation has already begun. Contact the department for assistance with enrolling in this course.
MICR 5029. Building Scientific Thinking Skills. 2 Credit Hours.
The goal of this course is to provide the opportunity for graduate students to develop critical thinking skills in reading scientific literature, developing/critiquing scientific ideas and grant proposals and effectively communicating one's own scientific ideas with peers. The courses will be offered in three consecutive stages. First, each student will be assigned/encouraged to read articles focusing on a topic in the areas of Microbiology and Immunology and give a 50 minute review presentation on the topic to the class followed by questions/critiques from fellow students and faculty members. Second, each student is guided to develop a mini-proposal on a chosen topic followed by written critiques from fellow students and faculty members. Finally, each student is arranged to give an oral defense of his or her written proposal to the class followed by questions from fellow students and faculty members. Since the proposal writing and defense portions mimic the process involved in M&I track qualification examination, this course will not only have a long lasting impact on the students' scientific skill development, but also help prepare the students for the immediate qualification examination.

MICR 5030. Microbiology And Immunology Track Journal Clubs. 0.5 Credit Hours.
The MI track students, together with faculty members and other researchers, will meet once a week to discuss articles on life science with an emphasis on the Microbiology and Immunology disciplines. At each meeting, an individual will present one or several papers, or a review and related materials. The presentation will be followed by questions and discussions involving everyone present at the meeting. Each meeting is scheduled for one hour.

MICR 5031. Pathogenic Microbiology. 3 Credit Hours.
This lecture-only course integrates different disciplines (immunology, cell biology, genetics, biochemistry, molecular biology, physiology, and medical microbiology) with a central theme focused on molecular mechanisms of microbial pathogenesis in humans. Recommended prerequisites for this course are Biochemistry and Molecular Biology.

MICR 5035. Emerging Trends in Immunology and Infection. 2 Credit Hours.
An intense and advanced exploration of the primary literature focusing on the latest emerging trends in immunological research. The format will allow students to develop skills of in depth critical analysis and will involve a combination of student presentations of current data and discussions of the historical development and evolution of new directions in immunological research.

MICR 5051. Intro To Immunology. 2 Credit Hours.
This course is a study of immune responses with emphasis on experimental strategies for elucidating cellular and molecular mechanisms. Three phases of study: (1) immunoochemistry and molecular biology of antibodies, lymphocyte receptors, and products of the major histocompatibility complex; (2) cellular interactions and immune-regulation; and (3) immunopathologies (hypersensitivity, autoimmunity, immunodeficiency, transplantation rejection, and tumor immunology). Prerequisites: consent of instructor, courses in General Biology and Genetics recommended.

MICR 5052. Virology. 1 Credit Hour.
This course focuses on the molecular and cellular biology of animal viruses, and their interactions with host cells. Many of the viruses to be covered in this course are medically significant or have provided critical information that has expanded our understanding of cell biology, immunology, development, and differentiation.
MICR 5095. Current Topics in Immunobiology and Host-microbe Interactions. 1 Credit Hour.
This course is designed to enhance and expand on the existing Acquiring Presentation Skills (APS) course (MICR 5090) that is required of all graduate students in the Infection, Inflammation, & Immunity discipline of the IBMS Graduate Program, and the Ph.D. students of the Microbiology & Immunology Graduate Program. Although the APS course allows students to gain experience with regard to making formal lecture presentations of their research, it is limited in that students present their work only once a year, the opportunity for full discussion is limited by the time available after presentations, and being a course in which participants are exclusively students, there are no opportunities to observe examples of how skilled seasoned investigators (i.e., faculty and postdoctoral fellows) present their work. In the currently proposed course, graduate students will not only have more frequent opportunities to present their own research and receive vital feedback and critiques, but will also hear and critique presentations by more senior investigators regarding projects performed in labs throughout the Department of Microbiology & Immunology.

MICR 6022. Advanced Microbial Physiology. 2 Credit Hours.
This course consists of readings and conferences. The course includes current concepts and experimental studies in microbial structure-function relationships and regulatory mechanisms. Prerequisites: consent of instructor.

MICR 6024. Advanced Microbial Genetics. 1-4 Credit Hours.
This course consists of lectures and conferences. This course is an in-depth study of selected areas of microbial genetics, and presentation and discussion of current literature in these areas. Prerequisites: Consent of instructor.

MICR 6026. Advanced Molecular Genetics Of Eukaryotic Pathogens. 2 Credit Hours.
This course will cover the major research methods and techniques used to study human fungal pathogens.

MICR 6043. Advanced Topics In Virology. 2 Credit Hours.
This course is an in-depth study of selected topics in animal virology at the molecular level. Prerequisites: consent of instructor.

MICR 6050. Advanced Topics In Tumor Immunology. 1 Credit Hour.
This course provides an opportunity for students to gain a solid foundation in modern tumor immunology. Topics include tumor antigens, autoimmunity, mechanisms of killing, dysregulation of inflammation, and counter measures mediated by tumor to thwart or subvert host immunity.

MICR 6052. Advanced Immunobiology. 3 Credit Hours.
This course consists of lectures only. This course is an in-depth study of the immune system and how it is regulated, including presentation and discussion of current literature in these areas. Prerequisites: MICR 5051 or consent of instructor.

MICR 6071. Supervised Teaching. 1-9 Credit Hours.
This course consists of teaching under the close supervision of instructors as laboratory assistants and as leaders in tutorial or review sessions. The more advanced students may present formal lectures in the classroom or lead discussions in the laboratory. Prerequisites: consent of chair or department.

MICR 6091. Seminars In Microbiology & Immunology. 1 Credit Hour.
Presentations and discussions of recent advances in various areas of Microbiology & Immunology. Invited speakers may be from inside or outside the HSC. Each graduate student in the M&I Track is expected to register for this course each fall and each spring semester for as long as the student is enrolled in graduate school.

MICR 6097. Research. 1-12 Credit Hours.
This course consists of independent, original research under the direction of faculty advisor. May be conducted in bacteriology, virology, mycology, parasitology, and immunology.

MICR 6098. Thesis. 1-12 Credit Hours.
Registration for at least one term is required of M.S. candidates. Admission to candidacy for the Master of Science degree is required.

MICR 7099. Dissertation. 1-12 Credit Hours.
Registration for at least two terms is required of Ph.D. candidates. In addition, Ph.D. candidates may be required to complete a course in Biostatistics. Prerequisites: Admission to candidacy for the Doctor of Philosophy degree.

Molecular Medicine (MMED)

Courses

MMED 5001. Advances in Personalized Medicine. 2 Credit Hours.
This course is designed to integrate the fundamental principles of cell and molecular biology with modern practices in personalized medicine. The topics will include understanding the molecular mechanisms of human disease, strategies for patient therapy and drug design, and translational strategies for personalized patient care. The course will combine presentations from nationally and internationally renowned speakers in Personalized Molecular Medicine as well as team-based learning approaches to design the next steps in research to advance studies in specific areas of personalized medicine.

MMED 5015. Modern Methods in Molecular Analysis. 2 Credit Hours.
Modern Methods in Molecular Analysis, (MMED 5015), Fall Semester Only - This course is designed to introduce students to the basic experimental techniques used in the study of cell biology, biochemistry, molecular biology, protein analysis, genomics, and personalized molecular medicine. This course will include didactic lectures as well as laboratory demonstrations and group learning activities.
MMED 5016. Fundamentals Of Biostatistics. 1 Credit Hour.
Fundamentals of modern biostatistics with special emphasis on proper
design of experiments, critical analysis of data and their presentation
will be offered. Particularly, modern biostatistical techniques required
to solve the practical problems in bioinformatics will be discussed. A
refresher of very basic concepts in statistics will be given; however,
the course will be devoted to contemporary statistical analysis of data
including hypothesis construction and testing, model validation, and
data association. The course will include short lectures describing
particular statistical problems faced by researchers in molecular biology,
approaches to solve them and interpretation of the results of statistical
analysis. Extensive practical training using popular statistical software
packages will follow each lecture.

MMED 5017. Practical Bioinformatics for Molecular Biologists. 3 Credit Hours.
An introduction to bioinformatics through computer laboratory exercises
designed to have students familiar with quantitative multi-dimensional
data analysis methods. Problem areas such as sequence analysis,
molecular evolution, gene regulation, and pathway construction and
analysis will be approached from a practical viewpoint. Comparative
genomics and functional genomics will also be covered. The required
biostatistics background required for implementation will also be
reviewed as part of this course. A combination of survey lectures on
broader topics and focused computer exercises covering specific
methodologies will be used.

MMED 5019. Graduate Colloquium in Molecular Medicine. 1.5 Credit Hour.
A course designed to provide graduate students with experience in
critical reading of the primary literature, seminar preparation and
presentation, data analysis and interpretation, and team-based learning
as they relate to Personalized Molecular Medicine.

MMED 5020. Research Practicum. 1.5-5.5 Credit Hours.
Independent research experiences under the direction of a faculty advisor
for students who choose the Course-Based Plan of Study for the Master
of Science in Personalized Molecular Medicine Program. Research
experiences include training in metabolomics, flow cytometry/FACS
analysis, single cell analysis, molecular and cell biology approaches,
systems approaches, computational biology, or drug design depending
on the interests of the student. Research experiences also include
directed research projects in research laboratories involving experimental
design, data collection, data analysis, statistical analyses, and data
presentation. During the Research Practicum, students will learn about
the underlying principles of a particular method and how to apply this
method to address a specific scientific aim. Students may participate in
conducting mini-projects to gain first-hand experiences within a given
topic. A written Practicum Report will be generated by the student
at the end of each semester of Research Practicum culminating in an oral
presentation by the student highlighting the key findings.

MMED 6016. Advanced Molecular, Cellular, and Synthetic Biology. 4 Credit Hours.
Advanced Molecular, Cellular, and Synthetic Biology. (MMED 6016), Fall
Semester Only- This foundational course is a study of the organization
and function of the genome at the molecular level. The topics include:
gene structure, transcriptional control, RNA structure and processing,
translation, genome replication and repair, the regulation of cell division,
signal transduction, hormone regulation, epigenetic regulation, the
molecular biology of tumors, and the regulation of proteins. Also included
will be the use of CRISPR-Cas and other synthetic biological methods
used in research and clinical applications (Science 2015 349, 1564). This
is an advanced course intended to introduce the student to the important
molecules involved in the life processes of the cell. Their structure,
function, localization, and interactions will be the focus of study. The
students will also be introduced to the implications that these molecular
events have in human health and disease and how research of these
molecular events can form the foundation of personalized molecular
medicine approaches.

MMED 6017. Cell Responses To DNA Damage. 1 Credit Hour.
This advanced course will cover recent advancements in the molecular
and cellular aspects of cellular responses to DNA damage. Topics include
new insights into DNA repair mechanisms, interactions between DNA
repair and tumor suppressor genes, and DNA damage-activated cell cycle
checkpoints.

MMED 6018. Journal Club and Research Presentation in Molecular
Medicine. 1 Credit Hour.
A course designed to provide graduate students with experience in
critical reading of the primary literature, seminar preparation and
presentation, data analysis and interpretation, and team-based learning
as they relate to Personalized Molecular Medicine.

MMED 6071. Supervised Teaching. 1-9 Credit Hours.
This course consists of teaching under the close supervision of instructors
in Advanced Molecular Biology and Modern Methods in
Cellular and Molecular Biology as laboratory assistants, review session,
and tutorial leaders. Assistants may be called upon to present formal
lectures.

MMED 6091. Seminars in Molecular Medicine. 1.5 Credit Hour.
This course includes presentations from nationally and internationally
renowned speakers in Molecular Medicine. This course will share with
students the most up-to-date research discoveries in Molecular Medicine.
Additionally, this course will include a unique annual mini-symposium in
which leaders from biotechnology and pharmaceutical companies will
speak to students about jobs, patents, entrepreneurial endeavors, clinical
trials, drug discovery, and integrating academics with business.

MMED 6097. Research. 1-12 Credit Hours.
Independent research under the direction of a faculty mentor for students
who choose the Thesis-Based Plan of Study for the Master of Science
in Personalized Molecular Medicine Program and also for the Ph.D.
students in the Molecular Medicine Graduate Program. Independent
research experiences will be determined by the faculty mentors along
with the student. Students will conduct research projects to gain first-
hand experiences within a given topic. (Variable SCH 1-12).
MMED 6098. Thesis. 1 Credit Hour.
Independent research under the direction of a faculty mentor for students who choose the Thesis-Based Plan of Study for the Master of Science in Personalized Molecular Medicine Program. Independent research experiences will be determined by the faculty mentors along with the student. Students will conduct research projects to gain first-hand experiences within a given topic. Write a Master’s Thesis, culminating in an oral Thesis Defense by the student highlighting the key research findings.

MMED 7099. Dissertation. 1-12 Credit Hours.
This course consists of research under the supervision of a mentor to complete the requirements for a Ph.D. degree. Registration for at least two terms is required of Ph.D. candidates.

**Neurology (NEUR)**

**Courses**

**NEUR 3005. Neurology Clerkship. 4 Credit Hours.**
This core clerkship is designed to give the student experience in evaluation of patients with neurologic disorders an opportunity to master the neurological exam in inpatient ward and consultation settings, as well as outpatient settings. The student will be expected to participate in the complete care of assigned General Neurology Ward patients and patients on the Stroke Specialty Wards. Students will also participate in Neurology consult rounds and have an opportunity to see consult patients. They will be assigned to either the University Hospital or VA Neurology wards/consult services for two weeks of the rotation. They will spend one week of the rotation of the Stroke wards service and participate in stroke specialty clinics during that week. One week of the rotation will be devoted to participating in a variety of general neurology and specialty clinics. Students are required to perform appropriately focused history and physical exams, prepare written and verbal presentations, interpret laboratory data and develop a differential diagnosis and management plan on all assigned patients. Students will also attend neurology morning report, the MS3 Neurology Lecture Series, selected Neurology Residency Lecture Series topics and Neurology grand Rounds. Students will receive a clinical performance evaluation by the supervising attending and residents using the SOM 3rd year medical student evaluation form.

**NEUR 4002. David Sherman Academy of Teaching Neurology. 2 Credit Hours.**
A longitudinal medical student elective, David Sherman Academy of Teaching Neurology, provides the foundation for learning the principles of practical clinical teaching techniques and the opportunity to create a Neurologic educational product. Teaching is a skill and this class provides students with formal training to help them excel as effective clinical teachers. The elective is longitudinal and provides 2 elective credits. There are three major objectives of this elective: (1) To gain mentored teaching experience in a variety of settings through completion of at least 10 sessions over the course of the year; (2) To complete an educational product of the student’s choice that may be incorporated into the future Neurology curriculum. This product may also meet criteria for the MD in Education Distinction (see below), but this is not a requirement; (3) To complete the Distinction in Medical Education Course topics through attending the presentations and/or online video and readings. A clinical teaching didactic will be completed through http://www.med-ed.virginia.edu/courses/resasteachers/home.cfm. The student may choose to pursue the MD Distinction in Medical Education using the project designed for this elective if they also meet the following requirements: 1) Develop a measurement tool to assess the effectiveness of the educational project; 2) Submit the project for publication; 3) Display the project on a poster presentation; 4) Give a capstone presentation and reflective summary to the DIME Committee and advisors. Students completing DIME will receive project feedback and support from the DIME Committee for the development of their project. The student will also have an advisory committee with up to three people. Students who wish to achieve the distinction will need to apply by December 1st of the fourth year. After the committee reviews all projects and capstone presentations are complete, they will determine the students who have achieved distinction.

**NEUR 4029. Neurology Consultation Service. 4 Credit Hours.**
Students are required to perform neurological consultations both at the University Hospital and Audie L. Murphy VA Hospital. One student will be assigned to each hospital service. Attending rounds with the staff neurologist will be made daily Monday-Friday. Weekend rounds will be at the discretion to the supervising attending. Students are required to perform appropriately focused history and physical exam, prepare written and verbal presentations, interpret laboratory data, and develop differential diagnosis and management plans on all assigned patients. Students will also attend neurology morning report, neuropathology conference, neuroradiology conference, and grand rounds. Students will receive a clinical performance evaluation by the supervising attending and resident. If rotation is done as the Ambulatory Selective, the student is required to prepare a written essay based upon specific course objectives concerning systems of care. Essays must be submitted on the last day of the rotation and is required to receive a passing grade in the course. Rotation must be four consecutive weeks if done as an Ambulatory selective.
NEUR 4030. Neurology Subinternship - University Hospital & Audie Murphy VA. 4 Credit Hours.
The objective of this sub internship is to prepare students for the intense and responsible role of the intern. The sub intern is an integral member of the team and is required to participate in all team activities and participate in all medical care for her/his patients, under the supervision of the Neurology resident and attending. The student’s clinical performance will be evaluated by the supervising attending and resident. The student will function as a sub-intern under the direct supervision of the Neurology resident. Considerable responsibility in the management of neurologic patients is provided on the inpatient ward services at the University Hospital and Audie L. Murphy VA Hospital. The student will work at least one weekend day and will participate in night call. The student will also spend one day each week in the adult Neurology Clinic evaluating patients with chronic neurologic problems. Attendance at daily rounds, consultation rounds, and formal conferences is expected. Students will also participate in Friday morning Neurology Grand Rounds.

NEUR 4032. Research in Neurology. 4 Credit Hours.
Several clinical and basic research projects, especially in the area of cerebral vascular disease, are being conducted in the Department of Neurology. Students may elect to work with the neurology faculty on one of these projects. This elective can be repeated depending upon the duration required for the research project. Student will receive a performance evaluation from the supervising faculty member. Discuss and arrange project through the department.

NEUR 7000. Away Rotation in Neurology. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty member prior to the beginning of the rotation (at least one week before the course begins). Credit will not be given for any rotation that has not been approved in advance. Required paperwork includes: “Course Approval” form, a written letter or email of acceptance from the physical preceptor with the start and end dates of the course/rotation, and a course description of your learning objectives and responsibilities during the rotation. Forms must include a complete address and telephone number for the off campus location or residence address for the student while at the off campus site. Forms will not be approved after the rotation has already begun.

Neurosurgery (NRSR)

Courses

NRSR 4035. Neurocritical Care. 4 Credit Hours.
The goal of this elective is to give students exposure to the specialty of neurocritical care. Students will act in the role of intern, taking responsibility for a minimum of 2-3 patients. They will gain knowledge in the multi-system aspect of critical care along with the unique aspects relating to patients with central nervous system disorders/injury. Students will have ample opportunity for procedures including: arterial line placement, central line placement, intubation, bronchoscopy. They will also learn about ICP 4monitors, EEG and neuroradiology. Students will be supervised by interns and neurocritical care faculty.

NRSR 7000. Off Campus Rotation In Neurosurgery. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty member prior to the beginning of the rotation (at least one week before the course begins). Credit will not be given for any rotation that has not been approved in advance. Required paperwork includes: “Course Approval” form, a written letter or email for acceptance form the physician preceptor with the start and end dates of the course/rotation, and a course description of your learning objectives and responsibilities during the rotation. Forms must include a complete address and telephone number for the off campus location or residence address for the student while at the off campus site. Forms will not be approved after the rotation has already begun. Contact the Department of Neurosurgery for assistance with enrolling in this course.

Nursing (NURS)

Courses

NURS 3110. Health Assessment: Clinical Application. 1 Credit Hour.
This course provides an opportunity for application of health assessment theory and skills in a simulated practice setting with emphasis on the adult and geriatric populations. Credit Hours: 1 semester hour (1 hour clinical skills laboratory). Corequisite: NURS 3204. Prerequisite: Admission to the Traditional B.S.N. track is required.

NURS 3204. Health Assessment: Theoretical Foundations. 2 Credit Hours.
This course focuses on the theory and practice of health assessment of individuals and families across the lifespan with emphasis on the adult and geriatric populations. Admission to the traditional undergraduate track is required. Corequisites: NURS 3110.

NURS 3205. Psychiatric and Mental Health: Theoretical Foundations. 2 Credit Hours.
This course focuses on the promotion, maintenance, and restoration of mental health across the lifespan with an emphasis on professional relationships, therapeutic communication, and the understanding of psychopathology. Success completion of semester 5 is required. Clock hours: 2 semester hours (2 hours theory). Corequisites: NURS 3206.

NURS 3206. Psychiatric and Mental Health Nursing: Clinical Application. 2 Credit Hours.
This course provides the opportunity for clinical experience for nursing intervention development for promoting, maintaining, and restoring mental health across the lifespan integrating principles of professional relationships, therapeutic communication, and concepts of psychopathology. Clock hours: 2 semester hours (2 hours clinical). Corequisites: NURS 3205.
NURS 3207. Care Of Childbearing Families: Theoretical Foundations. 2 Credit Hours.
This course addresses holistic care of women and their families during the childbearing years with emphasis on health promotion and risk reduction. Successful completion of semester 5 is required. Clock hours: 2 semester hours (2 hours theory). Prerequisites: Successful completion of 5th semester. Corequisites: NURS 3208.

NURS 3208. Care Of Childbearing Families: Clinical Application. 2 Credit Hours.
This course provides opportunity for clinical application of holistic care of women and their families during the childbearing years with emphasis on health promotion and risk reduction. Clock hours: 2 semester hours (2 hours clinical) Corequisites: NURS 3207.

NURS 3270. Professional Socialization 2. 2 Credit Hours.
This course addresses professional values, ethical and legal foundations, principles of social justice, history of nursing, and the roles of the 21st Century nurse with an emphasis on safety and quality. Credit Hour Allocation: 2 semester hours (2 hours theory). Prerequisite: Admission to the Accelerated B.S.N. track is required.

NURS 3272. Health Assessment and Promotion: Theoretical Foundations. 2 Credit Hours.
This course focuses on the theory and practice of health assessment of individuals and families across the lifespan. Admission to the Accelerated Undergraduate Program is required. Credit Hour Allocation: 2 semester hours (2 hours theory). Corequisites: NURS 3273. Prerequisites: Admission to the Accelerated B.S.N. track is required.

NURS 3273. Health Assessment and Promotion: Clinical Application. 2 Credit Hours.
This course provides an opportunity for application of health assessment theory and development of skills in a simulated practice setting. 2 semester hours (2 hours clinical skills laboratory). Corequisite: NURS 3272. Prerequisite: Admission to the Accelerated B.S.N. track is required.

NURS 3274. Psychiatric and Mental Health Nursing: Theoretical Foundations. 2 Credit Hours.
This course focuses on the promotion, maintenance, and restoration of mental health across the lifespan with an emphasis on professional relationships, therapeutic communication, and the understanding of psychopathology. Credit Hour Allocation: 2 semester hours (2 hours theory). Successful completion of Semester 5 is required.

NURS 3275. Psychiatric and Mental Health Nursing: Clinical Application. 2 Credit Hours.
This course provides clinical experience for nursing intervention development for promoting, maintaining, and restoring mental health across the lifespan integrating principles of professional relationships, therapeutic communication, and concepts of psychopathology. Credit Hour Allocation: 2 semester hours (2 hours theory). Corequisites: NURS 3274.

NURS 3303. Concepts of Professional Nursing. 3 Credit Hours.
This course addresses professional role development integrating concepts of multidimensional care and skills of inquiry and analysis to inform clinical decision making, professional judgement, and lifelong learning. Prerequisite: Admission to the Traditional B.S.N. track is required.

NURS 3304. Pharmacotherapeutics. 3 Credit Hours.
This course provides the foundation for safe, effective drug therapy and the role of the nurse in health promotion, disease prevention, and management. Successful completion of semester 5 is required.

NURS 3305. Foundations of Clinical Nursing Practice: Clinical Application. 3 Credit Hours.
This course provides practice experience for clinical decision making and interventions with individuals, including a special focus on the older adult, in diverse settings using a patient centered, holistic, caring framework. Corequisites: NURS 3330. Prerequisite: Admission to the Traditional B.S.N. track is required.

NURS 3309. Pathophysiology. 3 Credit Hours.
This course focuses on concepts of pathophysiology essential to understanding the diseases and disabling conditions that can affect the body systems across the lifespan. Clock hours: 3 semester hours (3 hours theory). Prerequisite: Admission to the Traditional B.S.N. track is required.

NURS 3314. Pathophysiology (Alternate Entry). 3 Credit Hours.
This course focuses on concepts of pathophysiology essential to understanding the diseases and disabling conditions that can affect the body systems across the lifespan. Admission to the Graduate Nursing Alternate Entry Program is required to take this course.

NURS 3321. Transitions In Professional Nursing (Alternate Entry). 3 Credit Hours.
This course addresses continuing professional role development for Registered Nurses who are returning to school to prepare for advanced generalist roles as Clinical Nurse Leaders or Administrative Managers at the graduate level. The focus is on integrating multidimensional care, skills of inquiry and analysis, and a broadened focus on individuals, families, and populations to inform clinical reasoning in changing health care environments. Admission to the Graduate Nursing Alternate Entry MSN Program is required to enroll in this course.

NURS 3330. Foundations of Clinical Nursing Practice -Theoretical Foundations. 3 Credit Hours.
This course provides a scientific foundation for clinical practice with individuals in diverse settings using a concept-based, patient-centered, holistic framework. Prerequisite: Admission to the Traditional or Accelerated B.S.N. track is required.

NURS 3365. Pharmacology. 3 Credit Hours.
This course provides the foundation for safe, effective drug therapy and the role of the nurse in health promotion, disease prevention, and management. Successful completion of semester 5 is required.

NURS 3370. Pathophysiology. 3 Credit Hours.
This course focuses on concepts of pathophysiology essential to understanding the diseases and disabling conditions that can affect the body systems across the lifespan. Prerequisite: Admission to the Accelerated B.S.N. track is required.

NURS 3371. Foundations of Nursing Care: Clinical Applications. 3 Credit Hours.
In this course the student will have the opportunity to develop foundational clinical competencies for providing safe, quality patient care in a clinical setting. Credit Hour Allocation: 3 semester hours (3 hours clinical). Corequisites: NURS 3330. Prerequisite: Admission to the Accelerated B.S.N. track is required.

NURS 3372. Family Nursing Care: Theoretical Foundations. 3 Credit Hours.
This course focuses on the care of families across the lifespan with emphasis on childbearing and childrearing families and their roles, functions, and dynamics with regard to health promotion and risk reduction. Successful completion of Semester 5.
NURS 3373. Family Nursing Care: Clinical Applications. 3 Credit Hours.
This course provides the opportunity for clinical application of nursing care for families across the lifespan with emphasis on childbearing and childrearing families and their roles, functions, and dynamics with regard to health promotion and risk reduction. Credit Hour Allocation: 3 semester hours (3 hours clinical). Prerequisites: NURS 3171. Corequisites: NURS 3372.

NURS 3374. Research and Evidence-Based Practice. 3 Credit Hours.
This course integrates concepts from research and information management that apply to the generation, appraisal, use, and dissemination of evidence that informs safe, quality nursing practice. Credit Hour Allocation: 3 semester hours (3 hours theory). Successful completion of semester 5.

NURS 3375. Research And Evidence Based Practice. 3 Credit Hours.
This course addresses the role of research in professional nursing practice including conduct of research, research sources utilization and dissemination, and principles and models of evidence-based practice. Successful completion of semester 5.

NURS 4210. Child and Family Health: Theoretical Foundations. 2 Credit Hours.
This course addresses holistic care of children and families with emphasis on health promotion, disease management, and injury prevention through therapeutic nursing assessment and intervention across environments. Credit Hour Allocation: 2 semester hours (2 hours theory). Successful completion of semester 6 is required.

NURS 4211. Child and Family Health: Clinical Application. 2 Credit Hours.
This course addresses holistic care of children and families with emphasis on health promotion, disease management, and injury prevention through therapeutic nursing assessment and intervention across environments. Credit Hour Allocation: 2 semester hours (2 hours clinical) Prerequisites: NURS 4210 Corequisites: NURS 4210.

NURS 4217. Population Focused Health: Clinical Application. 2 Credit Hours.
This course provides experience for application of population focused health promotion and disease and injury prevention based on determinants of local, national, and global health including lifestyle, environmental, cultural, and genetic factors. Credit Hour Allocation: 2 semester hours (2 hours clinical) Corequisites: NURS 4171.

NURS 4227. Population Focused Health: Clinical Applications. 2 Credit Hours.
This course provides clinical experience for application of population focused health promotion, and disease and injury prevention based on determinants of local, national, and global health including lifestyle, environment, cultural, and genetic factors. Credit Hour Allocation: 2 semester hours (2 hours clinical) Corequisites: NURS 4227.

NURS 4311. Care Of The Adult 1: Theoretical Foundations. 3 Credit Hours.
This course focuses on theoretical principles regarding holistic care of the adult experiencing chronic health problems within diverse settings. Credit Hour Allocation: 3 semester hours (3 hours theory). Prerequisites: Completion of Semester 6. Corequisite: NURS 4314.

NURS 4314. Care Of The Adult 1: Clinical Application. 3 Credit Hours.
This course provides opportunity for clinical application regarding holistic care of the adult experiencing chronic health alterations. Successful Completion of Semester 6. Credit Hour Allocation: 3 semester hours (3 hours clinical). Prerequisites: NURS 4311. Corequisites: NURS 4311.

NURS 4315. Care Of The Adult 2: Theoretical Foundations. 3 Credit Hours.
This course addresses holistic care of the acutely and critically ill adult experiencing complex health alterations while in acute care settings. Credit Hour Allocation: 3 semester hours (3 hours theory). Prerequisites: NURS 4311 and NURS 4314.

NURS 4316. Care Of The Adult 2: Clinical Application. 3 Credit Hours.
This course provides clinical experience for holistic patient-centered care of the acutely and critically ill adult experiencing complex health alterations within acute care settings. Credit Hour Allocation: 3 semester hours (3 hours clinical) Corequisites: NURS 4315.

NURS 4317. Population Focused Health: Theoretical Foundations. 3 Credit Hours.
This course addresses population focused health promotion and disease and injury prevention based on determinants of local, national, and global health including lifestyle, environmental, cultural, and genetic factors. Credit Hour Allocation: 3 semester hours (3 hours theory). Successful completion of semester 7.

NURS 4319. Leadership and Management: Theoretical Foundations. 3 Credit Hours.
This course presents theoretical principles of nursing leadership and management in diverse settings to promote quality patient outcomes. Credit Hour Allocation: 3 semester hours (3 hours theory). Successful completion of semester 7 is required.

NURS 4320. Leadership and Management: Clinical Application. 3 Credit Hours.
This course provides opportunity for clinical application of nursing leadership and management in diverse settings to promote quality patient outcomes. Credit Hour Allocation: 3 semester hours (3 hours clinical). Corequisites: NURS 4319.

NURS 4327. Population Focused Health: Theoretical Foundations. 3 Credit Hours.
This course addresses population focused health promotion, and disease and injury prevention based on determinants of local, national, and global health including lifestyle, environmental, cultural and genetic factors. Successful completion of semester 7 is required.

NURS 4329. Leadership and Management: Theoretical Foundations. 3 Credit Hours.
This course presents theoretical principles of nursing leadership and management in diverse settings to promote quality patient outcomes. Credit Hour Allocation: 3 semester hours (3 hours theory). Successful completion of Semester 7 is required.
NURS 4333. Nursing Leadership: Theoretical Foundations. 3 Credit Hours.
This course presents theoretical principles of nursing leadership and management in diverse settings to promote quality patient outcomes. Clock Hours: 3 semester hours (3 hours theory). Prerequisites: NURS 3272 and NURS 3273.

NURS 4403. Disease Management 3: Clinical Application. 5 Credit Hours.
This course is the clinical component for Disease Management 1: Theoretical Foundations and Disease Management II: Theoretical Foundations that focuses on the nursing care and decision making related to multiple disease concepts across the lifespan. (4 hrs Clinical) Prerequisites: NURS 4501, NURS 4502.

NURS 4420. Transition To Professional Nursing Practice: Clinical Immersion. 4 Credit Hours.
This course is a clinical immersion experience designed to provide comprehensive learning opportunities that promote integration of baccalaureate learning outcomes to prepare the graduate for professional nursing practice. Completion of all Traditional B.S.N. track courses is required.

NURS 4423. Clinical Immersion. 4 Credit Hours.
This course facilitates the transition of the student into professional practice through preceptorship by Registered Nurses in a variety of settings. Credit Hour Allocation: 4 semester hours (4 hours clinical). Completion of all Accelerated B.S.N. track courses is required.

NURS 4501. Disease Management 1: Theoretical Foundations. 5 Credit Hours.
This course emphasizes nursing care and decision making regarding patients across the lifespan experiencing alterations in metabolism, circulation, oxygenation, elimination, immunology/inflammation, and sexuality. Successful completion of semester 6 is required. (5 hrs Theory).

NURS 4502. Disease Management 2: Theoretical Foundations. 5 Credit Hours.
This course emphasizes nursing care and decision making regarding patients across the lifespan experiencing alterations in coordination and control, cellular differentiation, cognitive/sensory, fluid and electrolytes, sepsis, and trauma. (5 hrs Theory) Prerequisites: NURS 4501.

NURS 4533. Disease Management III-Clinical Application. 5 Credit Hours.
This course is the clinical component for Disease Management I: Theoretical Foundations and Disease Management II: Theoretical Foundations that focuses on the nursing care and decision making related to multiple disease concepts across the lifespan. Concurrent or successful completion of NURS 4501 Disease Management I: Theoretical Foundations and NURS 4502 Disease Management II: Theoretical Foundations. Corequisites: NURS 4501, NURS 4502.

NURS 4420. Transition To Professional Nursing Practice: Clinical Immersion. 4 Credit Hours.
This course is one of a series of graduate level courses that provides the nursing management and leadership foundation necessary to create safe, healthy, professional environments that empower interdisciplinary health care teams to engage patients and deliver optimal patient and system outcomes. Integration of internal and external forces impacting complex adaptive healthcare systems sets the context for a focus on human resource management at a clinical unit, clinic, department and service level as well as building capacity for event response. Big data analysis, trending, and benchmarking complement best practices in human resourcing and employment law to manage current human and relational resources. Additional focus includes the role of strategic staff development in anticipation of market dynamics, quality and service demands, technology, artificial intelligence and advances in science; including genomics and epigenetics. Students emerge with the capacity to leverage complex internal and external system dynamics, evidence, and information in order to establish healthy work environments and to manage and lead healthcare teams that deliver safe quality outcomes.

NURS 5306. Theoretical Foundations for Advanced Nursing Practice. 3 Credit Hours.
In this course students analyze interdisciplinary theories that inform research, practice and scholarship in healthcare.

NURS 5307. Translational Research for Advanced Nursing Practice. 3 Credit Hours.
In this course students learn the application of research in nursing and healthcare. Emphasis is placed on interpreting, evaluating and translating research to improve practice and healthcare outcomes. Graduate standing is required to register for this course.

NURS 5338. Advanced Pathophysiology. 3 Credit Hours.
In this course students focus on advanced pathophysiologic processes across the lifespan, incorporating use of clinical reasoning skills to distinguish alterations across multiple physiological systems. 3 clock hours class (45 hours class). Open for Cross Enrollment on Space Available Basis.

NURS 5339. Leadership and Health Policy for Quality and Safety. 3 Credit Hours.
Leadership principles and theories germane to an increasingly complex, rapidly changing global healthcare landscape will be explored. Primary focus will be the development of change capacity and policy making within microsystems, mesosystems and microsystems to transform health. Global health impact, interprofessional collaboration, and advocacy initiatives will be explored. Course content will include complexity theory and continuous quality improvement models, processes and tools to realize measurable health outcomes. Analysis will include political, demographic and economic forces that influence health policy and professional practice. Nuanced ethical and legal dimensions of practice will be explored. Reflective analysis of individual student leadership development will frame learning application. Graduate standing is required to register for this course. Open for Cross Enrollment on Space Available Basis.

NURS 5356. Financial and Economic Evidence In Health Care. 3 Credit Hours.
The student is introduced to the economic and financial factors affecting practice in a complex healthcare environment. Principles of healthcare economics, third party reimbursement, developing budgets, variance and economic evaluation methods, are considered.
NURS 6071. Supervised Teaching. 1-6 Credit Hours.
Directed teaching in the major area under close supervision of one or more faculty members is required of each doctoral student. Up to six semester credit hours toward a degree may be granted to the student who satisfactorily completes the graduate courses in Supervised Teaching in her/his area of study. (Optional).

NURS 6104. Integration and Transition Seminar. 1 Credit Hour.
This course provides the opportunity to share their individual micro-meso-macro systems analyses, experiences and insights and to extend their learning through collective dialogue. Practicum project successes and lessons learned will form the basis of student discussions focused on strategic and operational decision making and problem solving, human and resource management, interprofessional relationships and the related roles and responsibilities of nurse leaders / nurse executives across the continuum of care. Discoveries, challenges and developmental plans related to the leader within will be explored. Constructive reflection and peer coaching will be used to lay the foundation for student success. Prerequisites: NURS 5219, NURS 6405, NURS 6314. Corequisites: NURS 6313, NURS 6331, NURS 6330.

NURS 6108. Nursing Administration Practicum 1. 1 Credit Hour.
This introductory nursing administration practicum provides an opportunity for the student to utilize specialization specific tools and competencies to explore the leader within themselves and to identify personal challenges and opportunities for professional success. Students will assess leadership roles in their desired area of focus and establish a personal plan for professional development to assume desired roles. While locally focused, students will also explore the interconnection of local health and nursing leadership to global health. Identification and establishment of a program sustaining preceptorship with an experienced nurse executive in a selected institutional or community-based health care setting to accomplish the student’s professional development plan is the defining accomplishment of this course. Prerequisite: NURS 5339.

NURS 6110. Advanced Health Assessment: Clinical Application. 1 Credit Hour.
This course focuses on applying advanced health assessment skills; developing clinical basis for advanced assessment in nursing practice; collecting, interpreting and summarizing database; documenting findings; and presenting complete problem list. Clock Hours: 3 clock hours clinical (45 hours clinical). Prerequisite: An undergraduate health assessment course or comparable equivalent and; Corequisites: NURS 6210.

NURS 6111. Psychiatric Mental Health Nurse Practitioner (PMHNP) Diagnosis and Management: Clinical Seminar 1. 1 Credit Hour.
The focus of this course is integration and reflection of the Psychiatric Mental Health Nurse Practitioner (PMHNP) student’s core knowledge in health promotion, diagnosis and management in the care of patients and families with psychiatric disorders across the healthcare delivery system. The seminar course is designed to promote analysis and synthesis of the clinical experience through faculty mentoring, documentation of patient encounters, discussions, and scholarly clinical presentations. Prerequisites: NURS 6410, NURS 6411. Corequisites: NURS 6419, NURS 6219.

NURS 6119. Psychiatric Mental Nurse Practitioner (PMHNP) Diagnosis and Management Clinical Seminar 2. 1 Credit Hour.
The focus of this course is integration and reflection of the Psychiatric Mental Health Nurse Practitioner (PMHNP) student’s core knowledge in health promotion, diagnosis and management in the care of patients and families with psychiatric disorders across the healthcare continuum. The seminar course is designed to promote analysis and synthesis of the clinical experience through faculty mentoring, documentation of patient encounters, discussions, and scholarly clinical presentations. Prerequisites: NURS 6410, NURS 6411, NURS 6219, NURS 6419, NURS 6111. Corequisites: NURS 6420.

NURS 6120. Clinical Nurse Leader Role 2: Seminar. 1 Credit Hour.
This seminar is designed to provide students enrolled in the CNO capstone clinical course the opportunity to discuss and analyze leadership challenges in the development and implementation of the CNL role in various health care microsystems. Clock hours: 1 semester class hour (15 clock hours class). Prerequisite: NURS 6230 and NURS 6233 Corequisites: NURS 6822.

NURS 6124. Pediatric Nurse Practitioner Primary Care Diagnosis and Management: Clinical Seminar 1. 1 Credit Hour.
The focus of this course is integration and reflection of the Pediatric Nurse Practitioner (PNP) student’s core knowledge in health promotion, health protection, diagnosis and management in the care of children families in the primary healthcare setting. The seminar course is designed to promote analysis and synthesis of the clinical experience through faculty mentoring, documentation of patient encounters, discussions, and scholarly clinical presentations. Prerequisites: NURS 6421, NURS 6422. Corequisites: NURS 6424, NURS 6224.

NURS 6125. Pediatric Nurse Practitioner Primary Care (PNP-PC) Diagnosis and Management Clinical Seminar 2. 1 Credit Hour.
The focus of this course is integration and reflection of the Pediatric Nurse Practitioner (PNP) student’s core knowledge in health promotion, health protection, diagnosis and management in the care of children families in the primary healthcare setting. The seminar course is designed to promote analysis and synthesis of the clinical experience through faculty mentoring, documentation of patient encounters, discussions, and scholarly clinical presentations. Prerequisites: NURS 6421, NURS 6422, NURS 6224, NURS 6424, NURS 6124. Corequisites: NURS 6425.

NURS 6130. Nurse Practitioner Conceptual Basis For Advanced Practice Nursing. 1 Credit Hour.
The purpose of this course is to provide a conceptual basis for advanced practice nursing. Students examine nurse practitioner competencies with emphasis on acquiring knowledge and skills to assume leadership roles in health care delivery, health policy, and complex health care systems. Research and quality improvement mechanisms to implement change are explored.

NURS 6132. Population State of the Science. 1 Credit Hour.
This course provides a foundation for understanding of evidence-based clinical prevention and population care and services to individuals, families and aggregates/identified populations through the identification of key competencies and relevant and predictable learning opportunities in their practice settings.
This course is designed to build upon the psychiatric mental health nurse practitioner student's prior knowledge of advanced pharmacology to develop the knowledge and skills necessary for practical application of psychopharmacologic medications in the treatment of mental illness across the lifespan. The focus is on the neurobiological and psychopharmacological principles for the clinical management of psychotropic medications in the treatment of mental illnesses; integrating neuroanatomy, pharmacogenomics, neurophysiology, pathophysiology, pharmacology and behavioral science. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110. Open for Cross Enrollment on Space Available Basis.

NURS 6141. Pediatric Nurse Practitioner Primary Care (PNP-PC) Clinical Skills and Laboratory Science. 1 Credit Hour.
In this course students examine the relationships between abnormal physiology and diagnostic testing and how to analyze, select, and interpret laboratory studies in the context of clinical decision making as a nurse practitioner. Students will apply their knowledge of physiology, pathophysiology, microbiology, and evidence-based processes to diagnostic and therapeutic procedures performed by nurse practitioners specific to their scope of practice. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110. Open for Cross Enrollment on Space Available Basis.

NURS 6143. Family Nurse Practitioner (FNP) Clinical Skills and Laboratory Science. 1 Credit Hour.
In this course, students examine the relationships between abnormal physiology and diagnostic testing and how to analyze, select, and interpret laboratory studies in the context of clinical decision making as a nurse practitioner. Students will apply their knowledge of physiology, pathophysiology, microbiology, and evidence-based processes to diagnostic and therapeutic procedures performed by nurse practitioners specific to their scope of practice. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110. Open for Cross Enrollment on Space Available Basis.

This course is designed to build upon the family and pediatric nurse practitioner student's knowledge of pharmacokinetics and pharmacodynamics to develop comprehensive prescription plans for acute, chronic, and mental health conditions commonly found in the pediatric primary care population. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110. Open for Cross Enrollment on Space Available Basis.

This course is designed to build upon the adult gerontology acute care nurse practitioner student's knowledge of pharmacokinetics and pharmacodynamics to develop comprehensive prescription plans for acute, chronic, complex and critically ill older adolescent and adult patients. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110. Open for Cross Enrollment on Space Available Basis.
NURS 6147. Adult-Gerontology Acute Care Nurse Practitioner (AGACNP) Clinical Skills and Laboratory Science. 1 Credit Hour.
In this course students examine the relationships between abnormal physiology and diagnostic testing and how to analyze, select, and interpret laboratory studies in the context of clinical decision making as a nurse practitioner. Students will apply their knowledge of physiology, pathophysiology, microbiology, and evidence-based processes to diagnostic and therapeutic procedures performed by nurse practitioners specific to their scope of practice. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110. Open for Cross Enrollment on Space Available Basis.

NURS 6149. Psychotherapy for the Psychiatric Mental Health Nurse Practitioner (PMHNP). 1 Credit Hour.
This course introduces the psychiatric mental health nurse practitioner student to the theory and practice of psychotherapy. Students examine theories and techniques which provide clinically therapeutic interventions with adults and children. Students explore models of psychotherapy consistent with current professional research and practice. The primary focus is on Person-Centered therapy, Cognitive Behavior Therapy, and Supportive Psychotherapy. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110. Open for Cross Enrollment on Space Available Basis.

NURS 6153. Family Nurse Practitioner (FNP) Diagnosis and Management: Clinical Seminar 1. 1 Credit Hour.
The focus of this course is integration and reflection of the Family Nurse Practitioner (FNP) student's core knowledge in health promotion, health protection, diagnosis and management in the care of patients and families in the primary healthcare setting. The seminar course is designed to promote analysis and synthesis of the clinical experience through faculty mentoring, documentation of patient encounters, discussions, and scholarly clinical presentations. Prerequisites: NURS 6453, NURS 6454. Corequisites: NURS 6457, NURS 6254.

NURS 6154. Family Nurse Practitioner (FNP) Diagnosis and Management Clinical Seminar 2. 1 Credit Hour.
The focus of this course is integration and reflection of the Family Nurse Practitioner (FNP) student's core knowledge in health promotion, health protection, diagnosis and management in the care of patients and families in the primary healthcare setting. The seminar course is designed to promote analysis and synthesis of the clinical experience through faculty mentoring, documentation of patient encounters, discussions, and scholarly clinical presentations. Prerequisites: NURS 6453, NURS 6454, NURS 6254, NURS 6457, NURS 6153. Corequisites: NURS 6458.

NURS 6202. Nursing Administration Practicum 2. 2 Credit Hours.
This course continues the program's sustaining preceptorship and builds on the Practicum 1 foundation in three ongoing areas of leadership development: the leader within each student, a complexity based system analysis, and the application of theory through a clinical practicum project. Students will have the opportunity to engage in the system actively in order to begin a micro-meso-macro systems analysis and to establish project specific relationships. A systematic evaluation of opportunities for improvement will provide the basis for practicum project selection. The semester will culminate with the involved stakeholder's commitment to a general plan and timeline for practicum project implementation and evaluation. Students will reflect on their development across the semester and identify areas for ongoing growth as they plan for their next practicum. Portfolio development will continue. Prerequisites: NURS 5339, NURS 5306, NURS 6315, NURS 6108. Corequisites: NURS 5356, NURS 5219, NURS 5307.

NURS 6210. Advanced Health Assessment and Clinical Reasoning. 2 Credit Hours.
This course will build upon health assessment skills developed in the professional nurse's basic educational program. The theoretical and clinical basis for assessment in advanced practice will be developed. The process whereby the advanced clinician utilizes comprehensive physical, psychosocial, and cultural assessment across the lifespan, to gather specific data relevant to common health problems, is demonstrated. Faculty and preceptors facilitate laboratory and clinical experiences that focus on assessment of clients and presentation of findings in a variety of settings. An undergraduate health assessment course or comparable experience is required. Course Fees: Lab $30 Corequisites: NURS 6110.

NURS 6219. Psychiatric Mental Health Nurse Practitioner (PMHNP) Diagnosis and Management: Concepts & Theory 3. 2 Credit Hours.
This course provides the remaining theoretical basis for the competencies of the Psychiatric Mental Health Nurse Practitioner in health promotion, diagnosis, and management of patients with actual and potential psychiatric disorders listed in the Diagnostic & Statistical Manual of Mental Disorders across the lifespan. Emphasis is on integrating psychotherapy, psychopharmacology, complementary and alternative approaches to the treatment of patients across the continuum of care. Problem-based and self-directed learning strategies are used to review acute and chronic psychiatric disorders, analysis of data, formulation of differential diagnoses and development of patient-centered treatment plans in collaboration with families and interprofessional teams. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110, NURS 6410, NURS 6411. Corequisites: NURS 6111, NURS 6419.

NURS 6224. Pediatric Nurse Practitioner-Primary Care (PNP-PC) Diagnosis and Management: Concepts & Theory 3. 2 Credit Hours.
This course builds on the two prior PNP didactic courses and will further provide the BSN prepared nurse the competencies essential to practice nursing at the advanced practice level in the role of the primary care pediatric nurse practitioner (PNP). This is a hybrid course which means content is provided using a combination of face to face and on-line instruction. Case-based and self-directed learning strategies are used to promote student competency in health promotion, health protection, health assessment, and diagnosis and management of illness in the pediatric primary care setting. Additionally, this course emphasizes collaborative partnerships among patients, families, and other members of the health care team to ensure best outcomes for children, their families, and the community. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110, NURS 6421, NURS 6422. Corequisites: NURS 6124, NURS 6424.

NURS 6230. Clinical Nurse Leader 1: Role of the Adv. Generalist in Healthcare Microsystems. 2 Credit Hours.
The focus of this course is on assessment of clinical microsystems in healthcare settings to identify needed changes in clinical trajectory for patients within the system. Development of the role of the CNL as a patient care coordinator and educator for an interprofessional team is the aim of this course. Improving patient safety, quality outcomes, and planning for implementation of innovations in care based on evidence-based practice will be discussed. Clock hours: 30. Prerequisites: NURS 5339, NURS 5338, NURS 6210, NURS 6302, NURS 5306, NURS 5307, NURS 5356, NURS 6315, and NURS 6380.
NURS 6233. Clinical Nurse Leader 1: Role Of The Adv Generalist In Healthcare Microsystems - Clin Applications. 2 Credit Hours.
This course is a practicum course designed to assist the CNL is assessing a particular clinical microsystem of healthcare and designing educational programs for patients, families, and the interprofessional team. The focus of the assessment is on improving patient safety and selected quality outcomes based on evidence-based practice. Clock hours: 90 clinical clock hours, 30 hours clinical conference. Prerequisites: NURS 5339, NURS 5338, NURS 6210, NURS 6302, NURS 5306, NURS 5307, NURS 5356, NURS 6315, and NURS 6380. Corequisites: NURS 6230.

NURS 6235. Adult-Gerontology Acute Care Nurse Practitioner (AGACNP) Diagnosis & Management: Concepts & Theory 3. 2 Credit Hours.
This course fosters the progression of the Adult-Gerontology Acute Care Nurse Practitioner student’s role transition in the areas of health promotion, disease prevention, diagnosis and management in high acuity practice settings for the young adult, adult and older adult with complex acute, critical and chronic health conditions. Emphasis is placed on using evidence-based practice to formulate individualized plans of care and developing collaborative partnerships with patients, their families and inter-professional teams. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110, NURS 6435, NURS 6436. Corequisites: NURS 6135, NURS 6437.

NURS 6250. Advanced Health Promotion, Health Protection, and Disease Prevention. 2 Credit Hours.
Students analyze theories and research from nursing, health promotion, health protection and disease prevention. Family, human development, patient education and community are the foundation for exploring the phenomena of family focused care. Data grounded in epidemiological sources, health histories and family assessments are examined as the basis for identification of risk factors. Prerequisites: NURS 5306 and NURS 5307.

NURS 6254. Family Nurse Practitioner (FNP) Diagnosis and Management: Concepts & Theory 3. 2 Credit Hours.
This course provides the theoretical foundations for the competencies of the Family Nurse Practitioner (FNP) in health promotion, diagnosis and management in the primary healthcare setting for the pediatric patient and family. Problem-based and self-directed learning strategies are used to formulate differential diagnoses and develop evidence-based treatment plans for chronic and acute conditions affecting pediatric patients from birth to adolescence. Collaboration with interprofessional teams is examined as well as legal and ethical principles informing quality family-centered healthcare. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110, NURS 6453, NURS 6454. Corequisites: NURS 6153, NURS 6457.

NURS 6260. Intro: Nursing Education Theories & Trends. 2 Credit Hours.
This course will introduce the nursing education theories and trends that influence the development of nursing education programs in academic and service settings.

NURS 6262. Curriculum. 2 Credit Hours.
This course is designed to introduce the student to the process of curriculum development. The teaching and learning processes are examined from the standpoint of education and nursing research and the effect on various curriculum patterns. Students are introduced to selected learning theories and strategies to promote critical thinking and active learning. The course provides opportunity for examination for factors that influence curriculum development, implement, and evaluation in interprofessional education. Prerequisites: NURS 6132 and NURS 6260 Corequisites: NURS 6134.

NURS 6264. Strategies that Facilitate Learning Across Delivery Modalities and Systems. 2 Credit Hours.
This course focuses on theory and evidence based strategies enacted to create successful learning and environments; including responsiveness to individual student and staff characteristics and learning needs, desired outcomes, content and context. Additional focus includes technology and informatics applications that support learning in classroom, distance, skills lab, simulation, clinical education, and health care systems practice sites. Prerequisites: NURS 6132, NURS 6260, NURS 6262 and NURS 6134 Corequisites: NURS 6136.

NURS 6266. Evaluation in Education. 2 Credit Hours.
This course is designed to introduce the student to the process of curriculum evaluation. Strategies for assessing and evaluating learning outcomes will be examined. Students are introduced to methods of classroom and clinical evaluation. The course provides opportunity for examination of comprehensive program evaluation. Prerequisites: NURS 6132, NURS 6260, NURS 6262, NURS 6134, NURS 6132, NURS 6136 and NURS 6136 Corequisites: NURS 6138.

NURS 6302. Advanced Pharmacotherapeutics. 3 Credit Hours.
This course focuses on advanced practice knowledge and skills in the therapeutic use of pharmacologic agents including pharmacologic treatment of major health problems, pharmacokinetics principles, pharmacodynamics, pharmacogenomics and legal aspects of prescribing. Clock Hours: three clock hours class (45 hours class). Open for Cross Enrollment on Space Available Basis. Prerequisites: NURS 5338.

NURS 6312. Advanced Mental Health Concepts. 3 Credit Hours.
The focus of this course is developing the theoretical basis for advanced practice nursing in mental health using a holistic perspective to examine the etiology, meaning and consequences of human behavior. Graduate Standing is a prerequisite for this course.

NURS 6313. Program Planning and Evaluation for Transitions, Transformation and Integration. 3 Credit Hours.
This course provides the opportunity to explore management problems in health care settings with an emphasis on program planning and evaluation. Using analytical and problem-solving skills, processes, strategies, and evidenced-based practice, students will be given the opportunity to develop theory-based interventions and evaluation strategies. Prerequisites: NURS 5356, NURS 5306 and NURS 5307. Corequisites: NURS 6331, NURS 6104.

NURS 6314. Nursing Administration Practicum 3. 3 Credit Hours.
This course continues the program sustaining preceptorship and the three ongoing areas of leadership development: the leader within each student, a complexity based system analysis, and the application of theory through a clinical practicum project. Students will be expected to actively engage in the system to further analyze system dynamics and to advance their project. A theory and evidenced based logic model demonstrating best practices for decision making, financial analysis, and evaluation will be developed to support and track full project implementation. Culmination of the semester will reflect the practicum project’s full implementation and substantive progress toward completion. Students will again reflect on their development across the semester and to identify areas for ongoing growth as they plan for their final practicum. Portfolio development will continue. Prerequisites: NURS 5356, NURS 5306 and NURS 5307. Corequisites: NURS 6405.
NURS 6315. Informatics & Health Care Technologies. 3 Credit Hours.
This course addresses advanced leadership roles in the clinical setting related to information systems and patient care technology. The content focuses on information systems that assist in monitoring outcomes and quality improvement, patient safety, and evaluation and selection of patient care technology and consumer health information sources. Legal and ethical issues related to information systems and patient care technology will be explored. Graduate Standing is a prerequisite for this course. Open for Cross Enrollment on Space Available Basis.

NURS 6318. Grantsmanship Practicum. 3 Credit Hours.
This course consists of seminar and practicum on the topic of gaining financial support for research and/or demonstration projects in nursing and health care related areas. Students analyze the funding criteria of various agencies and techniques of strategic communication. Students project budget development and packaging of ideas as information basic to creating successful proposals. Using a research or demonstration project with which he/she is familiar, the student creates a funding proposal and participates in critiques of colleagues’ proposals. Prerequisites: Year 02 Doctoral Student.

NURS 6319. Psychiatric Mental Health Nurse Practitioner (PMHNP) Diagnosis and Management Clinical Application 3. 3 Credit Hours.
The focus of this clinical course is on the sustained integration of the Psychiatric Mental Health Nurse Practitioner essential knowledge in health promotion, diagnosis and management of patients and families with actual and potential psychiatric disorders across the lifespan and across the healthcare continuum. Emphasis is placed on care of patients and families with acute and chronic psychiatric disorders in collaboration with interprofessional teams using evidence-based and patient centered strategies. Prerequisites: NURS 6410, NURS 6411, NURS 6219, NURS 6419, NURS 6111, NURS 6420, NURS 6119.

NURS 6320. Theoretical Foundations for Advanced Nursing Practice. 3 Credit Hours.
In this course students explore and consider theories from nursing and related disciplines. Emphasis is placed on the role of theory to guide practice and care improvement. This course is a foundation for the advanced practice nurse to choose and use theories. Prerequisites: Graduate Standing.

NURS 6324. Pediatric Nurse Practitioner Primary Care (PNP-PC) Diagnosis and Management: Clinical Application 3. 3 Credit Hours.
This course will allow the student PNP to integrate prior theoretical knowledge and build on the previous clinical experience in a variety of pediatric clinical environments relevant to pediatric primary care. There will be a focus on health promotion, health protection, and the diagnosis and management of acute and chronic illnesses from birth through adolescence. Additionally, this course emphasizes collaborative partnerships among patients, families, and other members of the health care team to ensure best outcomes for children, their families, and the community. Prerequisites: NURS 6421, NURS 6422, NURS 6224, NURS 6424, NURS 6124, NURS 6425, NURS 6125.

NURS 6330. Nursing Administration Practicum 4. 3 Credit Hours.
This final practicum course in the program completes the sustaining preceptorship and the three ongoing areas of leadership development: the leader within each student, a complexity based system analysis, and the application of theory through a clinical practicum project. A summative complex systems analysis will be performed. Students will assume aspects of the nurse leader / nurse executive role as they finalize practicum project activities. Presentations of outcomes as well as plans for sustainment, and opportunities for continued improvement complete the student’s project responsibilities. As the nursing administration practicum series ends the students will use the AONE Nurse Leader Competencies, as well as, their preferred professional future, to reflect on their development across the program. They will have the opportunity to build a personal professional action plan that supports their transition into the marketplace and is supported by their finalized academic portfolio. Prerequisites: NURS 6405, NURS 6314. Corequisites: NURS 6313, NURS 6331, NURS 6104.

NURS 6331. Economics and Advanced Financial Management. 3 Credit Hours.
This course covers advanced financial management concepts relevant to managing the business of healthcare. Key concepts covered include principles of advanced financial management, interpretation of financial statements, regulatory requirements imposed by payers and accreditors, advanced budgeting and variance analysis, forecasting, and productivity management. The role of the Administrative Nurse Manager in interprofessional financial planning for quality, safety, and financial stability will be addressed. Prerequisites: NURS 5356. Corequisites: NURS 6313, NURS 6104.

NURS 6335. Adult-Gerontology Acute Care Nurse Practitioner (AGACNP) Diagnosis and Management: Clinical App 3. 3 Credit Hours.
This course develops clinical competency and emphasizes the integration of theory, assessment and advanced therapeutics for the safe and patient-centered care of adults in a high acuity healthcare setting. Emphasis is placed on the management of acute, complex, and chronic health problems in the young adult, older adult, and elder adults as well as adults with critical illness under the direction of clinical preceptors. In addition, this course emphasizes collaborative partnership development between patients, their families, and inter-professional teams. Prerequisites: NURS 6435, NURS 6436, NURS 6235, NURS 6437, NURS 6135, NURS 6438, NURS 6137.

NURS 6338. Advanced Pathophysiology. 3 Credit Hours.
In this course students focus on advanced pathophysiological processes across the lifespan, incorporating use of clinical reasoning skills to distinguish alterations across multiple physiological systems. 3 clock hours class (45 hours class). Open for Cross Enrollment on Space Available Basis.

NURS 6354. Family Nurse Practitioner (FNP) Diagnosis and Management: Clinical Application 3. 3 Credit Hours.
The focus of this clinical course is sustained integration of the Family Nurse Practitioner’s (FNP) essential knowledge in health promotion, diagnosis and management of patients and families in the primary healthcare setting across the lifespan. Emphasis is placed on care of patients and families with acute and chronic health problems in collaboration with interprofessional teams using evidence-based and patient-centered strategies. Prerequisites: NURS 6453, NURS 6454, NURS 6254, NURS 6457, NURS 6153, NURS 6458, NURS 6154.
NURS 6380. Fundamentals of Epidemiology. 3 Credit Hours.
This course is designed to study the distribution and determinants of health and disease in human populations. Improving health by altering personal and environmental risk factors will be a major focus. Epidemiological research using technology and public health informatics will be introduced. Clock hours: 45 clock hours. Open for Cross Enrollment on Space Available Basis.

NURS 6405. Transforming Complex Healthcare Systems for Quality and Safety. 4 Credit Hours.
This course focuses on student comprehension of organizational systems from traditional theories and structures through complexity theory. The dynamic influences of external and internal environmental changes and contemporary influences at microsystem, mesosystem and macrosystem levels are explored. Students will analyze current and emerging problems related to multiple aspects of quality and safety within healthcare systems. The unique role of nursing in quality improvement, including conceptualization and redesign of effective care delivery models, and care environments that address gaps in science and delivery of patient care services will be explored. Prerequisites: NURS 5339 or NURS 6222.

NURS 6410. Psychiatric Mental Health Nurse Practitioner (PMHNP) Diagnosis and Management: Concepts & Theory 1. 4 Credit Hours.
This course provides the theoretical foundations for the Psychiatric Mental Health Nurse Practitioner. Students will use a holistic perspective to examine the etiologies, meaning and consequences of human behavior. Problem-based and self-directed learning strategies are used to learn methods for gathering data in conducting a psychiatric assessment, formulating differential diagnoses and developing evidence-based treatment recommendations with individuals and families across the lifespan. Collaboration with interprofessional teams is examined as well as legal and ethical principles informing psychiatric care. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110.

NURS 6411. Psychiatric Mental Health Nurse Practitioner (PMHNP) Diagnosis and Management: Concepts & Theory 2. 4 Credit Hours.
This course builds on theoretical foundations for the Psychiatric Mental Health Nurse Practitioner developed in the first Diagnosis and Management Course. Competencies are developed in health promotion, diagnosis, and management of patients and families with potential psychiatric disorders across the lifespan. Emphasis is placed on integrating psychotherapy, psychopharmacology, complementary and alternative approaches to the treatment of patients across the continuum of care. Problem-based and self-directed learning strategies are used to review acute and chronic psychiatric disorders, analysis of data, formulation of differential diagnoses and development of patient-centered treatment plans in collaboration with families and interprofessional teams. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110, NURS 6410.

NURS 6412. Psychiatric Mental Health Nurse Practitioner Diagnosis and Mgmt: Concepts and Theory 1. 4 Credit Hours.
This course provides the theoretical basis for the competencies of the Psychiatric Mental Health Nurse Practitioner (PMHNP). This course lays the scientific foundation for independent practice as the RN transitions to the role of the Nurse Practitioner in health promotion, disease prevention, diagnosis and management of illness in psychiatric patients across the lifespan. Using self-directed learning strategies, disorders of approximately one half of the physiologic/psychological systems are examined. Psychotherapies and theories of half of psychopathology are surveyed. Additionally, this course emphasizes collaborative, partnership development among patients, families, and interprofessional teams. Prerequisites: NURS 5339, NURS 5306, NURS 5307, NURS 5356, NURS 6315, NURS 6250, NURS 5338, NURS 6302, NURS 6110, NURS 6210, NURS 6312.

NURS 6416. Psychiatric Mental Health Nurse Practitioner (PMHNP) Diagnosis And Mgmt: Concepts & Theory 2. 4 Credit Hours.
The focus of this course is refinement of the Psychiatric Mental Health Nurse Practitioner (PMHNP) role in health promotion, disease prevention, diagnosis and management in psychiatric practice with diverse populations across the lifespan. Using problem-based and self-directed learning strategies, disorders of the remaining physiologic systems and psychiatric disorders are examined. Emphasis is placed on differentiating signs and symptoms to formulate possible diagnoses and determining the effect of the illness on the family. In addition, the nurse practitioner’s role as a collaborative member of the interprofessional team will be evaluated. Prerequisites: NURS 5339, NURS 5306, NURS 5307, NURS 5356, NURS 6315, NURS 6250, NURS 5338, NURS 6302, NURS 6110, NURS 6210, NURS 6312 and NURS 6412.

NURS 6419. Psychiatric Mental Health Nurse Practitioner (PMHNP) Diagnosis and Management Clinical Application 1. 4 Credit Hours.
The focus of this clinical course is the integration of the Psychiatric Mental Health Nurse Practitioner essential knowledge in health promotion, diagnosis and management of patients and families with actual and potential psychiatric disorders across the lifespan and across the healthcare continuum. Emphasis is placed on care of patients and families with acute and chronic psychiatric disorders in collaboration with interprofessional teams using evidence-based and patient centered strategies. Prerequisites: NURS 6410, NURS 6411. Corequisites: NURS 6219, NURS 6111.

NURS 6420. Psychiatric Mental Health Nurse Practitioner (PMHNP) Diagnosis and Management Clinical Application 2. 4 Credit Hours.
The focus of this clinical course is on the continued integration of the Psychiatric Mental Health Nurse Practitioner essential knowledge in health promotion, diagnosis and management of patients and families with actual and potential psychiatric disorders across the lifespan and across the healthcare continuum. Emphasis is placed on care of patients and families with acute and chronic psychiatric disorders in collaboration with interprofessional teams using evidence-based and patient centered strategies. Prerequisites: NURS 6410, NURS 6411, NURS 6219, NURS 6419, NURS 6111. Corequisites: NURS 6119.
NURS 6421. Pediatric Nurse Practitioner-Primary Care (PNP-PC) Diagnosis and Management: Concepts & Theory 1. 4 Credit Hours. This course provides the theoretical content for the BSN prepared nurse to acquire the competencies essential to practice nursing at the advanced practice level in the role of the primary care pediatric nurse practitioner (PNP). Case-based and self-directed learning strategies are used to promote student competency in health promotion, health protection, health assessment, and diagnosis and management of illness in the pediatric primary care setting. Additionally, this course emphasizes collaborative partnerships among patients, families, and other members of the health care team to ensure best outcomes for children, their families, and the community. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110.

NURS 6422. Pediatric Nurse Practitioner-Primary Care (PNP-PC) Diagnosis and Management: Concepts & Theory 2. 4 Credit Hours. This course builds on the prior PNP didactic course and will further provide the BSN prepared nurse the competencies essential to practice nursing at the advanced practice level in the role of the primary care pediatric nurse practitioner (PNP). This is a hybrid course which means content is provided using a combination of face to face and on-line instruction. Case-based and self-directed learning strategies are used to promote student competency in health promotion, health protection, health assessment, and diagnosis and management of illness in the pediatric primary care setting. Additionally, this course emphasizes collaborative partnerships among patients, families, and other members of the health care team to ensure best outcomes for children, their families, and the community. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110, NURS 6421.

NURS 6423. Pediatric Nurse Practitioner (PNP) Primary Care Diagnosis And Management: Concepts And Theory 1. 4 Credit Hours. This course provides the theoretical basis for the competencies of the Nurse Practitioners (NP). This course lays the scientific foundation for independent practice as the RN transitions to the role of the Nurse Practitioner in health promotions, disease prevention diagnosis and management of illness in primary healthcare practice in diverse infant, child and adolescent population. Using self-directed learning strategies, disorders approximately one half of the physiologic systems are examined. Additionally, this course emphasizes collaborative partnership development among patients and families and interprofessional teams. Clock Hours: 60 clock hours didactic Prerequisites: NURS 5306, NURS 5307, NURS 5356, NURS 5339, NURS 6210, NURS 6312, NURS 5338, NURS 6315, NURS 6250, NURS 6110, NURS 6312 and NURS 6423.

NURS 6424. Pediatric Nurse Practitioner-Primary Care (PNP-PC) Diagnosis and Management: Clinical Application 1. 4 Credit Hours. This course will allow the student PNP to integrate theoretical knowledge into a variety of pediatric clinical experiences relevant to pediatric primary care. There will be a focus on health promotion, health protection, and the diagnosis and management of acute and chronic illnesses from birth through adolescence. Additionally, this course emphasizes collaborative partnerships among patients, families, and other members of the health care team to ensure best outcomes for children, their families, and the community. Prerequisites: NURS 6421, NURS 6422. Corequisites: NURS 6224, NURS 6124.

NURS 6425. Pediatric Nurse Practitioner Primary Care (PNP-PC) Diagnosis and Management: Clinical Application 2. 4 Credit Hours. This course will allow the student PNP to integrate prior theoretical knowledge and build on the previous clinical experience in a variety of pediatric clinical environments relevant to pediatric primary care. There will be a focus on health promotion, health protection, and the diagnosis and management of acute and chronic illnesses from birth through adolescence. Additionally, this course emphasizes collaborative partnerships among patients, families, and other members of the health care team to ensure best outcomes for children, their families, and the community. Prerequisites: NURS 6421, NURS 6422, NURS 6224, NURS 6424, NURS 6124. Corequisites: NURS 6125.

NURS 6428. Pediatric Nurse Practitioner (PNP) Primary Care Diagnosis And Management: Concepts And Theory 2. 4 Credit Hours. The focus of this course is refinement of the Pediatric Nurse Practitioners role in health promotion, disease prevention, diagnosis and management in primary health care practice with diverse population from birth through adolescent. Using problem-based and self-direct learning strategies, disorders of the remaining physiologic system are examined. Emphasis is placed on differentiating signs and symptoms to formulate possible diagnosis and determining the effect of the illness on the family. In addition, practitioner role as a collaborative member of the interprofessional team will be evaluated. Clock hours: 60 hours. Prerequisites: NURS 5339, NURS 5306, NURS 5307, NURS 5356, NURS 6315, NURS 6250, NURS 5338, NURS 6302, NURS 6110, NURS 6210, NURS 6312 and NURS 6423.

NURS 6435. Adult-Gerontology Acute Care Nurse Practitioner (AGACNP) Diagnosis & Management: Concepts & Theory 1. 4 Credit Hours. This course introduces the student to the principles of diagnostic and treatment strategies utilized in acute/critical care settings by the Adult-Gerontology Acute Care Nurse Practitioner (AGACNP). The use of evidence-based practice is encouraged to develop a strong scientific foundation for independent and collaborative practice as the registered nurse transitions to the role of the AGACNP. The focus is in health promotion, disease prevention, diagnosis and management of common illnesses seen in the acute care setting affecting the young adult, adult and older adult populations. In addition, this course emphasizes collaborative partnership development between patients, their families and inter-professional teams. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110.

NURS 6436. Adult-Gerontology Acute Care Nurse Practitioner (AGACNP) Diagnosis & Management: Concepts & Theory 2. 4 Credit Hours. This course fosters the progression of the Adult-Gerontology Acute Care Nurse Practitioner student’s role transition in the areas of health promotion, disease prevention, diagnosis and management in high acuity practice settings for the young adult, adult and older adult with complex acute, critical and chronic health conditions. Emphasis is placed on using evidence-based practice to formulate individualized plans of care and developing collaborative partnerships with patients, their families and inter-professional teams. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110, NURS 6435.
NURS 6437. Adult-Gerontology Acute Care Nurse Practitioner (AGACNP) Diagnosis and Management: Clinical App 1. 4 Credit Hours.
This course develops clinical competency and emphasizes the integration of theory, assessment and advanced therapeutics for the safe and patient-centered care of adults in a high acuity healthcare setting. Emphasis is placed on the management of acute, complex, and chronic health problems in the young adult, older adult, and elderly adults as well as adults with critical illness under the direction of clinical preceptors. In addition, this course emphasizes collaborative partnership development between patients, their families, and inter-professional teams. Prerequisites: NURS 6435, NURS 6436. Corequisites: NURS 6235, NURS 6135.

NURS 6438. Adult-Gerontology Acute Care Nurse Practitioner (AGACNP) Diagnosis and Management: Clinical App 2. 4 Credit Hours.
This course develops clinical competency and emphasizes the integration of theory, assessment and advanced therapeutics for the safe and patient-centered care of adults in a high acuity healthcare setting. Emphasis is placed on the management of acute, complex, and chronic health problems in the young adult, older adult, and elderly adults as well as adults with critical illness under the direction of clinical preceptors. In addition, this course emphasizes collaborative partnership development between patients, their families, and inter-professional teams. Prerequisites: NURS 6435, NURS 6436, NURS 6235, NURS 6437, NURS 6135. Corequisites: NURS 6137.

NURS 6451. Family Nurse Practitioner (FNP) Diagnosis Management of Young Families: Concepts & Theory. 4 Credit Hours.
This course provides the theoretical basis for the competencies of the Family Nurse Practitioner (FNP) in the care of young families. This course lays the scientific foundation for independent practice in health promotion, disease prevention, and the diagnosis and management of acute and chronic illness for patients across the reproductive continuum and the health and illness from birth to adolescents in the primary healthcare setting. Additionally, this course emphasizes collaborative partnership development among patients, families, and interprofessional teams. Prerequisites: NURS 5306, NURS 5307, NURS 5339, NURS 5356, NURS 6315, NURS 6250, NURS 5338, NURS 6302, NURS 6110, NURS 6210, NURS 6312.

NURS 6452. Family Nurse Practitioner (FNP) Diagnosis Management of Aging Families: Concepts & Theory. 4 Credit Hours.
This course provides the theoretical basis for the competencies of the Family Nurse Practitioner (FNP) in health promotion, diagnosis and management in the primary healthcare setting for the mature and aging patient and family. Problem-based and self-directed learning strategies are used to review acute and chronic disorders of the aging patient and family. Emphasis is placed on differentiating signs and symptoms to formulate possible diagnoses and determining the effect of illness on this diverse population. Additionally, this course emphasizes the FNP as a collaborative member of the interprofessional team. Prerequisites: NURS 5306, NURS 5339, NURS 5307, NURS 5356, NURS 6315, NURS 6250, NURS 5338, NURS 6302, NURS 6110, NURS 6210, NURS 6312.

NURS 6453. Family Nurse Practitioner (FNP) Diagnosis and Management: Concepts & Theory 1. 4 Credit Hours.
This course provides the theoretical foundations for the competencies of the Family Nurse Practitioner (FNP), including health promotion, palliative care, diagnosis and management for the adult and geriatric patient in the primary healthcare setting. Problem-based and self-directed learning strategies are used to formulate differential diagnoses and develop evidence-based treatment plans for chronic and acute conditions affecting the geriatric patient and family. Collaboration with interprofessional teams is examined as well as legal and ethical principles informing quality family-centered healthcare. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110.

NURS 6454. Family Nurse Practitioner (FNP) Diagnosis and Management: Concepts & Theory 2. 4 Credit Hours.
This course provides the theoretical foundations for the competencies of the Family Nurse Practitioner (FNP) in health promotion, diagnosis and management in the primary healthcare setting for adults, including women across the reproductive continuum. Problem-based and self-directed learning strategies are used to formulate differential diagnoses and develop evidence-based treatment plans for chronic and acute conditions affecting the adult patient and women across the reproductive continuum. Collaboration with interprofessional teams is examined as well as legal and ethical principles informing quality family-centered healthcare. Prerequisites: NURS 6338, NURS 6302, NURS 6210, NURS 6110, NURS 6453.

NURS 6455. Adult-Gerontology Acute Care Nurse Practitioner Diagnosis and Management: Concepts And Theory 1. 4 Credit Hours.
This course introduces the student to the principles of diagnostic and treatment strategies utilized in acute/critical care settings by the Adult-Gerontology Acute Care Nurse Practitioner. The use of evidence based practice is encouraged to develop a strong scientific foundation for independent and collaborative practice as the registered nurse transitions to the role of the Adult-Gerontology Acute Care Nurse Practitioner. The focus is in health promotion, disease prevention, diagnosis and management of common illnesses seen in the acute care settings affecting the young adult, adult and older adult populations. In addition, this course emphasizes collaborative partnership development between patients, their families and inter-professional teams. Prerequisites: NURS 6210, NURS 6302, NURS 6312, NURS 6315, NURS 5338.

NURS 6456. Adult-Gerontology Acute Care Nurse Practitioner Diagnosis and Management: Concepts And Theory 2. 4 Credit Hours.
This course fosters the progression of the Adult-Gerontology Acute Nurse Practitioner student’s role transition in the areas of health promotion, disease prevention, diagnosis and management in high acuity practice settings for the young adult, adult and older adult with complex acute, critical and chronic health conditions. Using problem-based and self-directed learning strategies, disorders of the physiologic systems are presented and build on the information presented in Diagnosis and Management: Concepts and Theory 1. Emphasis is placed on using evidence-based practice to formulate individualized plans for care and developing collaborative partnerships with patients, their families and inter-professional teams. Prerequisites: NURS 6455. Corequisites: NURS 6656.
NURS 6457. Family Nurse Practitioner (FNP) Diagnosis and Management: Clinical Application 1. 4 Credit Hours.
The focus of this clinical course is integration of the Family Nurse Practitioner’s (FNP) essential knowledge in health promotion, diagnosis and management of patients and families in the primary healthcare setting across the lifespan. Emphasis is placed on care of patients and families with acute and chronic health problems in collaboration with interprofessional teams using evidence-based and patient-centered strategies. Prerequisites: NURS 6453, NURS 6454. Corequisites: NURS 6354, NURS 6153.

NURS 6458. Family Nurse Practitioner (FNP) Diagnosis and Management: Clinical Application 2. 4 Credit Hours.
The focus of this clinical course is continued integration of the Family Nurse Practitioner’s (FNP) essential knowledge in health promotion, diagnosis and management of patients and families in the primary healthcare setting across the lifespan. Emphasis is placed on care of patients and families with acute and chronic health problems in collaboration with interprofessional teams using evidence-based and patient-centered strategies. Prerequisites: NURS 6453, NURS 6454, NURS 6254, NURS 6457, NURS 6153. Corequisites: NURS 6154.

NURS 6615. Pediatric Nurse Practitioner (PNP) Primary Care Diagnosis and Management 1: Clinical Application. 6 Credit Hours.
This course focuses on primary care experiences promoting health, preventing disease and diagnosing and managing acute and chronic illness from birth through adolescence and developing collaborative partnerships among patients, families, and interprofessional teams. Prerequisites: NURS 6423 and NURS 6428.

NURS 6616. Pediatric Nurse Practitioner (PNP) Primary Care Diagnosis & Management 2: Clinical Application. 6 Credit Hours.
This course focuses on refining the Pediatric Nurse Practitioner role in primary healthcare practice in diverse populations. Emphasis is placed on care of persons with complex health problems from birth through adolescence. In addition, the nurse practitioner’s role as a collaborative member of the interprofessional team will be evaluated. Prerequisites: NURS 6423, NURS 6428 and NURS 6616.

NURS 6620. Family Nurse Practitioner (FNP) Diagnosis & Management of Aging Families: Clinical Application. 6 Credit Hours.
The focus of this course is integration of the Family Nurse Practitioner’s core knowledge in health promotion, diagnosis and management in the care of the mature and aging patient and families in the primary healthcare setting. Emphasis is placed on the care of mature and aging patients and families with acute and chronic complex health problems. In addition, the family nurse practitioner as a collaborative member of the interprofessional team will be emphasized. Prerequisites: NURS 6451 and NURS 6452.

NURS 6621. Family Nurse Practitioner (FNP) Diagnosis & Management of Young Families: Clinical Application. 6 Credit Hours.
This course focuses on the primary care experience in health promotion, disease prevention, and diagnosis and management of acute and chronic illness in patients across the reproductive continuum and the health and illness from birth to adolescents. Additionally, this course emphasizes collaborative partnership development among patients, families and interprofessional teams. Prerequisites: NURS 6451 and NURS 6452.

NURS 6623. Psychiatric Mental Health Nurse Practitioner (PMHNP) Diagnosis & Management 1: Clinical Application. 6 Credit Hours.
Primary care experience in health promotion, disease prevention, diagnosis and management of psychiatric illness. Additionally, this course emphasizes collaborative partnership development among patients, families, and interprofessional teams. Prerequisites: NURS 6412 and NURS 6416.

NURS 6624. Psychiatric Mental Health Nurse Practitioner (PMHNP) Diagnosis & Management 2: Clinical Application. 6 Credit Hours.
The focus of this course is refinement of the Psychiatric Mental Health Nurse Practitioner role in health promotion, diagnosis and management in psychiatric practice in diverse populations across the life span. Emphasis is placed on care of persons with complex health problems. In addition, the nurse practitioner’s role as a collaborative member of the interprofessional team will be evaluated. Prerequisites: NURS 6412, NURS 6416 and NURS 6623.

NURS 6655. Adult-Gerontology Acute Care Nurse Practitioner Diagnosis and Management 1: Clinical Application. 6 Credit Hours.
This course develops clinical competency and emphasizes the integration of theory, assessment and advanced therapeutics for young adults, adults and older adults in a high acuity setting. Students will perform comprehensive clinical assessments including appropriate diagnostic and therapeutic testing. Management of acute and chronic health problems will be under the direction of clinical preceptors. Clinical placements will include a variety of acute/critical care areas including but limited to: emergency department, medical/surgical intensive care units, intermediate care and specialty services such as transplant and oncology. Gerontology experiences will be provided in long term, rehabilitation facilities and the acute care setting. In addition, this course emphasizes collaborative partnerships development between patients, their families, and inter-professional teams. Prerequisites: NURS 6456.

NURS 6656. Adult-Gerontology Acute Care Nurse Practitioner Diagnosis and Management 2: Clinical Application. 6 Credit Hours.
The focus of this course is to foster continued development of the clinical competency of the Adult Gerontology Acute Care Nurse Practitioner student in health promotion, disease prevention, and the formulation of evidence based treatment strategies in a high acuity setting for the young adult, adult and older adult populations. Content is directed toward the care of persons across the adult continuum with complex health problems. In addition, the refinement of the AG-ACNP’s role as a patient advocate and collaborative member of the inter-professional team will be emphasized. Prerequisites: NURS 6655.

NURS 6822. Clinical Nurse Leader Role 2: Clinical Application For The Advanced Nursing Generalist. 8 Credit Hours.
This capstone clinical experience is designed for students to develop expertise in clinical leadership in their respective interest areas. The health care setting will vary based on a student’s chosen program focus. Planning implementation of selected microsystems changes that will enhance the culture of learning, culture of safety, and improved patient outcomes based on evidence-based practice is the focus of this clinical course. At the successful conclusion of the course a student will be eligible to sit for the CNLTM credentialing examination provided by the American Association of Colleges in Nursing. Clock hours: 450 clinical clock hours, 30 clock hours clinical conference. Prerequisites: NURS 6230 and NURS 6233. Corequisites: NURS 6120.

NURS 7099. Dissertation. 1-9 Credit Hours.
Prerequisites: Admission to candidacy for Doctor of Philosophy degree; registration for two terms is required of PhD candidates.
NURS 7105. Role Of The Clinical Nurse Scientist. 1 Credit Hour.
This course will focus on the professional and ethical roles and responsibilities of the Clinical Nurse Scientist in advancing the discipline of nursing through the generation of clinical knowledge, discovery, and theory development. Potential settings for practice that are traditional, such as academic health centers as well as emerging venues, will be explored. Discussions about issues that may affect the Clinical Nurse Scientist in developing lifelong career/scholarship trajectories will occur.

NURS 7111. Advanced Nursing Seminar. 1 Credit Hour.
This seminar course provides the student with knowledge to facilitate integration and synthesis of the essential specialty competencies necessary to plan and design their DNP Practice Inquiry Project. This seminar may include a variety of activities, identification of the opportunity for improvement, literature synthesis and evidence for their theory based organizational intervention at multiple system levels. The activities will be specific to the student’s identified area of specialty. Students will share issues related to the plan and design of the DNP Practice Inquiry Project in seminar. Prerequisite: NURS 7323. Corequisite: NURS 7511.

NURS 7222. Leadership In Complex Healthcare Systems. 2 Credit Hours.
The focus of this course is on leadership skills preparing nurses for intra/interprofessional leadership in complex healthcare systems including collaborative and consultative models, conflict and board management, and advanced communication and team-building skills with emphasis on innovation and change. Clock hours: 2 clock hours class (30 hours class) Prerequisite: NURS 5339 Open for Cross Enrollment on Space Available Basis.

NURS 7226. Ethics Of Nursing Science. 2 Credit Hours.
The focus of this course is on the ethical imperative/implications in the role of the clinical nurse scientist. Current ethical theories are critiqued and the ethical implications of the major research paradigms are evaluated. Ethical issues arising from selected theoretical/research approaches are examined.

NURS 7301. Methods For Evidence-Based Practice (EBP) Translational Science 1. 3 Credit Hours.
This course focuses on analyzing evidence-based practice paradigms, quality improvement, and patient safety; appraising primary research and systematic review, and examining approaches to measuring care processes, organizational factors, nursing performance, and patient outcomes. Clock hours: 3 clock hours class (45 hours class) Prerequisites: NURS 5306 and NURS 5307 Open for Cross Enrollment on Space Available Basis.

NURS 7302. Theoretical Foundations for Leadership in Complex Adaptive Systems. 3 Credit Hours.
The course focuses on theoretical underpinnings for leadership, complexity science and complex adaptive systems. Individual leadership skill development for transforming healthcare and nursing practice through innovation, change management and quality improvement is highlighted. The course prepares nurses to assume leadership in complex healthcare systems through advanced communication, team building, conflict and board management, decision making and collaborative skills. Prerequisites: Graduate Standing. Open for Cross Enrollment on Space Available Basis.

NURS 7303. Science of Knowledge Translation and Implementation I. 3 Credit Hours.
This course builds a foundation for advanced clinical scholarship, preparing students to conduct a systematic search of the literature to address a research-practice gap, critically appraise the identified literature, and synthesize this body of literature to identify an evidence-based intervention(s) to address this gap. Students will analyze various models of evidence-based practice (EBP) and knowledge translation to guide the implementation of knowledge into practice. They will critically appraise and synthesize primary research, systematic reviews, and best practice guidelines to address clinical questions. Prerequisites: NURS 6320. Open for Cross Enrollment on Space Available Basis.

NURS 7304. Science of Knowledge Translational and Implementation II. 3 Credit Hours.
In this course students will enhance their capacity to integrate research and knowledge into practice. Students will examine knowledge translation models, implementation designs, program evaluation methods, and analytical approaches to improve practice, patient, and system-level outcomes. Students will also be introduced to strategies that sustain and facilitate evidence-based interventions in complex healthcare delivery systems. Ethical issues related to knowledge translation and implementation will also be explored in this course. Prerequisites: NURS 7303. Open for Cross Enrollment on Space Available Basis.

NURS 7305. DNP Seminar. 3 Credit Hours.
This seminar will focus on the DNP project development including preparation of the Portfolio. This seminar includes activities related to developing the DNP project proposal: identifying the opportunity for improvement, initial review of the literature for significance and background, selecting the appropriate theoretical model(s) that will guide the assessment and implementation of the project, clear identification of the project outcomes and measurements, plan for implementation, plan for analysis of outcomes, and plan for sustainability. During this seminar, students will work with the mentoring team (faculty mentor and committee members, one of the committee members must be from the clinical site). Students will complete the DNP project charter. Prerequisites: NURS 6141, NURS 6143, NURS 6147, or NURS 6149; NURS 6315, NURS 6320; NURS 6380; NURS 6410, NURS 6421, NURS 6435, or NURS 6453; NURS 7302, NURS 7303, NURS 7304, NURS 7320, NURS 7322, NURS 7324.

NURS 7306. DNP Project. 3 Credit Hours.
This course provides students with clinical specialty immersion experience to plan, design, implement, and evaluate the DNP Project. The role of the DNP as leader and innovator in complex organizational systems will be discussed as it relates to knowledge translation, implementation, and evaluation. Milestones for project completion are determined for each semester. Prerequisites: NURS 6436, NURS 6454, NURS 6411, NURS 6422. Corequisites: NURS 6235, NURS 6254, NURS 6219, NURS 6224.

NURS 7307. DNP Dissemination. 3 Credit Hours.
The student will disseminate DNP project outcomes, recommendations, and lessons learned through scholarly writing and presentations. Additionally, students will address practice implications with system leaders and communities of interest. Prerequisites: NURS 6319, NURS 6324, NURS 6335, or NURS 6354; NURS 7305; NURS 7306.
NURS 7310. Theory Development, Analysis And Evaluation In Nursing. 3 Credit Hours.
This course provides opportunity to study a system for the development of nursing science through middle-range theory development. Learning activities include engaging in strategies for concept, statement clarification, and theory clarification. Students and faculty will discuss theory application, theory construction, evaluation, and clinical testing of theory. The relationship between research and clinical practice to theory generation and testing is explored. The student and faculty will have the opportunity to gain practice in strategies for middle-range theory building. Prerequisites: NURS 7325 and NURS 7226.

NURS 7311. Theories And Research In Leadership, Quality, Safety, And Evidence Base. 3 Credit Hours.
This course focuses on leadership, chaos, system, improved and transitional science theories and patient safety, healthcare quality and evidence-based research and models to frame improvement, implementation, and translational research studies. Open for Cross Enrollment on Space Available Basis.

NURS 7312. DNP Project: Seminar. 3 Credit Hours.
This course requires the student to engage faculty and community leaders in the implementation and reporting of the process and outcomes of their theory and evidence based organizational intervention at multiple system levels. The student explores specific issues related to the specific practice topic that leads to an evidence-based improvement project. The role of the DNP as leader and innovator in complex organizational systems will be discussed as it relates to the proposal and implementation. Faculty, practice leaders and experts will assist with development of a plan that is relevant and feasible. Successful completion of PH 1690 as an alternate to NURS 7321. Prerequisites: NURS 7321, NURS 7301, and NURS 7323. Corequisites: NURS 7313.

NURS 7313. DNP Practice Inquiry: Clinical Application. 3 Credit Hours.
This course requires the student to engage faculty and community leaders in the implementation and reporting of the process and outcomes of their theory and evidence based organizational intervention at multiple system levels. The role of the DNP as leader and innovator in complex organizational systems will be discussed as it relates to implementation and evaluation. Faculty, practice leaders and experts will assist with the implementation and evaluation of a practice inquiry project. Successful completion of PH 1690 as an alternate to NURS 7321. Prerequisites: NURS 7321, NURS 7301, NURS 7323. Corequisite: NURS 7312.

NURS 7314. Nursing And Health Systems Administration. 3 Credit Hours.
This course is designed to prepare the professional chief nurse executive to provide strategic direction for all aspects of nursing care and care delivery operations for multiple clinical departments, hospitals and service lines across the continuum in regional and/or national healthcare systems to provide value. Successful completion of PH 1690 as an alternate to NURS 7321. Prerequisites: NURS 7321, NURS 7301, NURS 7323.

NURS 7316. Statistical Analysis For Nursing Science. 3 Credit Hours.
The foundational course focuses on statistics and computing skills that assist students to understand statistical methods, gain computing skills, interpret and perform basic statistical tests, and critique typical quantitative articles. Clock Hours: 3 clock hours class. Prerequisites: Graduate standing.

NURS 7320. Statistical Methods And Data Analysis To Evaluate Healthcare Delivery Systems. 3 Credit Hours.
Students will be introduced to analytical methods for knowledge translation and implementation to evaluate processes that impact system, practice, and patient level outcomes. Students will build skills to analyze patient, practice, and outcome data using descriptive statistics, quality improvement tools, and statistical process control. Students will examine appropriate models, methods, measures, data sources, and analyses to evaluate healthcare quality and patient outcomes. Students will also build capacity to interpret, visualize, and present data to advance practice and improve patient outcomes. Prerequisites: Graduate Standing. Open for Cross Enrollment on Space Available Basis.

NURS 7321. Statistical Analysis For Quality Improvement And Health Delivery Systems. 3 Credit Hours.
This course examines the concepts and techniques to develop, improve, and evaluate patient care and health care delivery systems from multiple perspectives including efficiency, effectiveness, and comparability. Students are provided with essential knowledge for evaluation of research to guide evidence-based practice at the highest level. This course provides an overview of the logic and appropriate use of statistical techniques most commonly reported in the research literature of the health professions. Students build on knowledge they have gained from basic statistics courses to develop advanced skills in interpreting and understanding common univariate and multivariate statistical approaches presented in published health care reports. Using a project-oriented approach, students are provided with statistical tools necessary to conduct state-of-the-art practice improvement projects and support leadership decisions. Prerequisite: Graduate Standing. Open for Cross Enrollment on Space Available Basis.

NURS 7322. Healthcare Policy Analysis And Advocacy. 3 Credit Hours.
This course focuses on analyzing, designing, implementing, and evaluating public policy process; engaging in policy decision-making process; participating in health services research, policy, and economic analysis; and political advocacy. Open for Cross Enrollment on Space Available Basis.

NURS 7323. Design And Analysis For Evidence-Based Practice (EBP) Translational Science 2. 3 Credit Hours.
This course extends Evidence-Based Practice Translational Science 1 to refine the student's ability to integrate research and knowledge into practice and evaluate impact on healthcare quality and safety and patient outcomes. Students will have the opportunity to use advanced program evaluation research approaches and analytic methods to design and evaluate innovations in systems of care in terms of care processes and patient outcomes. The course emphasizes appropriate and analytic approaches in translational science and explores ethical issues in translational science. Clock hours: 3 clock hours class (45 hours class) Prerequisites: NURS 7301 Open for Cross Enrollment on Space Available Basis.

NURS 7324. Healthcare Economics And Policy. 3 Credit Hours.
This course prepares the student to lead improvements in health care and shape health policy through an understanding of macroeconomic principles in the health care market. Students will be given the opportunity to apply theoretical and empirical economic analysis to business and public policy issues in health care. Open for Cross Enrollment on Space Available Basis.
NURS 7325. Philosophy Of Nursing Science. 3 Credit Hours.
The focus of this course is on articulating the differences in models of knowing and on analyzing the role of science and scientists in society. Emphasis is on the process of analysis, the ability to present the pros and cons of current and anticipated ethical issues, influencing specific clinical situations, and on development and use of technologies in health care. Clock hours: 4 seminar hours per week. Prerequisites: study of advanced professional elements and issues; role(s) socialization.

NURS 7373. Nursing: Quantitative Research Methods 2. 3 Credit Hours.
This course presents modern and classical psychometrics for nursing science from the perspective of item response theory. Most of the course will cover classical test theory from the perspective of modern test theory. An introduction to binary item response theory will also be presented. The course will emphasize applications within the context of modern psychometric principles. Prerequisites: NURS 7325, NURS 7226, NURS 7374, NURS 7310, NURS 7380, NURS 7375 Corequisites: NURS 7381 Open for Cross Enrollment on Space Available Basis.

NURS 7374. Nursing-Content & Practice: Quantitative Research Methodology 1. 3 Credit Hours.
Integration of the research process and qualitative and quantitative analysis, including concept mapping, operationalization of concepts, and appropriate statistical treatments, make up the content of this course. The course will incorporate identifying clinical research questions and developing study proposals for such questions. Clock Hours: three class hours. Open for Cross Enrollment on Space Available Basis.

NURS 7375. Regression Models For Nursing Science. 3 Credit Hours.
This course presents regression analysis at an intermediate level. Course will focus on regression for continuous variables: specification, estimation, testing, and diagnostics. Logistic regression for binomial and multinomial variables, log-linear regression for count variables, and proportional hazards regression for duration variables will be explored. An introduction to multilevel regression will occur. Prerequisites: Graduate standing Open for Cross Enrollment on Space Available Basis.

NURS 7377. Mixed Methods For Clinical Nurse Scientists. 3 Credit Hours.
This course will cover the use of mixed methods, quantitative and qualitative, to address complex research questions in nursing and health care. Problems of trying to merge methods and practical strategies for accomplishing this successfully, as well as paradigmatic issues, will be discussed. Prior products developed in qualitative and quantitative methods classes to devise a mixed method proposal that integrates readings on mixed methods with the student’s own research interests will be used. Prerequisites: NURS 7374 and NURS 7380 Open for Cross Enrollment on Space Available Basis.

NURS 7380. Qualitative Inquiry For Clinical Nursing Research. 3 Credit Hours.
This course will introduce students to qualitative inquiry as an approach to knowledge discovery applicable to clinical nursing research. Students will analyze, compare, and contrast a variety of qualitative approaches including philosophical underpinnings, methodologies, and applications. Those approaches may include: Phenomenology, ethnography, grounded theory, case study, historical research, naturalistic inquiry, interpretive analysis, action research, and focus-group methods. Criteria for evaluating qualitative research reports to critique qualitative research studies will be utilized. The relationship between a clinical problem and specific research methods will be analyzed. Students will have the opportunity to develop research questions and analyze their applicability to specific clinical issues, and learn varied strategies for collecting and analyzing qualitative research data. Prerequisites: NURS 7325, NURS 7226, NURS 7310. Corequisite: NURS 7325. Open for Cross Enrollment on Space Available Basis.

NURS 7381. Nursing: Synthesis And Application Of Clinical Research. 3 Credit Hours.
This course integrates the dynamic elements of clinical practice, theory, and research to prepare doctoral students to function effectively in the synthesis and application of clinical research. This course provides guided direction in the processes used for dissertation development and grant application proposals. Students are required to be actively involved in the critique and analysis of published literature and other students’ dissertation proposals, grant applications, and manuscripts. Prerequisites: NURS 7325, NURS 7226, NURS 7310, NURS 7374, NURS 7375, and NURS 7105 Open for Cross Enrollment on Space Available Basis.

NURS 7382. Structural Equation Models For Nursing Science. 3 Credit Hours.
This course presents structural equation modeling (SEM) for nursing science. The course will begin with a review of regression from an SEM perspective. The first major topic of the course will be path analysis, including model specification, methods of estimation, recursive and non-recursive models, direct, indirect, and total effects, methods of estimation, single and multi-group analyses, moderators and mediators, and the assessment of causality. The second major topic will be psychometrics from an SEM perspective, including congeneric test theory, reliability and stability, convergent and discriminant validity, and confirmatory factor analysis. The third major topic will combine the first two into structural equations, including model specification and identification, methods of estimation, second-order factor analysis, and the assessment of causal structure. Prior completion of Intermediate statistics is required to register for this course. Open for Cross Enrollment on Space Available Basis.

NURS 7383. Qualitative Methods 2: Application In Nursing Science. 3 Credit Hours.
This course is designed to provide students an opportunity to conceptualize a research problem from a qualitative perspective, to study one specific method (grounded theory, ethnography, phenomenology, hermeneutics), and to practice qualitative approaches to data collection and analysis in that method. Students will have opportunities to write a mini-proposal guided by a qualitative research question and leading to a specific qualitative research approach to the problem. There will be opportunities for participating in Mock reviews of qualitative research proposals (either as investigator or reviewer). Students will have the opportunity to learn the IRB approval process with qualitative proposals and will have opportunities to develop pilot research strategies building to a dissertation proposal. Strategies will include interviewing, focus group, or participant observation following the selected method. Through this process students are required to practice and learn strategies and processes for conceptualizing and implementing a qualitative study guided by a specific qualitative methodology. Prerequisites: NURS 7325, NURS 7226, NURS 7374, and NURS 7380 Open for Cross Enrollment on Space Available Basis.

NURS 7511. Advanced Nursing: Clinical Application. 5 Credit Hours.
This course provides the student with clinical specialty immersion experiences to facilitate integration and synthesis of the essential competencies necessary for implementation of the DNP Practice Inquiry Project. Students will engage faculty and practice leaders in the plan and design of the project. The practice immersion experience may include a variety of activities related to the identification of the opportunity for improvement, analyzing the organizational context and strategies for design with appropriate clinicians in the clinical practice immersion. The setting and activities will be specific to the student’s identified area of specialty. Corequisites: NURS 7111.
Nursing Elective (NURE)

Courses

NURE 3010. Mentored Research Practicum: Health Transitions. 1-2 Credit Hours.
This course is a practicum course taken each semester the student is designated as a Research Scholar. Designation as a Research Scholar is linked to specific undergraduate/graduate student awards. During this practicum course the student actively participates in selected aspects of a research project with a faculty mentor. Receipt of a Research Scholar award, file completed, and a signed contract in student’s Undergraduate/Graduate Nursing Office file is required. Corequisites: NURE 3115.

NURE 3011. Mentored Research Practicum: Chronic Health Transitions. 1-2 Credit Hours.
This course is a practicum course taken each semester the student is designated as a Research Scholar. Designation as a Research Scholar is linked to specific undergraduate/graduate student awards. During this practicum course, the student actively participates in selected aspects of a research project with a faculty mentor. Receipt of a Research Scholar award, file completed, and a signed contract in student’s Undergraduate/Graduate Nursing Office file is required. (1-2 Cr Clinical) Corequisites: NURE 3115.

NURE 3012. Mentored Research Practicum: Health and Illness. 1-2 Credit Hours.
This course is a practicum course taken each semester the student is designated as a Research Scholar. Designation as a Research Scholar is linked to specific undergraduate/graduate student awards. During this practicum course, the student actively participates in selected aspects of a research project with a faculty mentor. Receipt of a Research Scholar award, file completed, and a signed contract in student’s Undergraduate/Graduate Nursing Office file required. (1-2 Cr Clinical) Corequisites: NURE 3115.

This course is a practicum course taken each semester the student is designated as a Research Scholar. Designation as a Research Scholar is linked to specific undergraduate/graduate student awards. During this practicum course, the student actively participates in selected aspects of a research project with a faculty mentor. Receipt of a Research Scholar award, file completed, and a signed contract in student’s Undergraduate/Graduate Nursing Office file required. (1-2 Cr Clinical) Corequisites: NURE 3115.

NURE 3014. Mentored Research Practicum: Community. 1-2 Credit Hours.
This course is a practicum course taken each semester the student is designated as a Research Scholar. Designation as a Research Scholar is linked to specific undergraduate/graduate student awards. During this practicum course, the student actively participates in selected aspects of a research project with a faculty mentor. Receipt of a Research Scholar award, file completed, and a signed contract in student’s Undergraduate/Graduate Nursing Office file required. (1-2 Cr Clinical) Corequisites: NURE 3115.

NURE 3015. Mentored Research Practicum: Policy. 1-2 Credit Hours.
This course is a practicum course taken each semester the student is designated as a Research Scholar. Designation as a Research Scholar is linked to specific undergraduate/graduate student awards. During this practicum course the student actively participates in selected aspects of a research project with a faculty mentor. (1-2 Cr Clinical) Corequisites: NURE 3115.

NURE 3090. Special Topics In Nursing. 1-4 Credit Hours.
Various topics offered. Topics include, but are not limited to: 1) Adolescent Pregnancy: Nursing Implications of Biological, Psychological, and Sociological Perspectives, 2) Healthcare of Women in their Reproductive Years, 3) Application of Theory and Scientific Inquiry.

NURE 3091. Independent Study Nursing. 1-4 Credit Hours.
This elective provides students with the opportunity to expand their knowledge and skills in areas of special interest. Topic and mode of study are agreed upon by student and instructor. The course may be repeated for credit when topics vary. Hours to be arranged and consent of instructor is required.

NURE 3115. Applications Of Research In Nursing: Mentored Research Scholars. 1 Credit Hour.
The course is taken each semester the student is designated as a Research Scholar. The course provides an opportunity for designated Research Scholars to work closely with a faculty member who is actively engaged in the conduct of research and to share learning experiences and gain insights through discussion in a Research Scholar Seminar. Receipt of Research Scholar award; file completed, and a signed contract in student’s Nursing Office file is required.

NURE 4048. Art Rounds. 2 Credit Hours.
This course is an interactive, interprofessional course that takes students to the McNay Art Museum to learn physical observation skills. Using artwork as patients, students will have the opportunity to learn how to observe details and interpret images based on evidence. Taught jointly by Health Science Center faculty and McNay Museum educators, students will have the opportunity to view, observe, interpret, and give case reports on works of art. Studies indicate that these skills trans-late to improved patient physical observation skills.

NURE 5001. Mentored Research Practicum: State Of Science. 1-2 Credit Hours.
These courses are a series of practicum courses, one course taken, as appropriate, each semester that the student is designated as a Research Scholar. Designation as a Research Scholar is linked to specific graduate student awards and specific stages of the research process. During this practicum course the student is required to actively participate in selected aspects of a research project with a faculty mentor. Submit a completed, signed student/faculty mentor contract for student’s Graduate Nursing Office file. Prerequisites: receipt of a Research Scholar award. Corequisites: NURE 5115. Submit a completed, signed student/faculty mentor contract for student’s Graduate Nursing Office file.

NURE 5002. Mentored Research Practicum: Proposal Development. 1-2 Credit Hours.
These courses are a series of practicum courses, one course taken, as appropriate, each semester that the student is designated as a Research Scholar. Designation as a Research Scholar is linked to specific graduate student awards and specific stages of the research process. During this practicum course the student is required to actively participate in selected aspects of a research project with a faculty mentor. Submit a completed, signed student/faculty mentor contract for student’s Graduate Nursing Office file. Prerequisites: receipt of a Research Scholar award. Corequisites: NURE 5115.
NURE 5003. Mentored Research Practicum: Instrumentation. 1-2 Credit Hours.
These courses are a series of practicum courses, one course taken, as appropriate, each semester that the student is designated as a Research Scholar. Designation as a Research Scholar is linked to specific graduate student awards and specific stages of the research process. During this practicum course the student is required to actively participate in selected aspects of a research project with a faculty mentor. Submit a completed, signed student/faculty mentor contract for student’s Graduate Nursing Office file. Prerequisites: receipt of a Research Scholar award. Corequisites: NURE 5115.

NURE 5004. Mentored Research Practicum: Statistical Methods. 1-2 Credit Hours.
These courses are a series of practicum courses, one course taken, as appropriate, each semester that the student is designated as a Research Scholar. Designation as a Research Scholar is linked to specific graduate student awards and specific stages of the research process. During this practicum course the student is required to actively participate in selected aspects of a research project with a faculty mentor. Submit a completed, signed student/faculty mentor contract for student’s Graduate Nursing Office file. Prerequisites: receipt of a Research Scholar award. Corequisites: NURE 5115.

These courses are a series of practicum courses, one course taken, as appropriate, each semester that the student is designated as a Research Scholar. Designation as a Research Scholar is linked to specific graduate student awards and specific stages of the research process. During this practicum course the student is required to actively participate in selected aspects of a research project with a faculty mentor. Submit a completed, signed student/faculty mentor contract for student’s Graduate Nursing Office file. Prerequisites: receipt of a Research Scholar award. Corequisites: NURE 5115.

NURE 5006. Mentored Research Practicum: Research Results/Policy. 1-2 Credit Hours.
These courses are a series of practicum courses, one course taken, as appropriate, each semester that the student is designated as a Research Scholar. Designation as a Research Scholar is linked to specific graduate student awards and specific stages of the research process. During this practicum course the student is required to actively participate in selected aspects of a research project with a faculty mentor. Submit a completed, signed student/faculty mentor contract for student’s Graduate Nursing Office file. Prerequisites: receipt of a Research Scholar award. Corequisites: NURE 5115.

NURE 5090. Special Topics In Nursing. 1-4 Credit Hours.
Various topics offered. Topics include, but are not limited to 1) "Adolescent Pregnancy: Nursing Implications of Biological, Psychological, and Sociological Perspectives" - focuses on nursing intervention related to primary, secondary, and tertiary prevention of adolescent pregnancy and parenthood. The course is designed to provide the student with an overview of the nursing implications of interdisciplinary research and non-research literature on this increasing problem of premature childbearing and parenting. The scope of the focus includes the pregnant and parenting adolescent mother and father, the family structure, the community, and the greater society. Clock hours: three class hours per week. 2) "Anthropological Perspectives on Nursing and Health" - taught as a seminar, and will offer a review of concepts and methods of anthropology as they have been applied to problems of nursing and health. A major focus will be how anthropologists have investigated and analyzed health-related behaviors. This information will then be related to nursing science and practice, to see how the anthropological perspective can offer solutions or new approaches. Topics will include cultural variation in illness beliefs and illness behavior, types of healing practices, international health, the culture of health care, and narrative representations of illness and healing. Open for Cross Enrollment on Space Available Basis.

NURE 5091. Independent Study In Nursing. 1-6 Credit Hours.
This elective allows for detailed or in-depth study in a specific topic area. Topic and mode of study are agreed upon by student and instructor. The course may be repeated for credit when topics vary. Clock hours to be arranged. Graduate standing and consent of instructor are required.

NURE 5115. Applications of Research in Nursing. 1 Credit Hour.
A list is provided each academic semester citing faculty and their research projects with whom graduate students may contract for this elective course.

NURE 5195. Mentored Research Scholars. 1 Credit Hour.
This course is taught each semester for students designated as Student Research Scholars to share learning experiences and gain insights through discussion in a Research Scholar Seminar. Submit a completed, signed student/faculty mentor contract for student’s Graduate Nursing Office file; receive acceptance of the plan for mentored contract. Corequisites: NURE 5115.

NURE 5215. Applications of Research in Nursing. 2 Credit Hours.
A list is provided each academic semester citing faculty and their research projects with whom graduate students may contract for this elective course.

NURE 5248. Art Rounds for Graduate Students. 2 Credit Hours.
Art Rounds is an interactive, interprofessional course that takes students to the McNay Art Museum to learn physical observation skills. Using artwork as patients, students will learn how to observe details and how to interpret images based on available evidence. Taught jointly by UTHSCSA faculty (INTD 4048 and ELEC 5048) and McNay museum educators, students will view, observe, interpret, and give case reports on works of art. Studies demonstrate that these skills translate to improved patient physical observation skills. Open for Cross Enrollment on Space Available Basis.

NURE 5315. Applications of Research in Nursing. 3 Credit Hours.
A list is provided each academic semester citing faculty and their research projects with whom graduate students may contract for this elective course.
OBGY 4000. Obstetrical Externship. 4 Credit Hours.
This 4 week selective offers training and experience in the care of complicated and normal pregnancies and exposure to advanced obstetric techniques. It is designed primarily as a preparatory sub-internship for students anticipating residency in obstetrics and gynecology, and is primarily an inpatient course. The student will have the opportunity to be an integral member of the obstetric service and function at the junior intern level under the supervision of the obstetric faculty and residents. Opportunity for direct participation in labor and delivery, outpatient clinics (maternal-fetal medicine, diabetes, high-risk OB), operative obstetrics, and obstetric sonography is provided. The student is required to attend patient care conferences, didactic sessions, teaching rounds, and obstetric quality improvement conferences. The student will be required to give one formal seminar presentation on an obstetric clinical topic, and will participate in call on labor and delivery. Prerequisite: Completion of core clerkship in Obstetrics and Gynecology (OBGY3000 or equivalent) Additional prerequisite for visiting students is successful completion of USMLE Step 1 exam, satisfactory completion of all preclinical and clinical coursework.

OBGY 4007. Obstetric/Gynecology Research. 4 Credit Hours.
This selective is designed to provide the opportunity to participate in either clinical or basic research currently conducted by the faculty in the Department of Obstetrics and Gynecology. Depending on the student’s interest, an appropriate faculty member will be assigned as preceptor and will integrate the student into her or his ongoing research. The student is expected to be actively involved in the research and to prepare a formal oral or written presentation relative to their area of investigation.

OBGY 4008. Reproductive Health & Gynecological Surgery. 4 Credit Hours.
This selective is a primarily inpatient, surgically based sub-internship experience designed primarily for students planning to enter obstetrics and gynecology. The student will gain a broad experience in gynecologic care, perioperative care, and surgery. The student is required to be an active member of the gynecology service at the subintern level under the supervision of the faculty preceptor and the residents. Responsibilities include participation in: 1) inpatient gynecologic surgeries and therapies; 2) outpatient procedures such as diagnostic laparoscopy, tubal sterilization, vaginal sonography, and hysteroscopy; 3) clinic-based care including annual gynecologic and breast examination, cancer screening, contraception, treatment of sexually transmitted diseases, common gynecologic problems, and preoperative planning; 4) treatment of acute gynecologic emergencies; and 5) patient care rounds, patient care conferences, and didactic lectures. The student will be required to deliver one formal presentation and will also participate in gynecologic emergency room call. Prerequisite: Completion of a core clerkship in obstetrics and gynecology (OBGY3001 or equivalent) For visiting students: successful completion of USMLE Step 1 examination and adequate performance on all required preclinical and clinical courses is also required.

Obstetrics & Gynecology (OBGY)

Courses

OBGY 3005. Obstetrics/Gynecology Clerkship. 6 Credit Hours.
A clerkship consisting of gynecology and obstetrics is provided for medical students who have successfully completed the course in reproductive physiology and pathophysiology. The goal of the clerkship is to provide students with opportunities to prepare to function as a house officer capable of providing preventive care and treatment or competent to identify the patient’s need for direction into an appropriate care environment. Supervised direct patient experience occurs in the obstetrical wards, operating room, labor and delivery suite, emergency room, and the obstetrical, gynecologic, family planning, and cancer detection clinics. A guide identifying instructional goals and the mechanisms to reach them is provided. Twenty-five seminars provide the opportunity for integration of clinical experience and didactic learning. In order to enroll, students must have successfully completed all required preclinical courses.

OBGY 4000. Special Topic. 4 Credit Hours.
This course will need to be arranged with a designated faculty member(s) of the students choosing, meeting certain criteria prior to enrolling and getting permission to register. Research topics include but are not limited to PCOS, Teen Pregnancy, STD’s, Pre-Eclampsia, Pre-Term Labor, Post Partum Depression, or any other OB/GYN related topic. The student must choose a preceptor, decide on the topic, schedule, and what will be graded. Students will follow the schedule created by that preceptor for 4 weeks.
OBGY 4009. Endo-Infertility Elective. 4 Credit Hours.
This elective offers training and experience in Reproductive and Infertility. It is designed as an advanced course for students who have completed the core clerkship in Obstetrics and Gynecology, are interested in reproductive medicine, and anticipate a residency in Obstetrics and Gynecology. The student is required to work with faculty in the Division of Reproductive Endocrinology participating in patient consultations for infertility and is required to observe ongoing management of infertility. In addition, the students are required to learn laboratory techniques associated with andrology as well as in vitro fertilization. Hands-on microsurgery laboratory experience will be available. The student is required to attend the weekly Combined Reproductive Endocrinology and Infertility Conference, be present for surgeries on the faculty service as well as on the resident service, and participate twice weekly in the infertility clinic at the Downtown University Outpatient Center.

OBGY 4010. Advanced Sonography. 4 Credit Hours.
This elective offers training and experience in Obstetric Sonography. It is designed as an advanced course for students who have completed the core clerkship in Obstetrics and Gynecology and who are interested and anticipate a residency in Obstetrics and Gynecology. The student is required to work with the faculty in the Division of Obstetrics participating in patient consultations and observe ongoing management of patients. In addition, the student will have the opportunity to obtain hands-on experience in sonography. The student is required to attend weekly Gyn Rounds and Cesarean Section Conferences.

OBGY 4012. Gynecology/Oncology. 4 Credit Hours.
This elective gives focused experience in surgical techniques as well as the critical care of gynecologic oncology patients. The goal of this rotation is to provide students with the opportunities to prepare to function as a house officer capable of diagnosing and managing patients with gynecologic malignancies. Students will also have the opportunity to prepare to become competent to identify a patient’s need for direction into an appropriate care environment with a gynecologic/oncologist. The student is required to be a team member of gynecologic oncology service. It is a 7-term level under the supervision of gynecology/oncology faculty preceptors and the chief resident of that service. Responsibilities include inpatient gynecologic/oncology surgeries, inpatient gynecologic/oncologic critical care, outpatient gynecologic/oncology clinic care, gynecology-radiation/oncology conference(s), and gynecologic/oncology rounds.

OBGY 4013. Ob/Gyn Bootcamp. 4 Credit Hours.
The purpose of this elective is to prepare senior medical students who are interested in a career in obstetrics and gynecology for their internship. This elective is a "bootcamp" that provides practical "hands on" surgical training and valuable experiences so students are ready to perform day 1 of their residency. Prerequisites: Students are required to have passed their required MS3 obstetrics/gynecology clerkship.

OBGY 7000. Off Campus. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty member prior to the beginning of the rotation (at least one week before the course begins). Credit will not be given for any rotation that has not been approved in advance. Required paperwork includes: "Course Approval" form, a written letter or email for acceptance form the physician preceptor with the start and end dates of the course/rotation, and a course description of your learning objectives and responsibilities during the rotation. Forms must include a complete address and telephone number for the off campus location or residence address for the student while at the off campus site. Forms will not be approved after the rotation has already begun. Contact the department for assistance with enrolling in this course.

Occupational Therapy (OCCT)

Courses
OCCT 5001. Theoretical Foundations of Occupational Therapy. 2 Credit Hours.
An overview of occupational therapy, this course will address the history, philosophy, theoretical concepts, and overview of the OT Process that support the practice of occupational therapy.

OCCT 5003. Evidence-Based Practice Capstone. 3 Credit Hours.
This course provides the student with the opportunity to apply the principles of evidence-based practice in a treatment setting to an identified client. This process will include an integration of evidence-based research methods with a discussion and analysis of all aspects of occupational therapy management for the client.

OCCT 5005. The Role of Occupational Therapy in Low Vision Rehabilitation. 2 Credit Hours.
An introductory Web-based course in the field of low vision rehabilitation designed to help occupational therapy practitioners develop a comprehensive understanding of how low vision can impact an individual’s occupational performance and the therapy process. Evaluation and treatment interventions utilizing a multidisciplinary approach are presented. A one-day practicum (8 hours) at the Lions Low Vision Center of Texas is required.

OCCT 5007. Occupational Justice and Participation. 1 Credit Hour.
This course traces the development of an occupational justice approach to health and well being. The student will have the opportunity to explore ways to enable participation in occupation, within a sociopolitical context.

OCCT 5010. Human Occupation across the Lifespan. 3 Credit Hours.
This course is a study of the character and purpose of human activity throughout the life span. Areas of occupation, performance skills, performance patterns, client factors, and contexts are examined for each stage of life.

OCCT 5011. Research 2: Introduction to Research & Design. 3 Credit Hours.
This course introduces the student to the purpose of research and designs appropriate for answering research questions in practice settings. Topics include quantitative and qualitative designs utilized in OT and other health professions, as well as development of a scholarly research proposal. Open for Cross Enrollment on Space Available Basis.

OCCT 5012. Application of Neural Systems to Occupation. 4 Credit Hours.
This course provides the foundation to understand the structures and functions of the developing, mature, and aging nervous system. It covers basic neuroanatomy, neurophysiology and neuropharmacology. It also applies neuroscience to clinical applications regarding pathology and patient care and thus prepares the student in those aspects of neuroscience commonly encountered in clinical practice across the lifespan. Open for Cross Enrollment on Space Available Basis.

OCCT 5013. Applied Biomechanics of Movement. 3 Credit Hours.
This course is a study of kinesiology and biomechanical principles related to human motion with application to occupational therapy assessment techniques of the musculoskeletal system. This course will provide the student with the opportunity to learn a basic knowledge of kinesiology and biomechanics of human movement in preparation for the study of the biomechanical approach to evaluation and treatment of physical dysfunction as occupational therapists.
OCCT 5014. Professional Communication in Occupational Therapy. 3 Credit Hours.
The study of effective communication skills for occupational therapists in health care relationships. The course will focus on an understanding of self-communication behaviors and development of skills to interact non-verbally and verbally with patients, health teams, supervisors, families, and groups.

OCCT 5020. Occupational Therapy Process: Neonate-Preschool. 4 Credit Hours.
A study of the theories and approaches of occupational therapy assessment and intervention for young children with developmental delays. Occupational therapy assessment and intervention as related to the areas of occupation, performance skills, performance patterns, client factors, and contexts are examined.

OCCT 5021. Service Delivery Systems 1. 2 Credit Hours.
This course explores service delivery systems that exist for infants and young children with medical conditions and developmental disabilities. Topics include the organizational culture, administrative structure, missions, documentation procedures, and team interactions associated with occupational therapy in pediatric hospitals and early intervention programs.

OCCT 5022. Environmental Technologies 1. 2 Credit Hours.
This course provides the philosophical and therapeutic basis for occupational therapy utilization of adaptive, technological, and therapeutic equipment and materials. Activity analysis and problem-solving principles are developed. Included will be environmental adaptations and adaptive equipment for personal care, leisure, and home management.

OCCT 5023. Research 1: Assessment and Research Statistics. 3 Credit Hours.
This course focuses on principles of assessment and the psychometric properties of tests. The concepts of accurate evaluation, evaluation methods, purposes of evaluation, levels of measurement, standardization, validity, reliability, and test administration are examined. Students will develop skill in selecting and using the most evidence-based and appropriate standardized assessments within the domains of the OTPF 3rd Edition.

OCCT 5024. Clinical Medicine 1. 1 Credit Hour.
This course is an overview of the manifestations of developmental disabilities in pediatric patients and their medical and surgical management.

OCCT 5025. Pathology for Occupational Therapy. 3 Credit Hours.
This course introduces the principles of human disease including a discussion of the pathogenesis, morphology, clinical course and treatment of those diseases most pertinent to the graduate occupational therapy student. The first portion of the course is devoted to the principles of general pathology while the second portion of the course is a review of systemic pathology. Open for Cross Enrollment on Space Available Basis.

OCCT 5071. Level 1 Fieldwork: Neonatal-Preschool. 1 Credit Hour.
This course is an opportunity for the student to observe and begin participation in the assessment and treatment of infants and preschool children and their families. Students will be exposed to clinical and community facilities that serve this population.

OCCT 5091. Special Topics. 1-6 Credit Hours.
This course will be arranged through departmental faculty. The course topics vary according to student interests. Semester hours are variable and credit hours will be assessed per topic. Could be offered in fall or spring summer sessions.

OCCT 6005. Introduction to Anatomy. 1.5 Credit Hour.
This introductory course examines the structures of the human body. Students will gain introductory knowledge about the major anatomical components of the skeletal, muscular, vascular and peripheral nervous systems. This course will precede CSAT 5022 Gross Anatomy. Open for Cross Enrollment on Space Available Basis.

OCCT 6020. Occupational Therapy Process: School Age. 4 Credit Hours.
A study of the theories and approaches of occupational therapy assessment and intervention for school-aged children and adolescents with disabilities and learning difficulties. Occupational therapy assessment and intervention as related to the areas of occupation, performance skills, performance patterns, client factors, and contexts are examined.

OCCT 6021. Service Delivery Systems 2. 2 Credit Hours.
This course examines service delivery systems for school-aged children and adolescents with developmental disabilities. Topics include the organizational culture, administrative structure, missions, documentation procedures, and team interactions associated with occupational therapy in public schools; transitional living programs; and prevocational and supported employment settings.

OCCT 6022. Environmental Technologies 2. 3 Credit Hours.
This course explores the assistive technologies available for use by individuals with disabilities so they may pursue educational, vocational, and recreational occupations. Included are seating and mobility devices, computer input/output technologies, augmentative and alternative communication systems, aids for individuals with sensory impairments, and electronic aids to daily living.

OCCT 6023. Professional Communication for Occupational Therapy. 3 Credit Hours.
Clinical manifestations of adult biomechanical disorders will be presented. The medical and surgical management for these conditions will be described.

OCCT 6024. Clinical Medicine 2. 1 Credit Hour.
Clinical manifestations of adult biomechanical disorders will be presented. The medical and surgical management for these conditions will be described.

OCCT 6025. Psychosocial Components of OT. 4 Credit Hours.
This course provides the occupational therapy student with an understanding of psychiatric disease classification and the diagnosis and medical management of psychosocial conditions. Students will compare and contrast the contemporary bodies of knowledge in common use throughout the mental health arena and learn the specific occupational therapy evaluation and intervention procedures as they relate to each theoretical frame of reference. This course requires the student to observe, identify, and associate areas of occupation, performance skills, performance patterns, client factors, and context/environment as related to psychosocial components of participation with age-specific populations through visits to community settings.

OCCT 6027. Health Care Management. 3 Credit Hours.
This course is intended to provide the graduate student with an opportunity to assume supervisory, administrative, or management functions related to the delivery of occupational therapy services in the contemporary health care systems. The course is a study of the political, economic, legal and ethical factors that impact occupational therapy practices. Special emphasis will be given to the occupational therapy management functions of planning, organizing, directing, coordinating, controlling, and communicating.
OCCT 6030. OT Process: Adult Biomechanical Dysfunction. 4 Credit Hours.
A study of the theories and approaches of occupational therapy assessment and intervention for adults with musculoskeletal disorders. Occupational therapy assessment and intervention as related to the areas of occupation, performance skills, performance patterns, client factors, and contexts are examined.

OCCT 6031. Service Delivery Systems 3. 3 Credit Hours.
This course examines service delivery systems that exist for adults and the elderly with physical dysfunctions. Topics include the organizational culture, administrative structure, missions, documentation procedures, and team interactions associated with occupational therapy in rehabilitation hospitals, outpatient clinics, vocational settings, nursing homes, home health settings, assisted living settings, and hospice programs. This is the third in a series of courses addressing occupational therapy systems across the lifespan.

OCCT 6034. Professional Issues. 1 Credit Hour.
This interdisciplinary course is an overview of professional and ethical issues facing allied health professionals. Topics to be discussed include responsibilities of the health care practitioner, life and death decisions, patient confidentiality, substance abuse, whistle blowing, and informed consent. Ethics in research and other critical issues related to health care problems will also be addressed. Collaborative activities and simulated cases will be used to enhance discussion among students. Open for Cross Enrollment on Space Available Basis.

OCCT 6035. Concepts and Practices in Teaching. 2 Credit Hours.
The purpose of this course is to explore adult learner teaching methodologies and techniques that are applicable to classroom, clinical, or community settings. Students will define objectives, and plan and prepare instructional materials and practice skills.

OCCT 6037. OT Process: Adult Neuromuscular Dysfunction. 4 Credit Hours.
This course is a study of the theories and approaches of occupational therapy assessment and intervention for adults with sensorimotor and neuromuscular dysfunction. Areas of occupation, performance skills, performance patterns, client factors, and contexts are examined.

OCCT 6045. Clinical Medicine 3. 1 Credit Hour.
Clinical manifestations of adult neuromuscular disorders will be presented. The medical and surgical management for these conditions will be described.

OCCT 6069. Level 2 Fieldwork: Seminar. 1 Credit Hour.
This course will focus on the transition from classroom to Level 2 Fieldwork experiences. Students will have the opportunity to identify Level 2 fieldwork expectations, explore professional behaviors and ethics, review AOTA, NBCOT, and the State of Texas licensure requirements, and begin preparation for job searches.

OCCT 6070. Level 1 Fieldwork: School Age. 1 Credit Hour.
Students will have the opportunity to observe the occupational therapy process in public school, community, and supported employment settings with children and adolescents with developmental disabilities. Corequisites: OCCT 6020, OCCT 6021.

OCCT 6073. Level 2 Fieldwork A. 10 Credit Hours.
This first three-month fieldwork placement in an occupational therapy setting where the student will gain competence in providing occupational therapy services to individuals with physical dysfunctions or developmental disabilities.

OCCT 6074. Level 2 Fieldwork B. 10 Credit Hours.
This second three-month fieldwork placement in an occupational therapy setting where the student will gain competence in providing occupational therapy services to individuals with physical dysfunctions or developmental disabilities.

OCCT 6075. Level 1 Fieldwork: Elective. 1 Credit Hour.
Students are required to observe, participate in, and critique the occupational therapy process in a setting of their choice in collaboration with the Academic Fieldwork Coordinator.

OCCT 6076. Level 1 Fieldwork: Adult Neuromuscular Dysfunction. 1 Credit Hour.
Students are required to observe, participate in, and critique the occupational therapy process with adults and older adults with neuromuscular dysfunctions within community and rehabilitation settings.

OCCT 6077. Level I Fieldwork: Adult Biomechanical Dysfunction. 1 Credit Hour.
Students are required to observe, participate in, and critique the occupational therapy process with adults and older adults with biomechanical dysfunctions within community and rehabilitation settings.

OCCT 7000. Theoretical and Professional Foundations of Occupational Therapy. 3 Credit Hours.
Students in this course will explore the historical origins and philosophical base of the use of occupations in the profession. They will analyze philosophical, epistemological, and theoretical constructs of the profession from the inception of the profession to contemporary practice. They will examine the nature of occupation; the complex transactional relationship between the person, context or environment and concepts of occupational justice. Students will deconstruct the foundational concepts through experiential learning in a community setting. Throughout the course, students will examine the documents of the American Occupational Therapy Association, the World Federation of Occupational Therapy, and the World Health Organization, then evaluate and apply these guiding frameworks to professional cases.

OCCT 7001. Gross Anatomy. 6 Credit Hours.
This course provides a complete and detailed study of the structure and function of the human body including the study of human cadavers. Students will learn anatomical structures and systems of the human body and integrate knowledge of structure with function. Course fees: $861.

OCCT 7002. Applied Biomechanics of Movement. 4 Credit Hours.
This course builds on knowledge from Human Gross Anatomy and is the study of kinesiology and biomechanical principles related to human motion in preparation for utilizing the biomechanical approach for physical dysfunction. Students will gain an understanding of concepts pertaining to interactions between the person and the physical environment and begin to apply these for optimizing function and occupation. Students will develop and apply occupational therapy assessment techniques of the musculoskeletal system, orthotic fabrication, and treatment planning using therapeutic exercises and activity. Students will gain critical thinking and problem solving skills through labs, splint fabrication, exams, and case studies, for applying biomechanical principles to the delivery of occupational therapy.
OCCT 7003. Environmental Technologies 1. 3 Credit Hours.
This course provides the philosophical and therapeutic basis for occupational therapy utilization of adaptive, technological, and therapeutic media and materials. Students develop an understanding of the demands of interventionist technologies on clients and appraise their perception, sense of achievement and mastery through in-class experience and self-reflection. Students develop skills in applying task analysis methodologies to evaluate the occupations, client factors, performance skills, performance patterns, context(s), and environments that affect clients’ participation while demonstrating skills in the use of methods for instrumental and environmental adaptation and strategies that employ assistive techniques.

OCCT 7004. Human Occupation Across the Lifespan. 3 Credit Hours.
Students will relate their knowledge and understanding of human development throughout the life span to the client’s need for occupational participation by evaluating the interplay between life span development and the meaning and dynamics of occupation and activity in occupations, performance skills, performance patterns, activity demands, context(s) and environment as they enable the client to achieve health and wellness. Students will conceptualize and apply their understanding of the need for occupational participation throughout the life span to promote health and contribute to the prevention of disease and disability for their clients, their families, and society.

OCCT 7005. Occupational Therapy Process: Mental Health. 4 Credit Hours.
This course is a study of occupational therapy practice with individuals with mental health conditions. Students will advance their foundational knowledge of human behavior acquired in courses that include but is not limited to principles of psychology, sociology, and abnormal psychology as they develop and incorporate knowledge of the role and impact of sociocultural, socioeconomic, diversity factors, and lifestyle choices on the occupational participation of clients affected by mental illness. Through their understanding of the history and philosophical base of the profession of occupational therapy and their application of the theories that underlie this practice students will demonstrate the ability to select and provide direct, evidence-based occupational therapy assessment, intervention, and procedures to enhance their clients’ safety, health and wellness, and performance in ADL’s, IADL’s, education, work, play, rest, sleep, leisure, and social participation while incorporating the role of the occupational therapy assistant in the coordination, management of care, and transition of occupational therapy mental health services from client referral to discharge.

OCCT 7006. Foundations of Research Design. 3 Credit Hours.
This is the first course in a four course sequence designed to develop students’ knowledge and skills of research design to support the use of research evidence to occupational therapy practice and to develop and implement a scholarly study. The students will learn to search, access, analyze, critique, and synthesize literature; analyze philosophical orientations of research; evaluate quantitative and qualitative research designs; understand and interpret basic statistical measures used in data analysis; understand components of conducting research such as the development of research questions, sample selection, protection of human subjects, institutional review board requirements, and funding for research.

OCCT 7007. Level 1 Fieldwork: Mental Health. 1 Credit Hour.
Students will apply knowledge gained across the curriculum to practice in areas of occupation, performance skills, performance patterns, client factors, activity demands, and contexts with populations through directed observation and participation in practice settings related to mental health services. Students will apply evidence-based practice and clinical reasoning through course assignments.

OCCT 7008. Occupational Therapy Process: Pediatric Part 1. 5 Credit Hours.
Students in this class will compare and contrast selected theoretical perspective, models of practice, and frames of reference to achieve evidence-based pediatric occupational therapy. They will integrate these foundations into the occupational therapy processes for children with disabilities and their families to ensure cultural and socioeconomic relevancy; and child- and family-centered practice; and therapeutic-use of self. Students will develop competence in the screening, assessment and interpretation of assessments and use findings to diagnose occupational performance. Students will proficiently demonstrate research evidence-based interventions including developmental, remedial, compensatory strategies that support meaningful occupation of child in home, schools, and community. At the completion of this course, students will demonstrate use of data-driven decision making to guide assessment, intervention planning, outcome measure identification, intervention, monitoring progress/outcomes, team collaboration, and termination for infants, children, teens and young adults. Students will articulate theoretical models and evidence for the use of OT frames of reference including: occupation-based (play, school work, transition), acquisitional, social-emotional, sensory integration/process, visual perception, and biomechanical.

OCCT 7009. Clinical Conditions: Pediatrics. 2 Credit Hours.
Students will learn about the impact on occupational performance, pathophysiology, incidence and prevalence, sign and symptoms, diagnosis, and medical management of clinical conditions in pediatrics encountered in occupational therapy practice. Students will utilize clinical thinking skills to apply knowledge learned through case-based learning activities related to each condition addressed.

OCCT 7010. Application of Neural Systems to Occupation. 3 Credit Hours.
This course provides the foundation to understand the structures and functions of the developing, mature, and aging nervous system. Students will differentiate structural components of the nervous system to their function, correlate neurological examination findings with structural components, and associate neurological deficits or dysfunction seen in clinical practice with damage to specific neurological systems. Throughout the course, students will utilize deep critical thinking and problem solving skills to apply anatomical knowledge to clinical case scenarios.

OCCT 7011. Research Design and Proposal. 3 Credit Hours.
This is the second course in a four course sequence designed to develop students’ skills to develop a research proposal. Students will apply knowledge they attained in Foundations of Research regarding conducting a literature review, analyzing levels of evidence, synthesizing literature, selecting appropriate research design, and maintaining ethical conduct of research to develop a scholarly research proposal.

OCCT 7012. Level I Fieldwork: Pediatrics. 1 Credit Hour.
Students will apply knowledge gained across the curriculum to practice in areas of occupation, performance skills, performance patterns, client factors, activity demands, and contexts with populations through directed observation and participation in practice settings related to pediatric services. Students will apply evidence-based practice and clinical reasoning through course assignments.
OCCT 7013. Assessment Measures. 2 Credit Hours.
This course examines the various types of assessment measures used in occupational therapy practice. Students apply appropriate procedures to administer, score, analyze, interpret, and document the results of selected standardized and non-standardized assessment measures within the context of the occupational therapy process. Students apply their knowledge of the psychometric properties of standardized and non-standardized assessments in the selection of appropriate measures for their clients and client populations and determine the importance of statistics, tests, and measurements for the delivery of evidence-based practice. They assess the role of the occupational therapist and the occupational therapy assistant in the screening and evaluation process and relate the importance and rationale for supervision and collaboration in those processes. Students will evaluate research-based evidence for the use of assessment tools and demonstrate an understanding of how the collection, organization, and reporting of data promotes an understanding of client outcomes.

OCCT 7014. Occupational Therapy Process: Pediatric Part 2. 5 Credit Hours.
In this second pediatric process course, the students will critique the features and differences of selected theoretical perspective, models of practice, and frames of reference for evidence-based occupational therapy, including: occupation-based (ADLs, IADLs, play), task/environmental adaptation, motor learning/skill acquisitional, neurodevelopmental, biomechanical and ecological. Students will proficiently demonstrate research evidence-based interventions including developmental, remedial, and compensatory strategies supporting meaningful and contextual occupation. They will integrate these foundations into the occupational therapy processes for children with disabilities and their families to ensure cultural and socioeconomic relevancy, and child- and family-centered practice; and therapeutic-use of self. Collaborative skills with family and other professions will be developed by students. Students will show competence in the screening, assessment and interpretation of assessments and use findings to diagnose occupational performance. Students will demonstrate evidence-based decision making to guide assessment, intervention planning, outcome measure identification, intervention, monitoring progress/outcomes, and program termination for infants, children, teens and young adults. Students will expand their critical analysis of pediatric occupational therapy through written and demonstration assignments that compare and contrast models and frames of reference presented in both pediatric courses.

OCCT 7015. Pediatric Service Delivery. 3 Credit Hours.
Students in this course examine service delivery systems for infants, children and young adults with developmental disabilities. Characteristics of Early Childhood Intervention (ECI) and School-based service delivery will be compared and contrasted to the medical service delivery system. Students will describe and explain the historical development and the current implementation of legislation that supports occupational therapy services with individuals with developmental disabilities including: IDEA, Section 504 of the Rehabilitation Act of 1973, American with Disabilities Act, and Every Child Succeeds Act (ESSA) of 2015. Reimbursement regulations and practices for occupational therapy will be described by the students. Students will analyze and develop implementation procedures for children with disabilities within ECI and school settings inclusive of: Free and Appropriate Education, Early Intervening Services, Response to Intervention, and IEP and IFSP processes. Students will develop IEP and IFSP documentation including assessment, goal development, implementation, document, and transition and termination processes. Students will write consultative, team collaboration, and accountability plans used with other professionals and with occupational therapy assistants. Students will explain and provide strategies for providing OT services that are socioeconomically, culturally and contextually appropriate.

OCCT 7016. Occupational Therapy Process: Adult Neuromuscular. 5 Credit Hours.
This course is the study of occupational therapy practice with adults with neurological and neuromuscular conditions. Students will integrate knowledge learned in other foundational courses, analyze and apply theories, evidence based assessments, interventions, and strategies for treatment planning and apply it to the OT process for this population. They will demonstrate high-level clinical reasoning skills in the planning and implementation of OT intervention for adults with neurological and neuromuscular conditions.

OCCT 7017. Clinical Conditions: Adult Neuromuscular and Medical. 2 Credit Hours.
Students will learn about the impact on occupational performance, pathophysiology, incidence and prevalence, sign and symptoms, diagnosis, and medical management of clinical conditions related to neuromuscular and medical conditions encountered in occupational therapy practice with adults. Students will utilize clinical thinking skills to apply knowledge learned through case-based learning activities related to each condition addressed.

OCCT 7018. Environmental Technology 2. 3 Credit Hours.
Students will apply the Human Activity Assistive Technology (HAAT) framework to perform appropriate assessment for the provision of individualized assistive technology systems for individuals across contexts and environments. Students will explore the assistive technology available for use by individual across lifespan, integrate and describe the impact of assistive technologies on society and on the profession of occupational therapy, including ethical, cultural, and funding issues. Students will be able to gain practical experience in evaluating, prescribing, and training other in the use of all of the different types of assistive technology devices that enables performance in occupation and aids in efficiently and safety of performance in different contexts. Students will also gain the skills of applying evidence-based practice in the selection of assistive technology devices. Included are computer input/output technologies, augmentative and alternative communication systems, seating and mobility systems, electronic aids to daily living, aids for sensory impairment, and driving rehabilitation.
OCCT 7019. Inter-professional Seminar. 1 Credit Hour.
This interprofessional course provides an exploration of professional, ethical issues or leadership issues facing health professionals. Students work collaboratively in interprofessional teams reflecting on and deconstructing these issues. Students learn to articulate occupational therapy’s view of the ethical, professional, and practical considerations that affect the health and wellness needs of those who are experiencing or are at risk for social injustice, occupational deprivation, and disparity in the receipt of healthcare services. Students are exposed to knowledge of global social issues and prevailing health and welfare needs of populations with or at risk for disabilities and chronic health conditions. This allows students to integrate their knowledge and understanding of the American Occupational Therapy Association (AOTA) Occupational Therapy Code of Ethics and Ethics Standards and AOTA Standards of Practice and communicate how these serve as a guide for ethical decision making in professional interactions, client interventions, and employment settings. Students will apply the knowledge content and the interprofessional exchange of ideas to identify strategies for analyzing issues and making decisions to resolve personal and organizational bias and ethical conflicts.

OCCT 7020. Teaching and Leadership. 2 Credit Hours.
This course addresses teaching and learning, leadership, and change theories integral to occupational therapy education and leadership. Students will analyze frameworks that support teaching and learning in the practice and education settings, as well as leadership approaches that support development across settings. Students will design an education module related to the Doctoral Capstone Experience and deliver a community or professional education module.

OCCT 7021. Level I Fieldwork: Adult. 1 Credit Hour.
Students will apply knowledge gained across the curriculum to practice in areas of occupation, performance skills, performance patterns, client factors, activity demands, and contexts with populations through directed observation and participation in practice settings related to adult services. Students will apply evidence-based practice and clinical reasoning through course assignments.

OCCT 7022. Level II Fieldwork A. 9 Credit Hours.
During this first 12 week full-time fieldwork placement students will apply their understanding of the occupational therapy process, professional practice and leadership. Under the direct supervision of an occupational therapist, students will advance their clinical problem solving skills and gain competence as a generalist practitioner in providing occupational therapy services to individuals with physical dysfunctions or developmental disabilities.

OCCT 7023. Level II Fieldwork B. 9 Credit Hours.
During this second 12 week full-time fieldwork placement students will apply their understanding of the occupational therapy process, professional practice and leadership. Under the direct supervision of an occupational therapist, students will advance their clinical problem solving skills and gain competence as a generalist practitioner in providing occupational therapy services to individuals with physical dysfunctions or developmental disabilities.

OCCT 7024. Adult Service Delivery. 3 Credit Hours.
This course examines service delivery systems that exist for adults with physical dysfunction. Topics include organizational structure, variations in different practice settings, professional roles, team interactions, and documentation requirements associated with successful occupational therapy practice. Students will analyze current policy issues and trends in models of service delivery that influence the practice of occupational therapy and compare and contrast the differences in the culture and requirements of settings in which services are provided for adults including hospitals, rehab centers, out-patient clinics, home health, nursing homes and long term care, vocational settings, and hospice. Through practical application, students will learn documentation (including the use of an electronic platform), coding and billing, Medicare requirements, Functional Independence Measure (FIM) scoring, and regulations for supervising assistants and aides.

OCCT 7025. Management and Leadership in OT. 3 Credit Hours.
This course is a study of political, economic, legal, and ethical factors that impact the healthcare system and occupational therapy practice. Students will analyze various approaches to management and supervision in the profession and the community. Through exposure to current knowledge and case scenarios students identify and demonstrate techniques in the supervision and collaboration with occupational therapy assistants and other professionals concerning therapeutic interventions. Students are challenged to develop strategies for effective, competency-based legal and ethical supervision of occupational therapy and non-occupational therapy personnel. Students use self-assessments to evaluate personal and professional abilities and competencies as they relate to job responsibilities and interpret these to develop plans for improvement of personal management skills. Students are then challenged to analyze current policy issues and the social, economic, political, geographic, and demographic factors that influence the various contexts for practice of occupational therapy to select effective models of service delivery and understand their potential effect on the practice of occupational therapy.

OCCT 7026. Doctoral Seminar. 1 Credit Hour.
This course will focus on the transition from classroom to Level 2 Fieldwork experiences. Students will have the opportunity to identify Level 2 fieldwork expectations, explore professional behaviors and ethics, review AOTA, NBCOT, and the State of Texas licensure requirements. They will also finalize their mentoring agreements and individual objectives for their Doctoral Capstone Experience.

OCCT 7027. Occupational Therapy Process: Adult Biomechanical. 5 Credit Hours.
This course is the study of occupational therapy practice with adults with musculoskeletal, orthopedic, cardiac, and oncology conditions, and requires students to apply knowledge learned in Anatomy and Applied Biomechanics to integrate the content of this course. Students will analyze and apply theories, evidence based assessments, interventions, and strategies for treatment planning to support the occupational therapy process and demonstrate clinical reasoning skills in the use of treatment procedures and modalities utilized in the biomechanical approach. Students will learn and demonstrate effective interventions that include physical agent modalities, therapeutic exercises, ergonomic applications, manual therapy techniques, advanced orthotic fabrication and serial casting. The students will describe the use of these assessments and interventions for clients with disability in the participation of occupation in their home and community.
OCCT 7031. Doctoral Capstone Proposal Development 2. 2 Credit Hours.
This is the fourth course in a four course sequence designed to prepare students to develop their individual plan for their doctoral capstone. Students will integrate their knowledge of theoretical frameworks and models to guide their area of inquiry. They will continue their investigation of research design as it relates to program evaluation, program outcomes, and other outcome measures. Students will analyze and synthesize the literature in an area of interest and develop a base of support for their proposed area of scholarly investigation.

OCCT 7032. Doctoral Capstone. 12 Credit Hours.
The student will be immersed in an in-depth experience to support development of advanced skills and practice beyond a generalist in one or more of the following areas: advanced clinical practice, research, leadership/management, teaching/academia, or program development/community engagement. Students will finalize their specific learning objectives in collaboration with a faculty mentor and complete the experience in a mentored setting with faculty mentor support. The student's doctoral level skills will be demonstrated through dissemination of an individual capstone project. Students are required to successfully complete a competency requirement prior to beginning the Doctoral Capstone.

Ophthalmology (OPHT)

Courses

OPHT 4000. Special Topic. 4 Credit Hours.
This is a self-designed course created by both the student and the department to cover a specific topic. A Course Approval Form must be completed along with documentation of the designed course description.

OPHT 4001. Clinical Ophthalmology. 4 Credit Hours.
The goal of the senior selective experience is to help the student learn how to perform an ophthalmological examination using external examination techniques, Schiotz, and applanation tonometry, the direct and indirect ophthalmoscope, gonioscopy, and refraction, and to become familiar with the common systemic disorders that have ocular manifestations. The student is required to learn to recognize and understand the treatment of the most frequently encountered ocular diseases. Attire: Unless otherwise stated, scrubs should be worn in an operating room environment or during call hours. Under no circumstances may scrubs be worn during clinics or for any academic related activities. Exceptions may be made, but as a general rule, the student should always ask their faculty advisor before wearing any non-professional attire. Call: While this is not required, taking first ophthalmology call is highly encouraged as it is an excellent example of ophthalmology resident duties. We encourage all medical students to discuss this with their faculty mentor and a first or second year resident.

OPHT 4003. Clinical Ophthalmology Research. 4 Credit Hours.
The student is required to design and carry out a clinical project, review of literature, chart review, etc., with approval and guidance by instructor. The student also is required to participate with faculty instructors in seeing private patients, observing surgery, scheduled teaching conferences and Journal Club.

OPHT 4006. Ophthalmic Research. 4 Credit Hours.
The student is required to actively participate in research activities within the Department of Ophthalmology. The student is expected to carry out a research project, which may be clinical or involve laboratory research. A logical and step-wise approach to research will be emphasized, from literature review and collection of data to analysis and reporting of the results. Some time may also be available for exposure to clinic patients and performance of ophthalmological examinations.

OPHT 7000. Off Campus. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty member prior to the beginning of the rotation (at least one week before the course begins). Credit will not be given for any rotation that has not been approved in advance. Required paperwork includes: "Course Approval" form, a written letter or email for acceptance form the physician preceptor with the start and end dates of the course/rotation, and a course description of your learning objectives and responsibilities during the rotation. Forms must include a complete address and telephone number for the off campus location or residence address for the student while at the off campus site. Forms will not be approved after the rotation has already begun. Contact the department for assistance with enrolling in this course.
Oral Surgery (OSUR)

Courses
OSUR 6000. Introduction to Advanced Oral Surgery for Interns. 1 Credit Hour.

OSUR 7051. Oral & Maxillofacial Surgery. 4 Credit Hours.
The junior Oral and Maxillofacial Surgery experience will be a concentrated exposure to the specialty. OSUR 7051 consists of clinical experiences and a self-study, Canvas-based course. Biweekly seminars will supplement the self-study course. Junior students will be assigned to the Oral and Maxillofacial Surgery service for four weeks. During this time they will treat patients in the outpatient OMS clinic, the University Hospital Clinic Downtown, and they will work in the OMS Suite. Outpatient dentoalveolar surgery will be the focus. Students will have an opportunity to administer nitrous oxide sedation and observe cases where intravenous sedation is used. Opportunities may also be available for a limited number of students to observe and participate in the OR, ER, and on rounds at the University Hospital.

OSUR 8501. Specialist Advanced Oral and Maxillofacial Surgery 1. 1 Credit Hour.
Each course in this sequence contains modules in: case conference, dentofacial deformities, anesthesia and pain control, journal club, oral pathology, prosthetics conference, and morbidity and mortality conference. Students at each of the various levels participate in common session seminar, lecture, discussion, and case presentation sessions. At each progressive course level, increased knowledge, higher skills, and more-deeply-informed attitudes are expected of the student.

OSUR 8502. Specialist Advanced Oral and Maxillofacial Surgery 2. 1 Credit Hour.
Each course in this sequence contains modules in: case conference, dentofacial deformities, anesthesia and pain control, journal club, oral pathology, prosthetics conference, and morbidity and mortality conference. Students at each of the various levels participate in common session seminar, lecture, discussion, and case presentation sessions. At each progressive course level, increased knowledge, higher skills, and more-deeply-informed attitudes are expected of the student.

OSUR 8503. Specialist Advanced Oral and Maxillofacial Surgery 3. 1 Credit Hour.
Each course in this sequence contains modules in: case conference, dentofacial deformities, anesthesia and pain control, journal club, oral pathology, prosthetics conference, and morbidity and mortality conference. Students at each of the various levels participate in common session seminar, lecture, discussion, and case presentation sessions. At each progressive course level, increased knowledge, higher skills, and more-deeply-informed attitudes are expected of the student.

OSUR 8504. Specialist Advanced Oral and Maxillofacial Surgery 4. 1 Credit Hour.
Each course in this sequence contains modules in: case conference, dentofacial deformities, anesthesia and pain control, journal club, oral pathology, prosthetics conference, and morbidity and mortality conference. Students at each of the various levels participate in common session seminar, lecture, discussion, and case presentation sessions. At each progressive course level, increased knowledge, higher skills, and more-deeply-informed attitudes are expected of the student.

OSUR 8505. Specialist Advanced Oral and Maxillofacial Surgery 5. 1 Credit Hour.
Each course in this sequence contains modules in: case conference, dentofacial deformities, anesthesia and pain control, journal club, oral pathology, prosthetics conference, and morbidity and mortality conference. Students at each of the various levels participate in common session seminar, lecture, discussion, and case presentation sessions. At each progressive course level, increased knowledge, higher skills, and more-deeply-informed attitudes are expected of the student.

Orthodontics (ORTH)

Courses
ORTH 5010. Introduction to Orthodontics. 0.5 Credit Hours.
The expected to gain understanding of basic clinic operations, laboratory procedures and collection of orthodontic database including study models, photographs, and orthodontic clinical exams.

ORTH 5011. Orthodontic Techniques. 1 Credit Hour.
This course is designed to present to the students all modern orthodontic techniques, approached and appliance. The prerequisite for the course is solid biomechanics and understanding of importance of setting specific treatment goals for each patient. Discussions are led by the instructor on the cases treatment by the residents where the theoretical knowledge is applied.

ORTH 5012. Orthodontic Lab Technique. 0.5 Credit Hours.
The students are exposed to didactic teaching and practical hands on instruction about the design and fabrication of various orthodontic appliances including removable appliances, retainers and special custom designed appliances for complex orthodontic patients.

ORTH 5013. Orthodontic Treatment Planning. 0.5 Credit Hours.
The principles of the initial and advanced treatment planning are presented in this case based course. The student will learn how to effectively use databases including cephalometrics and 3-D imaging into making treatment decisions and presenting the treatment options to the patient.

ORTH 5014. Literature Seminars. 0.5 Credit Hours.
The students are taught to critically analyze and present current orthodontic literature, make effective presentations and learn how to categorize a research study within the hierarchy of research publications.

ORTH 5015. Orthodontic Biomechanics. 1 Credit Hour.
This course is designed to equip the student with knowledge of basic biomechanics and utilization of fundamental physical principles in orthodontics. It includes application of biomechanical principles in the design of the appliance and predictable tooth movement to achieve orthodontic movement goals.
ORTH 5020. Clinical Orthodontics 1. 1 Credit Hour.
During this clinical course, the student will be exposed to and learn all modern orthodontic techniques, approaches and appliances through treatment of about 65 orthodontic patients started by the student. In addition, about 20 transfer cases will be assigned to each student at the beginning of each year. The course will result in clinical competency of the student and preparation of at least six board quality cases for certification straight out of the residency program.

ORTH 5021. Clinical Orthodontics 2. 4 Credit Hours.
During this clinical course, the student will be exposed to and learn all modern orthodontic techniques, approaches and appliances through treatment orthodontic patients with several malocclusion and patients with craniofacial deformities started by the student, in addition understand the marketing side of orthodontics.

ORTH 5026. Clinical Orthodontics 2. 4 Credit Hours.
During this clinical course, the student will be exposed to and learn all modern orthodontic techniques, approaches and appliances through treatment orthodontic patients with several malocclusion and patients with craniofacial deformities started by the student, in addition understand the marketing side of orthodontics.

ORTH 5028. ABO Literature Review. 1 Credit Hour.
This series of seminars focuses on the literature required by the American Board of Orthodontics for the written board examination which the residents take during the spring semester of the second year. The seminars include in-depth coverage of the presented articles and topics and board-provided materials for preparing for the board written exam.

ORTH 5030. Case Analysis Seminars 1. 1 Credit Hour.
In this series of seminars, one resident is selected for each class to present a case of their choice with an in-depth analysis of the development of treatment planning, design of the appliance, and progress and outcome of the treatment. Other students in the audience are encouraged to ask questions and develop a discussion about the case and treatment approaches used.

ORTH 5035. Current Literature Review 1. 1 Credit Hour.
During this series of seminars attended by multiple of orthodontic faculty, the residents are presenting selected papers on current orthodontic topics. The seminars include in-depth discussion of the methodology, design of the study, interpretation of the results and conclusions based on the presented results. This course is designed to familiarize the student with all areas of current orthodontic literature and is a supplement to all didactic courses.

ORTH 5037. Orthodontic Lecture Series 1. 1 Credit Hour.
This series of orthodontic didactic lectures is a multifaceted course taught by several faculty during the course of the program. The topics covered in the course include periodontal consideration in orthodontics, orthodontic radiology, oral pathology, anatomy and histology and principles of growth and development.

ORTH 5070. Practice Management. 0.5 Credit Hours.
The practice Management course for orthodontics is an orthodontic specialty course designed to teach residents tools in managing a successful practice.

ORTH 5090. Research 1. 0.5 Credit Hours.
Following the course on Research Methodology, the student meets with the faculty and attends presentations on research topics from which he/she can select the topic of interest for the research project. Several components of that course throughout the duration of the program include understanding of research topics of interest to clinical orthodontics, design of clinical study and practical laboratory research on the selected project under the guide of student's research mentor.

ORTH 6000. Introduction to Advanced Orthodontics for Interns. 1 Credit Hour.
ORTH 7073. Junior Orthodontic Lectures And Case Analysis. 1 Credit Hour.
This advanced lecture/case presentation series emphasizes the principles of orthodontic diagnosis and treatment planning for limited orthodontic procedures and the principles of comprehensive orthodontic therapy, interdisciplinary dentistry, and orthognathic surgery.

Orthopedics (ORTO)

Courses
ORTO 4000. Special Topic. 4 Credit Hours.
This is a self-designed course created by both the student and the department to cover a specific topic. A Course Approval Form must be completed along with documentation of the designed course description.

ORTO 4003. Selective In Hand Surgery. 4 Credit Hours.
The student participates as a team member on the Orthopaedic Hand Surgery Service of University Hospital. The student participates in the care of acute, traumatic, and elective reconstructive problems of the hand. Principles of examination of the hand and upper extremity, as well as patient management, are taught through clinical experience and gross dissection of the upper extremity. The student is required to attend core lectures on basic orthopaedics by orthopaedic faculty. No late drops. Prerequisite: ORTO 4005.

ORTO 4005. Trauma, Fracture & Clinical Care. 4 Credit Hours.
Participate as a member of an orthopaedic elective service team (including VA) for two weeks and two weeks as a member of the orthopaedic trauma service. On the elective service, the student will be assigned to a specific resident and faculty member to work in the outpatient clinics, on wards, and in surgery. Experience will emphasize both operative and nonoperative treatment. On the trauma service, the student will be assigned to a specific resident to work in the emergency room, trauma clinics, and operating room. Broad experience in assessment and care of extremity trauma will include fracture reduction and application of plaster casts. The student is required to also attend core lectures in basic orthopaedics by faculty. Reading material includes excerpts from Essentials of Musculoskeletal Care, as well as reading material required by a particular service. No late drops.
ORTO 4006. Adult Reconstruction In Orthopaedics. 4 Credit Hours.
Assigned to the Total Joint Service. Clinic exposure includes two half
days of adult reconstruction clinic: one at UT Medicine and the second
at University Clinic Downtown. Students are required to learn to conduct
a thorough orthopaedic examination including preoperative and post-
operative evaluations. Operative experience includes two or three days
per week at University Hospital, Audie L. Murphy V. A. Hospital, and Santa
Rosa Northwest. Students will scrub with and assist Dr. Marshall and/or
Dr. Trick in the operating room. Procedures primarily include total hip and
total knee replacement and revision as well as hip and knee arthroscopy.
Learning objectives will focus on basic biomechanics, anatomy, and
perioperative care. Will attend core lectures on basic orthopaedics by
orthopaedic faculty. Reading material includes excerpts from Essentials
of Musculoskeletal Care. No late drops.

ORTO 4008. Pediatric Orthopaedics SRCH/UH. 4 Credit Hours.
Students are assigned to work with one of the pediatric orthopaedic
faculty for broad exposure in the essentials in pediatric orthopaedics.
Students are required to attend outpatient clinics at Christus Santa
Rosa Children's Hospital, University Clinic Downtown, and University
Clinic. Students are required to perform preoperative workups, attend
surgery, and attend conferences at Christus Santa Rose Children’s
Hospital. Both assessment and treatment of pediatric trauma, congenital
conditions such as clubfoot and dislocated hip, spinal disease, and
neuromuscular conditions such as cerebral palsy will be emphasized.
Students are required to attend core lectures on basic orthopaedics by
orthopaedic faculty. Reading material includes excerpts from Essentials
of Musculoskeletal Care, as well as reading material required by a
particular service. No late drops.

ORTO 4009. Orthopaedics Research. 4 Credit Hours.
The student will be assigned to the supervision of one member of the
orthopaedic faculty to carry out either a basic or clinical research project.
The content and scope of the project will be determined by the student
and faculty member prior to the start of the rotation. Either basic or
clinical studies may be undertaken. Students are required to attend core
lectures in basic orthopaedics by faculty. Reading material includes
excerpts from Essentials of Musculoskeletal Care, as well as reading
material required by a particular service. No late drops.

ORTO 4011. Sports Medicine Selective. 4 Credit Hours.
Students are assigned to the Sports Medicine Service. Students are
required to participate in the knee rehabilitation clinic, weekly training-
room visits, and attend surgeries. Introduction to the diagnosis and
treatment of joint instability as well as care of the athlete will be made.
Students are required to attend core lectures in basic orthopaedics by
faculty. A brief review paper on a sports subject related to the
student’s chosen field of study, researched and submitted in rough
draft, is required. Reading material includes excerpts from Essentials
of Musculoskeletal Care. No late drops.

ORTO 4012. Orthopaedic Oncology. 4 Credit Hours.
Students are required to participate as a member of Orthopaedic
Oncology Service. Students are required to participate in initial
evaluations, staging, biopsy and definitive treatment of patients with
primary musculoskeletal tumors and cancer metastatic to bone. Regional
anatomy, pathology, and initial patient evaluation are emphasized. Each
student is required to prepare a case presentation and discussion.
Clinical experience and surgical exposure will be included. Students are
required to attend core lectures in basic orthopaedics by faculty. Reading
material includes excerpts from Essentials of Musculoskeletal Care, as
well as reading material required by this service. No late drops.

ORTO 4014. Primary Care Orthopaedics. 4 Credit Hours.
A thorough outpatient orthopaedic primary care experience working
under direct faculty supervision in Outpatient Clinics, this rotation
is ideal for the student who wishes to pursue a career in Primary
Care Medicine. The focus will be on common outpatient orthopaedic
disease of the upper extremity, spine, and lower extremity. In addition,
students will be given the opportunity to learn to assess and treat
sports injuries, orthopaedic disorders of children, and in the treatment of
musculoskeletal tumors. No attendance in the operating room is required.
Students are required to attend core lectures in basic orthopaedics by
faculty. Reading material includes excerpts from Essentials of
Musculoskeletal Care. No late drops.

ORTO 7000. Off Campus. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty
member prior to the beginning of the rotation (at least one week before
the course begins). Credit will not be given for any rotation that has
not been approved in advance. Required paperwork includes: “Course
Approval” form, a written letter or email for acceptance form the
physician preceptor with the start and end dates of the course/rotation,
and a course description of your learning objectives and responsibilities
during the rotation. Forms must include a complete address and
telephone number for the off campus location or residence address for
the student while at the off campus site. Forms will not be approved after
the rotation has already begun. Contact the department for assistance
with enrolling in this course.

ORTO 7001. Orthopaedics Preceptorship. 4 Credit Hours.
Students are assigned to a practicing orthopaedic surgeon or group
from the Clinical Orthopaedic Faculty, either in San Antonio or out-of-
town. The student is required to see patients in the surgeon's private
office, participate in the care of patients in the emergency room, and be
involved in surgical cases. Rotations available include (but not limited to)
preceptorships in hand surgery, sports medicine, spinal surgery, joint
replacement, pediatric orthopaedics, and general orthopaedics. A rotation
description from the selected site must be turned in to the Orthopaedic
Student Administrator.

Otolaryngology (OTOL)

Courses

OTOL 4000. Special Topic. 4 Credit Hours.
Special topics in Otolaryngology-Head and Neck Surgery.

OTOL 4001. Head & Neck Surgery. 4 Credit Hours.
The course is a clinical experience in the outpatient, in-patient, and
operative environments. The course is normally offered for those
senior medical students who are interested in pursuing a career in the
field, although the clinical experience is also valuable for students
interested in primary care, ophthalmology, and applicable internal
medicine subspecialties. The student clerk is a full participatory member
of the clinical team and will gain valuable knowledge and experience
in the diagnosis, medical, and surgical care of the patient with upper
aerodigestive tract and related disorders. The student will have the
opportunity to enhance her/his surgical technical skills, including
emergency patient care. Clinical activities are available at both the
University Hospital System and the VA Hospital. Clerkships at BAMC
or WHAFMC are arranged through the institution's education office.
Exposure to the breadth and depth of the field includes general and
pediatric otolaryngology, rhinosinusology, head and neck oncologic
surgery, otology, laryngology and bronchoesophagology, maxillofacial
trauma, and facial plastic and reconstructive surgery.
OTOL 4002. Otorhinolaryngology Research. 4 Credit Hours.
The department offers students research opportunities in a diverse and wide range of clinical and basic science topics. Areas of ongoing research include voice disorder, head and neck oncology, animal models in laryngo-tracheal stenosis, and clinical outcomes studies. New opportunities for research are present in the functional areas of otolaryngology and hearing science, head and neck surgery, laryngology, general otolaryngology, and facial plastic and reconstructive surgery.

OTOL 7000. Off Campus. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty member prior to the beginning of the rotation (at least one week before the course begins). Credit will not be given for any rotation that has not been approved in advance. Required paperwork includes: "Course Approval" form, a written letter or email for acceptance form the physician preceptor with the start and end dates of the course/rotation, and a course description of your learning objectives and responsibilities during the rotation. Forms must include a complete address and telephone number for the off campus location or residence address for the student while at the off campus site. Forms will not be approved after the rotation has already begun. Contact the department for assistance with enrolling in this course.

Pathology (PATH)

Courses

PATH 4001. Hematology - University Hospital. 4 Credit Hours.
During this selective, through daily experience, consultations, and conferences, students will have the opportunity to learn to use CBCs, blood films, bone marrow studies, and other hematologic laboratory data in the diagnosis of basic hematologic, lymphoid, and coagulation disorders. This selective can be tailored according to the needs of individual students. The student interested in primary care can become involved in the performance of common laboratory tests done in the office. Daily contact with the pathologist will provide guidance in selection and proper utilization of laboratory testing for a specific patient’s problem. For the student interested in pathology and laboratory medicine, the organization, management, maintenance of quality control, and consultative role of the Hematology Laboratory will be emphasized. During the selective period, a student may be assigned to spend one week in flow cytometry, molecular genetics, or cytogenetics.

PATH 4002. Blood Banking. 4 Credit Hours.
This selective is to acquaint the student with transfusion practices including the indications, dosage, expected benefits and risks of the different blood components, and the performance of therapeutic apheresis. The student will also be exposed to basic immuno-hematology and blood-banking techniques of acquiring, processing, testing, and transfusing blood components. Under the direction of the pathologist, a transfusion medicine fellow, a pathology resident, and a technical specialist in blood banking, the student will be required to perform basic techniques, participate in resolving the problems of patients having difficulties in transfusion, and evaluate the appropriateness of transfusion episodes. The selective can be tailored to offer more experience in transfusion practices for patient care or in organization, management, quality control, and other factors important to the student who may consider laboratory medicine as a chosen field. Students are required to participate in consultations and education programs offered by the blood bank.

PATH 4003. Hematology/Blood Banking. 4 Credit Hours.
This combination selective between the Hematology Laboratory and the Blood Bank may be arranged if student so desires.

PATH 4007. Pathology Research. 4 Credit Hours.
The course involves participation in a selected facet of ongoing research projects being conducted by a faculty member with assigned responsibilities for technical performance, reading, and interpretation of results.

PATH 4012. Anatomic Pathology: Fine Needle Aspiration. 4 Credit Hours.
Students will be given the opportunity to learn the technique of fine needle aspiration (FNA) biopsy. Direct supervision by faculty, cytology fellow and/or pathology resident in the method of specimen procurement and preparation of the FNA specimen occurs after initial instruction by the course director or their designee for palpable lesions. Participation at radiologically guided or endoscopically guided FNAs is also observed. Students are required to learn basic Modified-Giemsa staining with preliminary evaluation for adequacy of aspirate. There will be exposure to basic interpretation of FNA material from smears and cell blocks with emphasis on selection of ancillary testing along with clinical correlation. A separate clinic time is NO longer available and FNAs are done on an "on-call" basis from UHS cytopathology. Exposure to other areas of anatomic pathology that pertain to quality improvement of clinical medicine skills will also be made available. The experience may be customized depending on the student’s future interests (pathology as a future vocation versus students planning on other fields of medicine).

PATH 4015. Forensic Pathology. 2 Credit Hours.
Daily responsibilities include the observation of forensic autopsies. Other responsibilities will include crime scene investigation, courtroom, and/or deposition exposure. During the rotation period, the student is expected to spend some time within the toxicology laboratory and must arrange this with the chief toxicologist. Near the end of the rotation, the student is expected to present a talk on a topic of current forensic interest to the staff during weekly case review. The student will be assessed by attendance, type and frequency of activities performed, and subjective evaluations by the medical examiner staff. This forensic pathology rotation must be pre-approved by the course director for both time period and length of rotation; recommended during the fourth year of medical school following core rotation in general autopsy and surgical pathology, though those rotations are not required.

PATH 4104. Naturopathic Medicine: Evidence-Based Critique. 0.5 Credit Hours.
This course strives to overcome the animosity between conventional and unconventional medicine by openly discussing and evaluating some of the naturopathic methods using the tools of evidence-based medicine. The objective of this course is to build basic knowledge about the mainstreams of naturopathic medicine such as fito-therapy, acupuncture and other reflexologies, Asian and European dietary systems, as well as stimulatory methods such as fasting and homeopathy. For each of these systems, diagnosis and treatment will be discussed from the evidence-based perspective.

PATH 4105. Evidence Based Medicine In Everyday Practice. 0.5 Credit Hours.
This course includes theory and methodological foundation, definitions and overview of evidence-based medicine, practical considerations, and reporting in evidence-based medicine.
PATH 4290. Clinically Applied Laboratory Medicine (CALM). 0.5 Credit Hours.
This course is an eleven-contact-hour mandatory course in laboratory medicine for MSIV students. Offered during the spring semester, the course is taught by members of the Pathology Department using patient case scenarios to illustrate laboratory medicine aspects of patient care management. An introductory one-hour lecture is presented to the entire class as a whole to provide course format information and small-group assignments. Groups of twenty-five to thirty students are formed based upon medical/surgical specialties; a student is assigned to a group according to chosen specialty. Patient cases are selected to emphasize important laboratory medicine points pertinent to a particular specialty.

PATH 5021. Biostatistics. 3 Credit Hours.
An introduction to Biostatistics, emphasis is upon application of statistical methods to biological problems. Topics include descriptive statistics, probability, hypothesis testing, and estimation.

PATH 5025. Individual Study In Biometry. 1-9 Credit Hours.
This course is for students who wish to study special problems in biometry or application of biometric methods to problems in the life sciences. A plan of study is determined by the student and the biometry faculty with topics varying according to the interests and requirements of the student.

PATH 5030. Oral Histopathology. 1 Credit Hour.
The course will review the histopathologic features of oral diseases. Cases signed-out on the Oral & Maxillofacial Pathology Biopsy Service will be discussed in a conference format utilizing a multiheaded microscope. Correlation of the histologic findings with the clinical and radiographic presentation of oral disease processes will be emphasized. Students will have the opportunity to learn the basis of surgical pathologic diagnosis and related ancillary special studies.

PATH 5035. Oral Pathology. 2 Credit Hours.
Clinicopathologic correlations, differential diagnosis, and therapeutic rationale are emphasized. The integration of history, physical findings, and clinical laboratory data with pertinent radiographic findings, clinical presentations, and anatomic pathology will be emphasized.

PATH 6026. Graduate Oral and Maxillofacial Pathology - Clinicopathologic Conference 1. 1 Credit Hour.
This course is presented in the first semester and consists of 16 one-hour sessions of instruction conducted as case conferences utilizing radiographic, histopathologic, and clinical projected glass slides and Kodachromes. Students present assigned literature reviews and cases emphasizing radiographic and histopathologic changes; discussions follow. Students include those from Oral and Maxillofacial Surgery, Periodontics, Endodontics, and Dental Diagnostic Sciences.

PATH 6027. Graduate Oral and Maxillofacial Pathology - Clinicopathologic Conference 2. 1 Credit Hour.
This course is a continuation of PATH 6026 Grad Oral/Maxillofacial Path 1. It is presented in the second semester and consists of 17 one-hour sessions of instruction conducted as case conferences utilizing radiographic, histopathologic, and clinical projected glass slides and Kodachromes. Students present assigned literature reviews and cases emphasizing radiographic and histopathologic changes; discussions follow. Students include those from Oral and Maxillofacial Surgery, Periodontics, Endodontics, and Dental Diagnostic Sciences. Prerequisite: PATH 6026.

PATH 7000. Off Campus. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty member prior to the beginning of the rotation (at least one week before the course begins). Credit will not be given for any rotation that has not been approved in advance. Required paperwork includes: “Course Approval” form, a written letter or email for acceptance form the physician preceptor with the start and end dates of the course/rotation, and a course description of your learning objectives and responsibilities during the rotation. Forms must include a complete address and telephone number for the off campus location or residence address for the student while at the off campus site. Forms will not be approved after the rotation has already begun. Contact the department for assistance with enrolling in this course.

PATH 7023. Oral & Maxillofacial Pathology: Clinicopathologic Conference. 1 Credit Hour.
This course is a series of 14 clinicopathologic conferences presented in an interactive case-based/clinical problem-solving format. Students will be expected to apply their fund of basic science knowledge learned in the prerequisite didactic pathology courses to simulated dental practice situations. Cases will be discussed systematically utilizing the S.O.A.P. format (Subjective, Objective, Assessment, Plan). Students are required to complete and turn in a worksheet and self assessment for each case. Students are expected to read articles from current scientific literature posted on the course site and take the online challenge examinations. Lectures on the critical topics of head and neck cancer and skin cancer will be given by the course director.

Pediatric Dentistry (PEDO)

Courses

PEDO 5020. Pediatric and Orthodontic Clinic 1. 2 Credit Hours.
The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience that will enable her or him to function as a proficient and competent provider of comprehensive dental services for children. Throughout the two-year program, residents will be expected to apply the information gained in the didactic part of the program to the delivery of dental care in the various clinical settings encompassed by the program. Although supervision by faculty is always provided, residents are expected to demonstrate increasing independence and initiative as they progress in clinical experience.

PEDO 5021. Pediatric & Orthodontic Clinic 2. 5 Credit Hours.
The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience that will enable her or him to function as a proficient and competent provider of comprehensive dental services for children. Throughout the two-year program, residents will be expected to apply the information gained in the didactic part of the program to the delivery of dental care in the various clinical settings encompassed by the program. Although supervision by faculty is always provided, residents are expected to demonstrate increasing independence and initiative as they progress in clinical experience.

PEDO 5022. Pediatric and Orthodontic Clinic 3. 6 Credit Hours.
The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience that will enable her or him to function as a proficient and competent provider of comprehensive dental services for children. Throughout the two-year program, residents will be expected to apply the information gained in the didactic part of the program to the delivery of dental care in the various clinical settings encompassed by the program. Although supervision by faculty is always provided, residents are expected to demonstrate increasing independence and initiative as they progress in clinical experience.
PEDO 5026. Orthodontics I. 2 Credit Hours.
This course comprises two seminar series in which orthodontic diagnosis and treatment principles for the primary and mixed dentitions are presented. Included also are laboratory technique exercises in which commonly used orthodontic appliances are constructed.

PEDO 5027. Orthodontics 2. 2 Credit Hours.
These seminars consist of a series of selected orthodontic topics that will be assigned to individual residents for presentation to their classmates and faculty. The course director will provide a seminal article on the assigned topic from which the resident will research additional references and present a seminar session based on the material.

PEDO 5028. Orthodontics 3. 1.5 Credit Hour.
These seminars consist of a series of selected orthodontic topics that will be assigned to individual residents for presentation to their classmates and faculty. The course director will provide a seminal article on the assigned topic from which the resident will research additional references and present a seminar session based on the material.

PEDO 5042. Pediatric Dentistry I. 2 Credit Hours.
This course comprises several seminar series and lectures on a variety of subjects pertinent to advanced pediatric dentistry. Included are conscious sedation, pulp therapy, traumatic dental injuries, cariology and prevention, periodontal problems, special patient care, infection control, restorative materials and techniques, radiographic principles and practice, and pediatric grand rounds.

PEDO 5043. Pediatric Dentistry 2. 6 Credit Hours.
This course is largely a continuation of lectures and seminars on the subject matter introduced in PEDO 5042 Pediatric Dentistry 1, but also adds case conferences and current literature seminars.

PEDO 5044. Pediatric Dentistry 3. 6 Credit Hours.
In part, this is a continuation of some lecture and seminar topics from PEDO 5043 Pediatric Dentistry 2. In addition, the following subject matter will be presented: behavior management, psychosocial growth and development, pediatric oral pathology, advanced nutrition, craniofacial growth and development, antibiotics, and analgesics and sedatives.

PEDO 5051. Pediatric Physical Diagnosis. 1.5 Credit Hour.
The pediatric dental resident will be given the opportunity to learn physical evaluation of a child’s various systems to determine the patient’s status prior to administration of general anesthesia.

PEDO 6000. Introduction to Advanced Pediatric Dentistry for Interns. 1 Credit Hour.
This is a one year program during which the student intern participates in similar curricular activities as the first year pediatric dentistry residents. The student will attend didactic courses with the first year residents and participate in presentations of journal articles in seminars. The student will participate in weekly case presentations and interdisciplinary dentistry seminars, as well as lectures by guest speakers in our institution. Clinical activities will involved hands-on contact with patients and working on pediatric patients under the supervision of pediatric dentistry residents and faculty. The intern will be assigned their own patients, and will attend clinic sessions with the pediatric dentistry residents. Interns will rotate through our offsite clinics, providing comprehensive dental care to pediatric patients.

PEDO 6023. Pediatric And Orthodontic Clinic 4. 7 Credit Hours.
The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience that will enable him or her to function as a proficient and competent provider of comprehensive dental services for children. Throughout the two-year program, residents will be expected to apply the information gained in the didactic part of the program to the delivery of dental care in the various clinical settings encompassed by the program. Although supervision by faculty is always provided, residents are expected to demonstrate increasing independence and initiative as they progress in clinical experience.

PEDO 6024. Pediatric and Orthodontic Clinic 5. 4.5 Credit Hours.
The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience that will enable him or her to function as a proficient and competent provider of comprehensive dental services for children. Throughout the two-year program, residents will be expected to apply the information gained in the didactic part of the program to the delivery of dental care in the various clinical settings encompassed by the program. Although supervision by faculty is always provided, residents are expected to demonstrate increasing independence and initiative as they progress in clinical experience.

PEDO 6025. Pediatric and Orthodontic Clinic 5. 7 Credit Hours.
The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience that will enable him or her to function as a proficient and competent provider of comprehensive dental services for children. Throughout the two-year program, residents will be expected to apply the information gained in the didactic part of the program to the delivery of dental care in the various clinical settings encompassed by the program. Although supervision by faculty is always provided, residents are expected to demonstrate increasing independence and initiative as they progress in clinical experience.

PEDO 6029. Orthodontics 4. 2 Credit Hours.
These seminars consist of a series of selected orthodontic topics that will be assigned to individual residents for presentation to their classmates and faculty. The course director will provide a seminal article on the assigned topic from which the resident will research additional references and present a seminar session based on the material.

PEDO 6030. Orthodontics 5. 2 Credit Hours.
These seminars consist of a series of selected orthodontic topics that will be assigned to individual residents for presentation to their classmates and faculty. The course director will provide a seminal article on the assigned topic from which the resident will research additional references and present a seminar session based on the material.

PEDO 6045. Pediatric Dentistry 4. 6 Credit Hours.
A continuation of the case conferences, current literature seminars, and pediatric grand rounds, this course also introduces practice management and topics in clinical genetics.

PEDO 6083. Investigative Project. 1 Credit Hour.
Each resident is required to carry out an investigative project that may be laboratory-, clinic-, or library-based, depending on the interests of the student. Projects must be submitted in the form of a manuscript or publishable quality.

PEDO 6084. Investigative Project. 1 Credit Hour.
Each resident is required to carry out an investigative project that may be laboratory-, clinic-, or library-based, depending on the interests of the student. Projects must be submitted in the form of a manuscript or publishable quality.
PEDO 6146. Pediatric Dentistry 5. 5 Credit Hours.
This course continues the case conferences, current literature seminars, and pediatric grand rounds of PEDO 6045 Pediatric Dentistry 4, adding craniofacial anomalies seminars.

PEDO 7091. Pediatric Dentistry Clinic. 2 Credit Hours.
Clinical experience with child patients gives students the opportunity to gain clinical judgement and proficiency while practicing comprehensive dentistry for children. Areas of competency include prevention, examination, diagnosis and treatment planning, local anesthesia, operative dentistry, pulpal therapy, oral injuries, oral surgery, preventive and interceptive orthodontics, behavior management, maintenance care, and periodontics.

**Pediatrics (PEDI)**

**Courses**

PEDI 3005. Pediatrics Clerkship. 6 Credit Hours.
This third-year pediatric clerkship addresses issues unique to childhood and adolescence by focusing on human developmental biology, and by emphasizing the impact of family, community, and society on child health and well-being. Additionally, the clerkship focuses on the impact of disease and its treatment on the developing human, and emphasizes growth and development, principles of health supervision, and recognition of common health problems. The role of the pediatrician in prevention of disease and injury and the importance of collaboration between the pediatrician and other health professionals in stressed. During this clerkship, students spend time working in outpatient and inpatient settings.

PEDI 4000. Special Topic. 4 Credit Hours.
This is a self-designed course created by both the student and the department to cover a specific topic. A Course Approval Form must be completed along with documentation of the designed course description.

PEDI 4003. General Pediatrics Selective. 4 Credit Hours.
The goal of the General Pediatrics Selective is to teach medical students the knowledge and skills to understand human growth and development and its clinical application from infancy through adolescence; to take a complete, accurate, and culturally-sensitive history from children and their families; and to perform complete and problem-focused physical examinations of infants, children and adolescents for common acute and chronic pediatric illnesses. Students will communicate effectively in written and oral form with physicians, patient families, and clinic staff; describe the influence of family, community, and society on child health and disease; incorporate strategies for health promotion and injury prevention into patient care; and refer to and coordinate care with subspecialists and community agencies. Students will interpret common radiologic studies and perform office-based diagnostic tests and minor procedures. Students will be expected to demonstrate professional responsibility in working as a team member with other members of the General Pediatrics team, patients, and families. Students work Monday-Friday with faculty and residents in an academic clinic primarily in the acute care setting.

PEDI 4006. Pediatric Cardiology. 4 Credit Hours.
The goal of the Pediatric Cardiology Selective is to improve the student's understanding of the pathophysiology and management of pediatric and congenital heart diseases. Clinical skills in cardiac auscultation, EKG interpretation, and chest x-ray interpretation will be emphasized primarily in the outpatient setting. The student will observe noninvasive techniques in diagnosis such as echocardiography and invasive procedures in the cardiac catheterization laboratory. The student will participate in didactic instruction and online materials to improve knowledge and skills. The student is expected to research a cardiology topic during the rotation, and give a presentation on findings to the group at the end of the rotation. Student learning will be further enhanced by participation in weekly multidisciplinary patient management conferences. The student will be expected to demonstrate professional responsibility in working as a team member with other members of the Pediatric Cardiology care team, patients, and families.

PEDI 4009. Pediatric Gastroenterology/Nutrition. 4 Credit Hours.
The goal of the Pediatric Gastroenterology Selective is to increase the knowledge and skills of students in the diagnosis and management of gastrointestinal, liver, and nutritional disorders of children. Clinical teaching activity takes place in the inpatient setting, with opportunities to follow patients in the outpatient setting. The student will actively participate in evaluating and managing patients including observing endoscopy and other procedures if necessary. Required reading and discussion of study material with faculty will be expected. The student will participate in didactic sessions to enhance learning of common diagnoses. The student will be expected to demonstrate professional responsibility in working as a team member with other members of the Pediatric Gastroenterology team, patients, and families.

PEDI 4013. Pediatric Hematology/Oncology. 4 Credit Hours.
The goal of the Pediatric Hematology/Oncology Selective is to develop knowledge and skills in diagnostic evaluation, therapy, and follow-up of hematology/oncology patients. Clinical activities will take place primarily in the outpatient setting. This is an opportunity for experience in blood and bone marrow morphological diagnosis, in techniques for bone marrow aspiration, and in administration of intravenous and intrathecal chemotherapy. The student will work with a multidisciplinary team to meet the complex psychosocial needs of this patient population. The student is expected to demonstrate professional responsibility in working as a team member with other members of the Pediatric Hematology/Oncology team, patients, and families. Pediatric Clerkship is required prior to taking this course.

PEDI 4015. Pediatric Hematology/Oncology Research. 4 Credit Hours.
Previous experience with introductory adult or pediatric hematology/oncology courses preferred. The student will participate in a clinical or basic investigation project on a topic of interest to the student under the supervision of the medical staff. The research might utilize retrospective information on specific groups of patients treated at the Children’s Cancer Research and Treatment Center, the Hematology Clinic, or the Bone Marrow Transplant Unit; or it may investigate in-depth a particular clinical or basic facet of a disease process.
PEDI 4016. Pediatric Allergy, Immunology, And Infectious Diseases. 4 Credit Hours.
The goal of this Selective is to develop student skills in clinical and laboratory evaluation of hypersensitivity, infection, immunity, and inflammation, and in the management of allergic disease, infectious disease, primary and secondary immune deficiencies, rheumatologic conditions, and associated complicated complications. The scope of infectious diseases typically encountered includes community and hospital acquired infections, including post-surgical infections, infections in cancer and transplant patients, and HIV-infected children. The student will participate in outpatient clinics and inpatient consultations. The student will spend time in the laboratory covering bacteriology, virology, mycology, flow cytometry, and HLA typing. Scheduled conferences include weekly Case Management which will include presentation of patient cases to the faculty and care team. The student is expected to research a pertinent topic during the rotation and give a presentation on findings to the group at the end of the rotation. The student is expected to demonstrate professional responsibility in working as a team member with other members of the Pediatric infectious Disease, Allergy, and Immunology teams, patients, and families.

PEDI 4018. Child Neurology. 4 Credit Hours.
The goal of the Child Neurology Selective is to develop the knowledge and skills to evaluate and manage children with neurologic disorders. The student will distinguish normal from abnormal neurologic development; perform a skillful neurologic history and exam to distinguish normal from abnormal findings, peripheral from central nervous system lesions, and static from progressive neurologic dysfunction; identify temporary vs. chronic progressive neurological dysfunction; and recognize and manage neurological disorders that generally require referral. Students will be able to discuss the indications, side effects, and mode of action of commonly used medications in pediatric neurology; the indications for complex or expensive neurologic testing; and the pediatrician's role in prevention of neurologic disorders in children. Patient activity is primarily in the outpatient setting, but students will participate in consultations and care of select inpatients. Students are expected to demonstrate professional responsibility in working as a team members of the Pediatric Neurology care team, patient, and families.

PEDI 4020. Pediatric Endocrinology. 4 Credit Hours.
The goal of the Pediatric Endocrinology Selective is to develop the knowledge and skills needed to diagnose and manage disorders of thyroid/parathyroid, adrenal/gonad, growth (including hypopituitarism), and carbohydrate metabolism (including diabetes mellitus). Most patient care activity occurs in the outpatient setting with clinics focused on either diabetes (type 1, type 2, medul diabetes) or endocrine issues. Students will explain how to use a glucometer and insulin pump and how to perform growth and puberty stimulation tests. Directed reading is provided, and the patients are reviewed and the pertinent literature discussed at regularly scheduled conferences. Each student will present one interesting case at a weekly Case Conference. Students are expected to demonstrate professional responsibility in working as a team member with other members of the Pediatric Endocrinology team, patients, and families.

PEDI 4022. Neonatal Research. 4 Credit Hours.
This rotation is designed for students interested in laboratory or clinical research experience in Perinatal Medicine. The student will work directly under the guidance of a faculty member and be involved in data gathering, chart review, or lab work in the area of research in which the faculty is involved and commensurate with the student’s experience and interests. The selective will provide opportunities for protocol development, literature review, data analysis, and learning through reading and student-faculty interaction. Students must arrange to work with a neonatal faculty member before contacting the department for permission.

PEDI 4023. Neonatology. 4 Credit Hours.
The goal of Neonatology Selective is to gain the knowledge and skills needed to evaluate and manage preterm and term infants requiring intensive care. Students will work neonatologists and their staff in the Neonatal Intensive Care Unit and participate as a member of the neonatal response team in attending high-risk deliveries and admitting babies to the NICU. All aspects of the medical and nursing care of the high-risk or fragile newborn will be open to the student for study. The student is expected to function at the level of a sub-intern. The student will also be encouraged to participate in the support and instruction of families and gain understanding of "life beyond the NICU" for these special babies. The preceptor will guide the student in selecting appropriate reading to enhance the experiential component of the selective. The student is expected to demonstrate professional responsibility in working as a team member with other members of the neonatal team, patients and families. Weekend and night call schedules are integrated with those of the pediatric house staff. Students will work 6 days/week with 1 day off. As the 4th weekend is off, this translates to 3 days off during the rotation. These 3 days may be used for interviews; additional days off for interviewing should not be expected.

PEDI 4027. Pediatric Genetics. 4 Credit Hours.
The goal of the Pediatric Genetics Selective is to develop student knowledge and skills in diagnosing and developing management plans for children with single gene disorders, chromosome abnormalities, multiple congenital anomalies, metabolic disorders, teratogenic exposures, developmental delay, intellectual disability, and autism. Most patient activity is in the outpatient setting, but students will participate in inpatient consultations. Patient encounters range from 45 minutes to 2 hours in length depending on the patient and the chief concerns. Students will participate in multidisciplinary clinics, including craniofacial anomalies clinic. Training in differential diagnosis includes use of online genetics databases and resources. Students are expected to demonstrate professional responsibility in working as a team member with other members of the Genetics team, patients, and families.

PEDI 4029. Pediatric Pulmonology. 4 Credit Hours.
The goal of the Pediatric Pulmonology Selective is to develop the knowledge and skills needed to diagnose and manage common pediatric pulmonary disorders. The emphasis will be on how to obtain pertinent history, the recognition of physical signs of pulmonary diseases, CXR, and blood gas evaluation, and the critical assessment of the data gathered. Students will participate in outpatient pulmonary clinics, including cystic fibrosis and asthma clinics, and will follow pediatric inpatients with pulmonary disorders. The practice of evidence-based medicine will be emphasized. Regularly scheduled didactic sessions will expand on topics encountered in patient care. Students are expected to demonstrate professional responsibility in working as a team member with other members of the Pulmonary team, patients, and families.
PEDI 4031. Pediatric Nephrology. 4 Credit Hours.
The goal of the Pediatric Nephrology Selective is to develop skills in diagnosis and management of common renal disorders in children as well as significant participation in the management of dialysis and kidney transplant patients. The student will learn the essential concepts in the pathophysiology and management of fluid and electrolytes and acid base disturbances. Most patient care activity occurs in the outpatient setting, but students will also participate in the management of inpatients. The student will learn histopathology of renal diseases through reviewing biopsies with pathologists. The student is expected to demonstrate professional responsibility in working as a team member with other members of the Pediatric Nephrology team, patients, and families.

PEDI 4036. Pediatric Critical Care. 4 Credit Hours.
The goal of the Pediatric Critical Care Selective is to develop the skills needed to evaluate and manage critically ill infants and children with medical and surgical diagnoses. The student will actively participate in a multidisciplinary team in the Pediatric Intensive Care Unit. Students will enhance their knowledge and skills in invasive procedures, principles of mechanical ventilation, principles of resuscitation, pharmacology of critical care, and the pathophysiology of these diseases. The student will serve as a sub-intern, participating in daily rounds with the attending pediatric faculty. Directed reading and didactic materials will be provided. The student is expected to demonstrate professional responsibility in working as a team member with other members of the Critical Care team, patients, and families.

PEDI 4039. Child Abuse Pediatrics. 4 Credit Hours.
The goal of the Child Abuse Pediatric Selective is to increase the student’s awareness that maltreatment is a common cause of many acute, delayed, and chronic physical and mental health conditions. The student will recognize demographic risk factors, but will see child abuse as a medical diagnosis made by the history and physical examination. The student will understand that abuse and neglect have immediate, short term, intermediate term, and long term effects that extend out into adulthood. Most patient care activity occurs in the outpatient setting, but the student may participate in emergency room and inpatient consults. The student will participate in staffing with CPS and other investigators and may have the opportunity to observe court hearings. The student is expected to demonstrate professional responsibility in working as a team member with other members of the Child Abuse Pediatrics team, CPS investigators, patients, and families.

PEDI 4040. Inpatient Pediatrics. 4 Credit Hours.
The goal of the Inpatient Pediatrics Selective is to prepare the student for pediatric inpatient wards during residency by enhancing knowledge and skills needed to evaluate and manage basic inpatient pediatric diseases as well as improving clinical skills such as oral and written case presentation, physical examination, hand-offs, and incorporating evidence-based medicine into clinical practice. The student will demonstrate knowledge of procedure skills including but not limited to conscious sedation, incision and drainage, and lumbar puncture. The student will function at the level of a sub-intern. The student will participate in the care of inpatients, small-group didactics, an online clinical reasoning skills module, and various organized educational activities. The student will also be expected to spend two weeks in nursery focused on teaching 3rd year medical students and the evaluation and management of newborns. The portion of the rotation spend on the inpatient floor will require flexibility in scheduling with some night softs possible given the current variability in patient volume. The student will demonstrate professional responsibility in working as a team member with other members of the Inpatient Pediatrics team, patients, and families. Information about training sites may be found on the AHEC websites: https://stahec.uthscsa.edu/. Student must first receive permission from the Department of Pediatrics before contacting the AHEC Office (567-7819). Application must be made 6-8 weeks in advance of the date on which you want to start the rotation. Once the rotation is confirmed by the AHEC Office, the student will be given electric permission to go online and register for the course. On or before the first day of the rotation, the student will need to meet with Administrative Associate at the Center of South Texas Programs/AHEC Office (567-7819).

PEDI 4074. AHEC Clinic Experience. 4 Credit Hours.
The goal of the AHEC Clinic Experience Elective are to provide medical students with the knowledge and skills to understand human growth and development and its clinical application from infancy through adolescence; take a complete, accurate, and culturally-sensitive history from children and their families; and perform complete and problem-focused physical examinations of infants, children and adolescents for common acute and chronic pediatric illnesses. The student will interpret common radiologic studies and perform office-based diagnostic tests. Under the auspices of the UTHSCSA AHEC Program, this experience exposes students to the primary care of ambulatory patients at various AHEC clinical training sites in South Texas. Under the direct supervision of a Board Certified General Pediatrician, the student serves as the initial physician in the evaluation and management of a wide array of outpatient problems. This clinic experience may include associated inpatient experience, depending on the patient responsibilities of the physician. The student will be expected to demonstrate professional responsibility in working as a team member with other members of the pediatric team, patient and families. Information about training sites may be found on the AHEC websites: https://stahec.uthscsa.edu/. Student must first receive permission from the Department of Pediatrics before contacting the AHEC Office (567-7819). Application must be made 6-8 weeks in advance of the date on which you want to start the rotation. Once the rotation is confirmed by the AHEC Office, the student will be given electric permission to go online and register for the course. On or before the first day of the rotation, the student will need to meet with Administrative Associate at the Center of South Texas Programs/AHEC Office (567-7819).

PEDI 4100. Nutrition Readiness For Internship. 0.5 Credit Hours.
This course will consist of four two-hour sessions that cover a variety of clinically oriented discussions and practical points of value to new interns. Topics are modified annually to cater for every year participants’ areas of interest and upcoming internship. Reading material about topics of discussion will be distributed to students to review before the class to insure maximal participation in team based learning style. Topics to be covered: nutritional care of the surgical patient and TPN, nutrition in pregnancy, nutrition in special situations such as brain injury, encephalopathy, renal and liver disease, enteral nutrition and nutritional rehabilitation in growth and intestinal failure in short bowel patients.
PEDI 7000. Off Campus. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty member prior to the beginning of the rotation (at least one week before the course begins). Credit will not be given for any rotation that has not been approved in advance. Required paperwork includes: "Course Approval" form, a written letter or email for acceptance form the physician preceptor with the start and end dates of the course/rotation, and a course description of your learning objectives and responsibilities during the rotation. Forms must include a complete address and telephone number for the off campus location or the address for the student while at the off campus site. Forms will not be approved after the rotation has already begun. Contact the department for assistance with enrolling in this course.

PEDI 7002. Pediatric Developmental Disabilities. 4 Credit Hours.
The goal of the Pediatric Developmental Disabilities Elective is to develop the knowledge and skills needed to assess and interpret findings of developmental-behavioral assessments, understand the neurological and genetic work-up, and become familiar with community resources for special needs children. The student will have the opportunity to participate in the developmental, neurological, and genetic evaluation of children with developmental-behavioral disabilities. Common developmental-behavioral disabilities encountered in this rotation may include Autism Spectrum Disorders, Attention-Deficit Hyperactivity Disorder, Global Developmental Delay, Intellectual Disability (formerly Mental Retardation), Learning Disabilities, Neural Tube Defects, and Cerebral Palsy. Patient care activity takes place in the outpatient setting. Students will also participate in key community site visits. In addition to core didactic sessions, students will have independent readings that complement their clinical activities. For electives occurring in June, July and August, the student will spend 1 week at Camp CAMP (Children's Association for Maximum Potential), a summer camp in the Texas Hill Country for children with a variety of disabilities. (All expenses are paid). Medical Students will be part of a medical team responsible for daily medical management of a "tribe" of children. The student must complete paperwork as required by Camp CAMP before attending.

PEDI 7012. Pediatric Community Preceptorship. 4 Credit Hours.
The goal of the Pediatric Community Preceptorship is to provide medical students with knowledge and skills to diagnose and manage patients found in the preceptor's practice; to understand the social, cultural, economic, and family forces which impact on the health status of children; and understand the community roles of the pediatrician, as a member of the health care team, and as an advocate for children. Students will actively participate in patient care in the office practice of board-certified pediatric preceptors. Preceptorships are available with board-certified pediatrician preceptors. Preceptorship experience must be scheduled well in advance and may be 2 or 4 weeks in length, students must arrange to work with a preceptor before contacting the department for permission. All preceptors must have an adjunct faculty appointment with a medical school.

Periodontics (PERI)

Courses
PERI 5011. Clinical Periodontics 1. 1 Credit Hour.
Students have the opportunity to gain clinical experience as they treat patients in the postdoctoral clinic. Cases gradually increase in complexity and severity and include treatment of the medically compromised patient, implant cases, and interdisciplinary cases.

PERI 5012. Clinical Periodontics 1. 1 Credit Hour.
Students have the opportunity to gain clinical experience as they treat patients in the postdoctoral clinic. Cases gradually increase in complexity and severity and include treatment of the medically compromised patient, implant cases, and interdisciplinary cases.

PERI 5025. Case Presentation Seminar. 0.5 Credit Hours.
The course consists of presentation of clinical cases. Students have the opportunity to prepare their approaches to therapy and gain experience in oral presentation of cases.

PERI 5031. Periodontics Lecture Series. 2 Credit Hours.
This course is designed to instruct the student in all aspects of periodontology. It is meant to be an adjunct to the PERI 6073 Literature Seminar. Topics dealing with basic science, pathobiology, and clinical and surgical aspects of periodontal disease will be discussed.

PERI 5035. Peri Lecture Series. 1 Credit Hour.
This course is designed to instruct the student in all aspects of periodontology. It is meant to be an adjunct to the PERI 6073 Literature Seminar. Topics dealing with basic science, pathobiology, and clinical and surgical aspects of periodontal disease will be discussed. Cross-listed/Concurrent: PERI 6030/6031.

PERI 5037. Bone & Connective Tissue Biology. 0.5 Credit Hours.
This course seeks to apply current principles of bone and periodontal ligament cell biology to our understanding of the development, maintenance, and repair of periodontal tissues and to the clinical management of pathology at the tooth supporting structures. Emphasis is placed on the basic cell and structural biology which provides the underlying rationale for current and experimental approaches to periodontal disease and therapies.

PERI 5052. Surgical Anatomy. 1 Credit Hour.
This course emphasizes the learning of the head and neck anatomy that is related directly to surgical procedures performed by periodontists and endodontists and the practice of prosthodontic dentistry. Anatomic structures related to implant placement receive special emphasis. Surgical complications related to anatomy are described. A dissection on human cadavers is presented with a strong emphasis on surgical anatomy.

PERI 5073. Literature Seminars. 1 Credit Hour.
This course is designed to familiarize the student with the historical and contemporary literature related to periodontics. The first-year course is concerned mainly with basic science literature while second- and third-year courses concentrate on the clinical literature. Students have the opportunity to evaluate the data in the literature, critique experimental design, abstract articles, critically evaluate research findings, and learn to use library resources.

PERI 5074. Current Lit Seminar. 1-5 Credit Hours.
Current periodontal literature published during the academic year is discussed in a seminar format.

PERI 5075. Mock Boards. 0.5 Credit Hours.
This course is a simulation of the exams given by the American Board of Periodontology. Students present their cases orally, with slides, to faculty examiners and take an oral examination.
PERI 5097. Research. 1-9 Credit Hours.
This course consists of independent, original research under the direction of a faculty member.

PERI 6000. Introduction to Advanced Periodontics for Interns. 1 Credit Hour.

PERI 6001. Periodontic Practice Management. 0.5 Credit Hours.
The objective of this course is to prepare the student for the business aspects of clinical practice. The student will be exposed to the banking finances, practical aspects of office management, matters relating to dental insurance, and the different types of practice.

PERI 6009. Clinical Periodontics 2. 2 Credit Hours.
Students have the opportunity to gain clinical experience as they treat patients in the postdoctoral clinic. Cases gradually increase in complexity and severity and include treatment of the medically compromised patient, implant cases and interdisciplinary cases.

PERI 6011. Clinical Periodontics 2. 3 Credit Hours.
Students have the opportunity to gain clinical experience as they treat patients in the postdoctoral clinic. Cases gradually increase in complexity and severity and include treatment of the medically compromised patient, implant cases, and interdisciplinary cases.

PERI 6012. Clinical Periodontics 3. 4.5 Credit Hours.
Students have the opportunity to gain clinical experience as they treat patients in the postdoctoral clinic. Cases gradually increase in complexity and severity and include treatment of the medically compromised patient, implant cases, and interdisciplinary cases.

PERI 6016. Clinical Periodontics 3. 2 Credit Hours.
Students have the opportunity to gain clinical experience as they treat patients in the postdoctoral clinic. Cases gradually increase in complexity and severity and include treatment of the medically compromised patient, implant cases, and interdisciplinary cases.

PERI 6020. Emergency Care Seminar. 0.5 Credit Hours.
This is a pragmatic course to familiarize the student with the medical emergencies that the clinician may incur while practicing dentistry. Major texts on the medically compromised patient are used as a guideline. The course is given in seminar format.

PERI 6025. Case Presentation Seminar. 0.5 Credit Hours.
The course consists of presentation of clinical cases. Students have the opportunity to prepare to defend their approaches to therapy and gain experience in oral presentation of cases.

PERI 6030. Periodontic Lecture Series. 2 Credit Hours.
This course is designed to instruct the student in all aspects of periodontology. It is meant to be an adjunct to the PERI 6073 Literature Seminar. Topics dealing with basic science, pathobiology, and clinical and surgical aspects of periodontal disease will be discussed.

PERI 6031. Periodontic Lecture Series. 2 Credit Hours.
This course is designed to instruct the student in all aspects of periodontology. It is meant to be an adjunct to the PERI 6073 Literature Seminar. Topics dealing with basic science, pathobiology, and clinical and surgical aspects of periodontal disease will be discussed. Concurrent: PERI 5031 and PERI 6031.

PERI 6036. Peri Lecture Series. 1 Credit Hour.
This course is designed to instruct the student in all aspects of periodontology. It is meant to be an adjunct to the PERI 6073 Literature Seminar. Topics dealing with basic science, pathobiology, and clinical and surgical aspects of periodontal disease will be discussed. Concurrent: PERI 5031 and PERI 6031.

PERI 6050. Periodontal Medicine. 1 Credit Hour.
This course is designed to establish the principles essential for problem-oriented evaluation of the dental patient. The intent is to discuss the diagnosis of selected common orally related primary and secondary mucocutaneous conditions and oral cancer and their management.

PERI 6070. Supervised Teaching. 0.5 Credit Hours.
Graduate students are assigned to the various clinics and classes for the opportunity to acquire experience in teaching pre-doctoral students and faculty members in a variety of situations. Supervision and evaluation of teaching performance are provided by the graduate faculty.

PERI 6071. Supervised Teaching. 0.5 Credit Hours.
Graduate students are assigned to the various clinics and classes for the opportunity to acquire experience in teaching pre-doctoral students and faculty members in a variety of situations. Supervision and evaluation of teaching performance are provided by the graduate faculty.

PERI 6072. Supervised Teaching. 0.5 Credit Hours.
Graduate students are assigned to the various clinics, laboratories, and classes for the opportunity to acquire experience in teaching undergraduate students in a variety of situations. Supervision and evaluation of teaching performance are provided by the graduate faculty.

PERI 6073. Literature Seminars. 1 Credit Hour.
This course is designed to familiarize the student with the historical and contemporary literature related to periodontics. The first-year course is concerned mainly with basic science literature while second- and third-year courses concentrate on the clinical literature. Students have the opportunity to evaluate the data in the literature, critique experimental design, abstract articles, critically evaluate research findings, and learn to use library resources.

PERI 6074. Current Lit Seminar. 0.5-5 Credit Hours.
Current periodontal literature published during the academic year is discussed in a seminar format.

PERI 6075. Mock Boards. 0.5 Credit Hours.
This course is a simulation of the exams given by the American Board of Periodontology. Students present their cases orally, with slides, to faculty examiners and take an oral examination.

PERI 6097. Research. 1-9 Credit Hours.
This course consists of independent, original research under the direction of a faculty advisor.

PERI 6098. Thesis. 1-9 Credit Hours.
Completion of an acceptable thesis is required for the Master of Science degree. Registration in this course for at least one semester is required of all degree candidates. Prerequisites: admission to candidacy for the Master of Science degree.

PERI 7059. Implantology. 1 Credit Hour.
Through lecture sessions, this introductory course offers students an opportunity to obtain both background and knowledge regarding accepted dental implant systems.
PERI 7081. Periodontics. 1.5 Credit Hour.
This course is an expansion of the foundation presented in the sophomore year. Surgical treatment planning, rationale, techniques, and wound healing are emphasized. A three-hour surgical laboratory exercise is included. Periodontal interrelationships with prosthodontics, endodontics, and orthodontics are examined in case presentation formats with student participation.

PERI 8015. Periodontics. 0.5 Credit Hours.
This lecture course is a comprehensive review of current periodontal topics. Topics include those that should be employed in the diagnosis, treatment planning, and management of periodontal diseases in a general dentistry practice setting. Both non-surgical and surgical treatment approaches will be discussed.

PERI 9097. Research. 4 Credit Hours.
The student develops a research protocol and background literature search for a clinical, laboratory, or animal model research project.

Pharmacology (PHAR)

Courses

PHAR 4000. Special Topic. 1-42 Credit Hours.
This is a self-designed course created by both the student and the department to cover a specific topic. A Course Approval Form must be completed along with documentation of the designed course description.

PHAR 4003. Clinical Pharmacology. 4 Credit Hours.
This selective is an essential course in Drug Prescribing and Therapeutics for future interns in any specialty. It is an excellent opportunity to brush up on drug therapy before entering residency and to avoid causing harm to the patients through mis-prescription of drugs. The drugs of the major therapeutic areas and how they are used are reviewed by specialists from the Departments of Medicine, Psychiatry, Surgery, and Pharmacology. Particular emphasis is placed on the use of drugs in clinical scenarios.

PHAR 5013. Principles Of Pharmacology & Physiology 1. 3 Credit Hours.
Topics include principles of drug action; receptor classification and quantitation; dose response relationships; cellular mechanisms of drug action; fundamental concepts of drug receptor interactions; voltage gated and ion channels; drug actions mediated by transduction and non-transduction enzymes; time course of drug action; absorption, distribution, biotransformation and elimination of drugs; pharmacokinetics; and experimental approaches to drug action.

PHAR 5014. Integrative Physiology & Therapeutics. 4.5 Credit Hours.
This course provides students with a base of knowledge in physiology and pharmacology taking an integrative approach to understanding experimental and clinical therapeutics. Primary focus will be on understanding normal physiologic functions, cellular mechanism underlying disease, and systematic consideration of the pharmacology, clinical applications, and toxicities of the major classes of drugs. This required 4.5 credit hour course for Pharmacology and Physiology students is comprised of three sections, each covering major areas of physiology and pharmacology along with their corresponding therapeutics. The three sections include: 1) autonomic nervous system control and therapeutics, 2) cardiovascular, renal and respiratory physiology and therapeutics, and 3) metabolism, hormones, GI physiology and therapeutics. Each section is to be offered separately as an independent micro-elective for students from other programs within the Graduate School of Biomedical Science. Prerequisites: IBMS 5000 and PHAR 5013.

PHAR 5018. Cardiovascular, Renal and Respiratory Physiology and Therapeutics. 2 Credit Hours.
This course covers the anatomy, physiology and pharmacology of the heart, the blood vessels, kidneys, and airways and lungs. Specific areas include: 1) normal physiology of the cardiovascular system and mechanisms underlying its major pathologies such as atherosclerosis, hypertension, heart failure and stroke, as well as the major classes of drugs (antihypertensives, anti-lipemics, anti-anginals, and antiocoagulants) to treat these primary cardiovascular disorders. 2) importance of the kidneys in maintaining body electrolyte and water balance, and examples of cardiovascular and kidney diseases that are targets for important therapeutic drugs such as the diuretics and ACE inhibitors. 3) respiratory physiology and drugs used in the treatment of asthma and chronic obstructive pulmonary disease. Prerequisites: IBMS 5000 or equivalent.

PHAR 5019. Metabolism, Hormones, GI Physiology and Therapeutics. 2 Credit Hours.
This course provides an overview of the following: 1) physiology of major endocrine systems, including pituitary, thyroid, GI and renal hormones, etc. It covers endocrine regulation of stress, blood sugar, male and female fertility, calcium balance, growth, pregnancy, and appetite. Pharmacological approaches to management of diseases caused by defects in metabolism (e.g. diabetes) and hormonal regulation (e.g. thyroid disorders), as well as sex steroids and adrenal steroids, will be discussed. 2) mechanisms and regulation of digestion/acid secretion and nutrient absorption by the GI tract along with pharmacological management of GI diseases, including GERD, peptic, ulcer, etc. Prerequisites: IBMS 5000 or equivalent.

PHAR 5020. Basics Of Research Design. 2 Credit Hours.
This course aims at teaching first-year graduate students fundamentals of research design and analysis of scientific literature to orient them with setting up scientific experiments and writing grant proposals. The course is divided into three sections: research design, communicating scientific data, and getting scientific ideas funded.

PHAR 5021. Autonomic Control & Therapeutics. 0.5 Credit Hours.
This course covers basic anatomy, physiology and pharmacology of the autonomic nervous system, including its higher order CNS components of the ANS in the regulation of homeostasis. Diseases that involve alterations in ANS function and drugs that modulate catecholaminergic and cholinergic neuro-effector transmission will be discussed.

PHAR 5023. Drug Discovery and Development. 2.5 Credit Hours.
Drug Discovery and Development is a 2.5 credit hour course that provide students with an understanding of the overall process of drug discovery and development. It covers the basic principles of how new drugs are discovered, how drugs interact with their biological targets, and application of medicinal chemistry in lead optimization. Focused lectures on specific therapeutic areas will include drug development for cancer, diabetes, pain, and psychiatric disorders. Patenting, phase 1, 2 and 3 clinical trials, and marketing processes will be covered, as will contract opportunities for basic science researchers with drug companies. Case studies of both successful and unsuccessful drug candidates will be presented, where students will learn about the entire drug discovery and development process. Upon successful completion of this course, students will have a comprehensive knowledge of the fundamental principles of drug discovery and development, though to successful implementation of the new drug in the clinic. Prerequisite: IBMS 5000 or at the discretion of the course directors.
PHAR 5090. Seminar. 1-9 Credit Hours.
This course consists of presentation and discussion of recent advances in research by staff faculty, students, and outside scientists. A monthly journal club that emphasizes student presentations of current primary literature is also a component.

PHAR 5091. Special Topics: Microelectives. 0.5-9 Credit Hours.
Micro-electives are courses that can be of any type (tutorial or original literature review, short [2-week] didactic, technique, etc.). In general, since they are short, they are often offered at any time of convenience between the student(s) and the faculty. Various topics include but not limited to: (1) New Views on Monoaminergic Neurotransmission: Are Transporters Important?; (2) Drug Discovery: Nuts and Bolts; (3) Historical Perspectives of Receptor Theory; (4) Cell Membrane Microdomains and Signaling; (5) Neuropeptide Metabolism; (6) Serotonin: From Soup (Transmission) to Nuts (Behavior); (7) Central-Cardio-Respiratory Systems; (8) Neural Substrates of Regulatory Behaviors: Peptides and Monoamines; (9) Current Issues in Basic Research on Mechanisms of Epilepsy; (10) Appetite Control: Adiposity Hormones and Neuropeptides; (11) Fundamentals of Behavioral Pharmacology; (12) Therapeutics: Autonomic Pharmacology; (13) Therapeutics: Cardiovascular-Renal Pharmacology (Prerequisite - PHAR 5091.012); (14) Therapeutics: Central Nervous System Pharmacotherapeutics; (15) Therapeutics: Chemotherapy; (16) Therapeutics: Endocrine Pharmacology; (17) Therapeutics: Pharmacological Management of Pain; and (18) G protein-coupled receptor heteromers.

PHAR 5092. Special Problems In Pharmacology: Research Practicum. 1-9 Credit Hours.
This is a full-semester research experience for the principal investigator to evaluate if a student demonstrates the potential for productive and independent investigation during the summer following the first year. The course concludes with a 15 minute oral presentation given by the student and a written report in a journal style.

PHAR 6005. Drugs in Society. 3 Credit Hours.
This course will provide an overview of the basic neuropharmacology, preclinical pharmacology, epidemiology, as well as legal and social issues associated with alcohol and the major classes of abused drugs. The course will be team taught by several faculty members from the Departments of Pharmacology, Physiology, and Psychiatry. The format will include lectures, videos, and group discussion. The major drug classes that will be discussed include the following: 1) alcohol, benzodiazepines, and barbiturates; 2) nicotine (tobacco and other delivery systems); 3) marijuana and other cannabinoids; 4) opioids; 5) stimulant drugs including cathinones; 6) ketamine and related drugs; 7) hallucinogens; and 8) dietary supplements and over the counter medications. Readings will include scientific original and review articles, selected chapters in books (e.g., Drugs, Society, and Human Behavior, McGraw-Hill), as well as blogs and recent government and news agency publications as they become available and are relevant.

PHAR 6015. Effects, Power, Meta-Analysis. 1 Credit Hour.
Evaluating the statistical significance of research findings requires knowledge of statistics, but additional skills are needed to evaluate their importance. This course introduces tools that help answer three questions: 1) How do I assess the practical or everyday significance of my research results, 2) Does my study have sufficient power to find what I am seeking, and 3) How do I draw conclusions from past studies reporting disparate results. Answering these questions involves estimation of effect size, calculation of statistical power, and pooling of individual effect size estimates by meta-analysis. This course discusses these activities together, because they are interrelated. A well-designed study is normally based on a prospective power analysis, and a good power analysis will ideally be based on a meta-analytically derived mean effect size. There is a growing recognition by scientific journals and funding agencies of the need to report effect sizes along with the results of test of statistical significance and to quantify the statistical power of studies. The aim of this course is to help acquire the skills necessary to meet these needs. This micro-elective builds on the significance-testing and power analytic skills that students learn in CSAT 5095 Experimental Design and Data Analysis. Thus, having taken CSAT 5095 is a prerequisite for this course.

PHAR 6020. Molecular & Pharmacological Basis Of Therapeutics. 3 Credit Hours.
This course provides the graduate student with current knowledge of how genetic variants can affect drug response and the potential to optimize drug therapy. Course format will include lectures, discussion of selected literature, individual student presentations, and the opportunity for the development of a mini pharmacogenetic/genomic protocol and consent form to address a clinical/biomedical question mutually agreed upon between course director and students.

PHAR 6025. Molecular Pharmacology. 2 Credit Hours.
This course will be presented in a journal club/paper discussion format and will focus on the molecular aspects of pharmacology, with emphasis on molecular biology, biochemistry, and cell biology of a variety of physiological systems subjected to pharmacological manipulation. The topics to be discussed will include molecular mechanisms of drug action, signal transduction and regulation, molecular approaches, and recent advances in areas of molecular pharmacology.

PHAR 6027. Fundamentals Of Neuroethics. 1 Credit Hour.
Recent advances in neuroscience have considerably improved our understanding of brain function. However, the fascinating examination of brain's mysteries often intersects with the concerns of ethics and public policy. This course aims at presenting and discussing philosophical and scientific perspectives on major bioethical issues pertinent to neuroscience research. Several subjects will be covered in the course, including the ethics of pharmacological and surgical interventions on the brain/min binomial, therapy versus enhancement, brain imaging and mental privacy, neurobiology of decision making, consciousness, unconsciousness, and death.
PHAR 6079. Superseded Teaching. 1-9 Credit Hours.
This course provides a mentored teaching experience. The student will be responsible for directing an undergraduate Physiology laboratory course under the guidance of the Physiology faculty. The student will prepare and provide limited lectures addressing background information required to understanding and performing research laboratories, as well as direct undergraduates in performance of these laboratories. Physiology faculty will insure that graduate students are prepared and knowledgeable about the laboratories they will direct. In addition, students will receive training in general pedagogy and specifically, in the performance, conduct, and directing of physiology research and its dissemination. In addition to learning to direct a laboratory course and providing lecture-based information, graduate students will be trained in preparing, administering, and marking laboratory exams.

PHAR 6097. Research. 0.5-12 Credit Hours.
Independent, original research under the direction of a faculty advisor.

PHAR 6098. Thesis. 1-12 Credit Hours.
Registration for at least one term is a Graduate School requirement for all MS candidates.

PHAR 7002. Bridging The Gap From Bench To Bedside: Pharmacology Clinical Practicum. 1 Credit Hour.
Pharmacology is the most basic of the science disciplines to bridge the gap between "bench and bedside." This micro-elective will provide students with focused exposure to therapeutics and clinical practice. The course will incorporate case-based, operating room scenarios using human simulator mannequins, with a clinical experience in association with the Department of Anesthesiology. Students must directly contact the course director before registering for this course.

PHAR 7003. Electrophysiology In Neuroscience Research. 1 Credit Hour.
The purpose of this course is to explore the rationale underlying the use of electrophysiological techniques in neuroscience research. Rather than focusing on the technical aspects of electrophysiology, this course will discuss current hot topic manuscripts that utilize different electrophysiological approaches including in vivo (anesthetized and conscious), in vitro, extracellular (single-unit and field potential), intracellular and patch. It is anticipated that at the end of the course students will be more familiar with the area of electrophysiology and able to understand why particular approaches are utilized in neuroscience research and be able to critically review electrophysiological data from manuscripts.

PHAR 7099. Dissertation. 1-12 Credit Hours.
Registration for at least two terms is a Graduate School requirement for all Ph.D. candidates. Prerequisites: admission to candidacy for Doctor of Philosophy degree.

PHAR 8009. Pharmacotherapeutics. 2 Credit Hours.
The emphasis of this course is on understanding the rationale, indications, and contraindications for prescribing pharmacologic agents in dentistry. Consideration of the pharmacologic agents that the patient may be taking at the time of the dental visit is emphasized.

Physical Therapy (PHYT)

Courses

PHYT 5009. Neuroscience. 3 Credit Hours.
This course in neuroscience provides the foundation to understand the structure and functions of the developing, mature, and aging nervous system. It covers basic neuroanatomy, neurophysiology, and neuropharmacology. It also applies neuroscience to clinical applications regarding pathology and patient care. Since cultural organization is central to most functional concepts, neuroanatomy is emphasized to facilitate an overall understanding of the nervous system. Morphology is covered first at the cellular level, then regionally. Neurophysiology of cellular processes of nerve cell transmission as well as regional connectivity of pathways devoted to specific neural modalities is covered. Neuropharmacology encompasses the chemical aspects of synaptic transmission at the cellular level, and the regional differences of transmitter pharmacology. Neuropathology is introduced when appropriate to the systems being discussed. Open for Cross Enrollment on Space Available Basis.

PHYT 5091. Special Topics. 0.5-4 Credit Hours.
This course will be arranged through Department faculty. The course topics vary according to student interest. Semester hours are variable and credit hours will be assessed per topic. The course could be offered any time during the third year (MPT-III), fall or spring.

PHYT 7001. Clinical Foundations 1. 4 Credit Hours.
This course addresses the fundamental concepts of physical therapy practice including basic clinical screening for disease to include systems review, diagnostic procedures, and introductory physical therapy skills. Students are exposed to the components of documentation, basic examination, therapist-to-patient interaction, the disablement process, interdisciplinary management of the patient, and the use of the Guide to Physical Therapy as a management tool. Students also study functional screening techniques, body mechanics, surface anatomy, postural assessment, patient positioning and transfers, locomotion, and the use of assistive devices. The course adds to the foundation for clinical reasoning and clinical decision making. Students have the opportunity to practice fundamental skills involved in patient management.

PHYT 7005. Exercise and Physiology of Rehabilitation. 4 Credit Hours.
The goal of this course is to introduce the student to the application of exercise principles to different populations. This will be achieved by examining the physiology of exercise and applying the principles of therapeutic exercise to different populations. Emphasis is on the role of exercise to improve function, prevent dysfunction, and promote wellness. The role of complementary medicine and integration of interdisciplinary professionals in the presentation of content is intended to enhance understanding of holistic care for active populations. The effects of exercise on energy metabolism, nutrition, cardiopulmonary function, and the musculoskeletal systems are also emphasized in this course. At the end of this course, students will have had the opportunity to learn to be able to apply training principles to develop an appropriate exercise program.
**PHYT 7009. Neuroscience. 3 Credit Hours.**
This course in neuroscience provides the foundation to understand the structure and functions of the developing, mature, and aging nervous system. It covers basic neuroanatomy, neurophysiology, and neuropathology. It also applies neuroscience to clinical applications regarding pathology and patient care. Since cultural organization is central to most functional concepts, neuroanatomy is emphasized to facilitate an overall understanding of the nervous system. Morphology is covered first at the cellular level, then regionally. Neurophysiology of cellular processes of nerve cell transmission as well as regional connectivity of pathways devoted to specific neural modalities is covered. Neuropharmacology encompasses the chemical aspects of synaptic transmission at the cellular level, and the regional differences of transmitter pharmacology. Neuropathology is introduced when appropriate to the systems being discussed. Open for Cross Enrollment on Space Available Basis.

**PHYT 7011. Clinical Foundations 2. 4 Credit Hours.**
This course continues to introduce the fundamental concepts of physical therapy practice including basic clinical screening, systems review, and introductory physical therapy skills. The course takes a regional approach to surface anatomy and its radiologic correlates, detailed muscle function with specific muscle testing. Functional outcome measures, palpation, and principles of selected interventions to include soft tissue massage and proprioceptive neuromuscular facilitation (PNF). The course will continue to lay the foundation for clinical reasoning and clinical decision making. The student will be given the opportunity to practice fundamental skills involved in patient management.

**PHYT 7012. Movement Science 1. 4 Credit Hours.**
This course is a study of joint structure and function, and the mechanical principles underlying the kinematics and kinetics of human motion. Emphasis is placed on the interaction between biomechanical and physiological factors in musculoskeletal function and the implications of kinesiology principles in physical therapy practice.

**PHYT 7014. Systematic Reasoning and Scientific Investigation 1. 3 Credit Hours.**
This course is designed to develop critical thinking regarding interpretation of research literature. It provides a general introduction to research design, statistical reasoning, and interpretations of the literature. Topics include scientific method, research design, statistical reasoning, development of research questions, issues of measurement, and an overview of parametric and non-parametric statistical techniques. All topics are presented to facilitate understanding of research literature and utilizing evidence for clinical decision-making. The learner will have the opportunity to be able to critically analyze rehabilitation research and begin the process of formulating a critically relevant research question. Open for Cross Enrollment on Space Available Basis.

**PHYT 7017. Cells, Systems, and Disease. 3 Credit Hours.**
This course characterizes what happens to the human body during different disease processes. It begins at the cellular and tissue levels and advances to a progressive study of diseases and disorders within different organ systems. It examines the pathological changes of both histological and gross anatomical specimens, as well as the biochemical and physiological changes that occur during different diseases and disorders. It also discusses some aspects of diagnosis and treatment of these disorders. There is an extensive medical vocabulary associated with this course. Open for Cross Enrollment on Space Available Basis.

**PHYT 7018. Pharmacological Principles in Physical Therapy. 2 Credit Hours.**
This course provides the foundation for understanding the impact of drugs on patients with conditions encountered in the practice of physical therapy. Basic pharmacological principles are addressed, as well as important precautions and contraindications for physical therapy treatments. Open for Cross Enrollment on Space Available Basis.

**PHYT 7019. Scientific Basis of Neurological Disorders. 3 Credit Hours.**
This course in neuroscience provides further foundation to understand the structures and functions of the developing, mature, and aging nervous system. It covers basic neuroanatomy, neurophysiology, and neuropathology. It also applies neuroscience to clinical applications regarding pathology and patient care. Since structural organization is central to most functional concepts, neuroanatomy is emphasized to facilitate an overall understanding of the nervous system. Special emphasis is given to the structures involved in motor control, their functions, and pathologies. Open for Cross Enrollment on Space Available Basis.

**PHYT 7021. Clinical Experience 1. 5 Credit Hours.**
Clinical Experiences 1, 2, and 3 are designed for the student to apply knowledge gained in the basic and clinical sciences courses completed in the first 2 years to clinical practice. The student will become proficient in examination, evaluation, and intervention of patients in a variety of physical therapy settings. Students will complete 10 week rotations in each of 3 settings: acute, inpatient neurological, and outpatient orthopedic. However, they may complete these in any order depending on availability of clinical sites.

**PHYT 8002. Management of the Patient with Musculoskeletal Dysfunction 1. 5 Credit Hours.**
Students in this course integrate previously learned skills and knowledge and apply new skills in the examination, evaluation, and intervention of patients across the lifespan with musculoskeletal conditions of the upper quarter, which will include the cervical and thoracic spine and the upper extremity. The course reviews musculoskeletal tissues, the effects of systematic disease on musculoskeletal tissues, the physical therapy exam, and the principles of evidence-based practice. The course then follows a regional approach with attention to the examination and intervention of the cervical/thoracic spine and each joint area in the upper extremity. Students are expected to be knowledgeable and proficient in material from the first-year courses in the areas of patient care skills, anatomy, kinesiology, and therapeutic exercise. The course emphasizes 1) using the best available evidence to examine and treat patients with musculoskeletal complaints in the extremities, 2) critically analyzing the patient’s history and tests and measures to formulate a physical therapy diagnosis and determine the need for further referral, 3) recognizing non-musculoskeletal causes of extremity pain and identifying patients needing further diagnostic studies and referral to a specialty physician, and 4) the interdisciplinary approach to patient management through guest speakers from different medical specialties.
PHYT 8007. Orthotics in Rehabilitation. 1.5 Credit Hour.
The goal of this course is for the student to become proficient in the basic principles and clinical application of orthotic interventions used in the interdisciplinary management of the patient with extremity or spinal disorders across the lifespan. The course addresses the examination of the patient in need of an orthotic device, analyzing the results of the exam, and use of the best available evidence to identify the most efficacious orthotic device to manage or prevent impairment, functional limitation, or disability. Students will have the opportunity to use their critical thinking skills to problem solve case situations and prescribe or fabricate an orthosis most efficacious according to the best available evidence and with consultation from other disciplines.

PHYT 8011. Therapeutic Approaches to Pain and Movement Dysfunction. 3 Credit Hours.
This course examines the management of pain and movement disorders with various interventions. Content includes both direct and indirect effects of interventions with a biopsychosocial approach to patient-centered care. Theory and application of modalities within this course include soft tissue massage/mobilization (STM), tissue integrity; inflammation and repair, and principles and application of electrophysical agents in clinical PT, including cryotherapy, heat and electrical stimulation. The course consists of lectures, labs, “passport” self-selected site visits to experience clinical application of modalities used in physical therapy.

PHYT 8012. Prosthetics in Rehabilitation. 1.5 Credit Hour.
This course is designed to enable the student to become proficient in the principles of examination and intervention for the patient who experiences limb amputation or has congenital limb absence. The course includes the management of wounds and co-morbidities that put one at risk for limb amputation and strategies to identify these patients and prevent limb loss. The student learns the care and prosthetic management of patients in the pre and post-operative stages with limb amputation at different levels. Instructors present strategies to problem solve when presented with patients with other conditions or factors that complicate the patient’s course of rehabilitation. The interdisciplinary management of patients with limb amputation is emphasized through clinical experience with a prosthetist.

PHYT 8013. Management of the Patient With Cardiopulmonary Dysfunction. 3 Credit Hours.
This course provides instruction in the basic science and clinical foundation required for the examination and treatment of disorders of the cardiovascular and pulmonary systems. Emphasis is on interpretation of evaluative results involving cardiovascular and pulmonary pathology and application of specific treatment interventions in developing comprehensive PT management of these classes of pathology. This course includes interdisciplinary presentations and opportunities relevant to evidence-based wellness and fitness programs for the physical therapist functioning as part of the cardiovascular and pulmonary rehabilitation team.

PHYT 8014. Seminar in Physical Therapy Patient Care. 1 Credit Hour.
This course is designed to promote integration of knowledge from basic sciences, patient care, health promotion and scientific investigation to enhance patient outcomes. Emphasis will be placed upon facilitation of student review of patient cases/profiles with selection of tests and measures and potential treatment interventions.

PHYT 8021. Clinical Experience 2. 5 Credit Hours.
Clinical Experiences 1, 2, and 3 are designed for the student to apply knowledge gained in the basic and clinical sciences courses completed in the first two years to clinical practice. The student will become proficient in examination, evaluation, and intervention of patients in a variety of physical therapy settings. Students will complete 10 week rotations in each of 3 settings: acute, inpatient neurological, and outpatient orthopedic. However, they may complete these in any order depending on availability of clinical sites.

PHYT 8022. Professional Issues and Clinical Decision-Making 1. 2 Credit Hours.
This course is designed for the student to assimilate major theories about learning across the lifespan, learning style, teaching techniques, communication in the clinical setting, and communication as a means to develop cultural competence. Emphasis will be on instruction related to clinical practice and critical thinking as well as application to motor learning. A major theme of this course is the development of communication skills to enhance therapist-patient interactions, promote an understanding of learning across the lifespan, and develop cultural competence. Open for Cross Enrollment on Space Available Basis.

PHYT 8075. Human Development across the Lifespan. 3 Credit Hours.
The purpose of this course is to provide the student with the opportunity to learn about typical human lifespan development with the emphasis on health and wellness with application to the practice of PT. The course focuses on the embryonic development, early infancy, childhood, adolescence, adulthood, older adults, and the oldest old. Opportunities for didactic, clinical, and community are integrated into the course to facilitate active learning opportunities. Topics may include interdisciplinary management, cultural sensitivity, psychological factors, socioeconomic concerns, community-based resources, and patient/family education regarding health and wellness/fitness. Open for Cross Enrollment on Space Available Basis.

PHYT 8102. Systematic Reasoning and Scientific Investigation 2. 2 Credit Hours.
The emphasis of this course is continued development of critical thinking skills to promote evidence-based practice in the clinical setting. This course is a continuation of Systematic Reasoning and Scientific Investigation 1, and gives the student the support to experience and complete an extensive Critically Appraised Topic or a written research investigation. The student will also practice in small group format the skill of research articles analysis and presentation for public health and education. Students will either submit one article to the APTA Hooked on Evidence website or practice applying for a speaking position for a TPTA conference. The student will also produce either a written research investigation relevant to the practice of PT or a written Critically Appraised Topic with an extensive review of literature. Students also generate an oral presentation of their project to complete the requirements for this course.
PHYT 8106. Principles of Administration in Physical Therapy. 2 Credit Hours.
This course examines current issues and trends in law, ethics and managerial, professional (ATPA) ethics.

PHYT 8108. Management of the Patient with Neuromuscular Dysfunction 1. 5 Credit Hours.
This course is designed to allow the student to develop the skills necessary to perform examination, evaluation, diagnosis, prognosis, and problem-solving approach that integrates case studies. Current evidence-based research related to the management of the patient with neuromuscular dysfunction will be critically assessed.

PHYT 8112. Management of the Complex Patient. 3.5 Credit Hours.
This course gives the student the opportunity to practice examination techniques with a systems approach. Screening for conditions requiring referral will be practiced with continued diagnosis, prognosis to include plan of care using the PT Guide to Physical Therapy Practice. The student will generate a case study that will incorporate specific anatomical correlations with images related to the patient case and will be presented to the class for integration of anatomical relationships to patient care. Faculty from the Department of Cell Systems & Anatomy will supervise the peer teaching in the anatomy laboratory.

PHYT 8114. Management of the Patient with Musculoskeletal Dysfunction 2. 5 Credit Hours.
Students in this course integrate previously learned skills and knowledge and apply new skills in the examination, evaluation, and intervention of patients across the lifespan with musculoskeletal conditions of the lumbosacral spine and the lower quarter. The course follows a regional approach with attention to the examination and intervention of the lumbosacral spine, the sacroiliac joint, and each joint of the lower extremity. Students are expected to be knowledgeable and proficient in material from the first-year courses of patient-care skills, kinesiology, and therapeutic exercise. This course emphasizes 1) using the best available evidence to examine and treat patients with spine complaints, and 2) recognizing non-musculoskeletal causes of spinal pain and identifying patients needing further diagnostic studies and referral to a specialty physician.

PHYT 8116. Management of the Patient with Neuromuscular Dysfunction 2. 5 Credit Hours.
This course is a continuation of Management of the Patient with Neuromuscular Dysfunction 1, and is designed to allow the student to continue to develop the skills necessary to perform examination, evaluation, diagnosis, prognosis, and the development of comprehensive intervention plans of care for patients with neuromuscular dysfunction. Emphasis is on differential diagnosis, screening, examination, and evaluation of function, and on development of intervention programs that lead to improvement in function. Movement dysfunction will be covered across the lifespan for acute and chronic conditions. Current evidence-based research related to the management of the patient with neuromuscular dysfunction is critically assessed. Management strategies and skills are reinforced by encouraging the students to participate in hands-on pre-clinical experiences, work with area clinicians related to specific diagnoses, and design treatment plans based on case studies with a focus on interdisciplinary practice.

PHYT 8121. Clinical Experience 3. 5 Credit Hours.
Clinical Experiences 1, 2, and 3 are designed for the student to apply knowledge gained in the basic and clinical sciences courses completed in the first 2 years to clinical practice. The student is required to become proficient in examination, evaluation, and intervention of patients in a variety of physical therapy settings. Students are required to complete 10 week rotations in each of 3 settings: acute, inpatient neurological, and outpatient orthopedic. However, they may complete these in any order depending on availability of clinical sites.

PHYT 8122. Professional Issues and Clinical Decision-Making 2. 2 Credit Hours.
This course explores professional issues in physical therapy practice. Topics of emphasis include Vision 2020, professional behaviors, APTA Code of Ethics and Guide to Professional Conduct, and legal standards of behavior for physical therapists. Particular emphasis will be placed on communication and conflict resolution, personality and cultural diversity, stress management, and entry-level physical therapy skill performance. There will also be an interdisciplinary component to the course that will provide students with an overview of ethical issues facing allied health professionals. Topics to be discussed include responsibilities of the health care professional, life and death decisions, patient confidentiality, substance abuse, whistle-blowing, and informed consent. Ethics in research and other critical issues related to health care problems also will be addressed. Collaborative activities and simulated cases will be used to enhance discussion among students.

PHYT 8130. Movement Science 2. 2 Credit Hours.
The course will examine how humans learn and acquire skills, as well as the mechanisms that are used to control skilful movement utilizing integration of concepts from neuroscience and kinesiology. Content will include critical discussion of the various schools of thought on how movement is controlled and learned. Students will have the opportunity to apply the concepts of motor control and motor learning for patients with movement dysfunction. Emphasis will be placed on movement control and motor learning in normal and special populations.

PHYT 8221. Clinical Experience 4. 2 Credit Hours.
This course is a four-week clinical experience that allows the student to choose an area of interest and refine their physical therapy examination, evaluation, and intervention skills in that setting. Students may choose to gain more experience in one of the three required clinical areas (acute, inpatient neurological, outpatient orthopedic) or pursue a specialty area of interest. Alternatively, faculty may identify an area where the student may benefit from additional experience and assign a specific clinical setting.
PHAS 5006. Clinical Physiology. 4 Credit Hours.
This course is designed to provide students in health professions discipline with the fundamentals of normal human physiology. The course includes concepts from cellular to system level. Topics include cellular, respiratory, cardiovascular, digestive, renal, male and female reproductive, musculoskeletal, nervous, and endocrine systems with integration of these physiologic concepts to pathologic disease processes. The course includes classroom lecture, case studies and student presentations.

PHAS 5007. Pathogenesis of Human Disease. 3 Credit Hours.
This course covers the basic principles of pathology providing the opportunity for the understanding of human disease processes. Course content includes discussion of general disease processes such as cellular degeneration, inflammation, tissue repair, chemical and physical injury, developmental disorders and neoplasia and a thorough examination of the principal diseases of the major tissues and organ systems. Upon completion of the course the student will have had the opportunity to acquire foundation knowledge of the concepts of pathophysiology applicable and required for clinical diagnosis of human diseases. Open for Cross Enrollment on Space Available Basis.

PHAS 5009. Principles of Nutrition for the Physician Assistant. 2.5 Credit Hours.
The student will have the opportunity to develop knowledge of the role of nutrition in healthy and disease states. Emphasis will be on nutrition as a component of patient care and treatment. Open for Cross Enrollment on Space Available Basis.

PHAS 5011. Principles of Ethics and Professionalism. 1 Credit Hour.
A major component of becoming a critical thinker involves understanding of professional behavior and ethical decision making that may affect others, particularly patients and their families. This course will encourage discussion and analysis of issues that involve professional behavior and ethical conflicts to help PA students prepare for approaching ethical dilemmas. In addition, the course will address ethical issues relating to research.

PHAS 5034. Clinical Medicine 2. 10 Credit Hours.
This course provides students with all aspects of medical care based on an organ system approach. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Health disparities will be included. Special topics will include pediatric and geriatric applications. The organ systems to be covered are genetics, dermatology, renal/male reproductive, cardiovascular, respiratory, and hematologic.

PHAS 5036. Clinical Medicine 4. 10 Credit Hours.
This course provides students with all aspects of medical care based on an organ system approach. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Health disparities will be included. Special topics will include pediatric and geriatric applications. The organ systems to be covered are gastrointestinal, musculoskeletal, neurologic female reproductive, endocrine, and special topics.
PHAS 5035. Clinical Medicine for PA 1. 3 Credit Hours.
This course provides students with all aspects of medical care based on an organ system approach. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Health disparities will be included. Special topics will include pediatric and geriatric applications. The organ systems to be covered are cardiology, with EKG, and pulmonology.

PHAS 5036. Clinical Medicine for PA 2. 5 Credit Hours.
This course provides students with all aspects of medical care based on an organ system approach. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Health disparities will be included. Special topics will include pediatric and geriatric applications. The organ systems to be covered are: cardiology with EKG, and pulmonology.

PHAS 5037. Clinical Medicine for PA 3. 10 Credit Hours.
This course provides students with all aspects of medical care based on an organ system approach. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Health disparities will be included. Special topics will include pediatric and geriatric applications. The organ systems to be covered are: cardiology with EKG, and pulmonology.

PHAS 5038. Clinical Medicine for PA 4. 2 Credit Hours.
This course provides students with all aspects of medical care based on an organ system approach. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Health disparities will be included. Special topics will include pediatric and geriatric applications. The organ systems to be covered are nephrology, musculoskeletal, rheumatology, gastrointestinal, infectious disease, obstetrics, gynecology, and endocrinology.

PHAS 5039. Clinical Medicine for PA 5. 4 Credit Hours.
This course provides students with all aspects of medical care based on an organ system approach. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Health disparities will be included. Special topics will include pediatric and geriatric applications. The organ systems to be covered are: cardiology with EKG, and pulmonology.

PHAS 5040. Clinical Medicine for PA 6. 2 Credit Hours.
This course provides students with all aspects of medical care based on an organ system approach. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Health disparities will be included. Special topics will include pediatric and geriatric applications. The organ systems to be covered are: cardiology with EKG, and pulmonology.

PHAS 5041. Clinical Medicine for PA 7. 2 Credit Hours.
This course provides students with all aspects of medical care based on an organ system approach. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Health disparities will be included. Special topics will include pediatric and geriatric applications. The organ systems to be covered are: cardiology with EKG, and pulmonology.

PHAS 5042. Clinical Medicine for PA 8. 2 Credit Hours.
This course provides students with all aspects of medical care based on an organ system approach. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Health disparities will be included. Special topics will include pediatric and geriatric applications. The organ systems to be covered are: cardiology with EKG, and pulmonology.

PHAS 5043. Physiology in Health and Disease. 4 Credit Hours.
This course shall provide students with the opportunity to develop a knowledge base of human physiology in health and diseased states. Emphasis will be on the pathophysiology of human disease processes. Course content includes organ system physiology and general disease processes of degeneration, inflammation, neoplasia, and changes associated with major tissue/organ diseases.

PHAS 5044. Clinical Anatomy. 5 Credit Hours.
This course uses lecture and laboratory experience to learn gross morphology of the human body including: structural relationships, anatomical variations and radiological correlations. The course will emphasize the application of this anatomical knowledge to clinical practice. Students will conduct a complete cadaver gross dissection in order to reveal the anatomical basis for performing clinical procedures, conduct a physical exam, and assess structures that may be injured or diseased based on a patient presentation. Students are expected to become skilled at identification of anatomical structures, and are also expected to become proficient at recognition of structural arrangements and structural relationships. Students have the opportunity to further their knowledge of anatomy by using computer-assisted technology, which is available online. Course Fees: Admin Fee/Materials: $831 Lab/ Gross Anatomy: $30.

PHAS 5091. Special Topics. 1-10 Credit Hours.
This special topics or directed study course is a faculty-directed, didactic opportunity for students. Specific course objectives and study plans will be developed based on student needs and faculty decisions. The course may be used for special projects, additional coursework, or remedial education. It may be repeated for credit.

PHAS 5201. Patient Evaluation 2. 2 Credit Hours.
This course is a continuation of Patient Evaluation 1, and provides the student with additional opportunities to develop a theoretical and clinical basis for assessment of the patient. The process, in which a physician assistant utilizes a comprehensive physical, psychosocial, and cultural assessment across the lifespan to gather specific data relevant to common health problems, is demonstrated. Faculty will facilitate laboratory and clinical experiences that will focus on assessment of patients and presentation of findings in a variety of settings.

PHAS 5301. Patient Evaluation 3. 2 Credit Hours.
This course is a continuation of Patient Evaluation 2, and provides the student with additional opportunities to develop a theoretical and clinical basis for assessment of the patient. The process, in which a physician assistant utilizes a comprehensive physical, psychosocial, and cultural assessment across the lifespan to gather specific data relevant to common health problems, is demonstrated. Faculty will facilitate laboratory and clinical experiences that will focus on assessment of patients and presentation of findings in a variety of settings.

PHAS 6004. Preventative Medicine and Public Health. 4 Credit Hours.
The student will have an opportunity to develop an understanding and knowledge of epidemiology and preventive medicine across a number of topics. An introduction to public health, with an emphasis on needs assessment and project development, is a major component of this course. Open for Cross Enrollment on Space Available Basis.

PHAS 6010. Pharmacology 1. 3 Credit Hours.
The student will have an opportunity to develop an understanding and knowledge of the pharmacological basis of therapeutics with special emphasis on the biochemical and physiological functions in disease. Major areas covered include drugs active in the cardiovascular, autonomic, and central nervous systems. General principles of drug action and specific coverage of drugs used in the treatment of bacterial, viral, and parasitic diseases are provided.

PHAS 6013. Clinical Research and Evidence Based Medicine. 3 Credit Hours.
This course is a general introduction to research design, statistical reasoning, and interpretation of medical/scientific literature. Topics include scientific method, theory, development of research questions, issues of measurement, models of experimental and non-experimental designs, and an overview of parametric and non-parametric statistical techniques. All topics will be in reference to understanding the literature and to evidence for practice decisions. The learner will have an opportunity to critically analyze medical and scientific literature/research and participate in a research project headed by faculty mentors.

PHAS 6014. Pharmacology 2. 3 Credit Hours.
A continuation of Pharmacology 1, the student will have an opportunity to develop an understanding and knowledge of the actions and therapeutic uses of drugs. The topics include principles of pharmacology and pharmacokinetics. Topics will center on drug action, autonomic and cardiovascular pharmacology, neuropharmacology, endocrine pharmacology, GI and respiratory pharmacology, and an introduction to chemotherapy and toxicology. Special topics will include basics in prescription writing.
PHAS 6015. Clinical Skills. 2.5 Credit Hours.
This course provides the student with an opportunity to experience multiple aspects of clinical practice and procedure skills to further develop an appreciation for the art and science of medicine as it relates to physician assistant practice. The student will have an opportunity to apply those skills taught in lecture to lab practicums and outside clinical experience during the clinical phase of their studies. Faculty will facilitate laboratory experience that will focus on demonstration and performance based training. Activities will range from observation to participation in procedure skills. Course Fees: Clinical fee $300.00.

PHAS 6101. Internal Medicine Supervised Clinical Practice Experience. 4 Credit Hours.
This clinical rotation is part of a series of supervised clinical practice (SCP) opportunities for students who have completed the didactic phase of the Physician Assistant curriculum. SCP experiences enable students to meet program expectations, and acquire the competencies needed for entry level clinical PA practice. This outpatient primary care rotation will include preventive, acute and chronic patient encounters that include women’s health and care across the life span.

PHAS 6102. Family Medicine Supervised Clinical Practice Experience. 4 Credit Hours.
This clinical rotation is part of a series of supervised clinical practice (SCP) opportunities for students who have completed the didactic phase of the Physician Assistant curriculum. SCP experiences enable students to meet program expectations, and acquire the competencies needed for entry level clinical PA practice. This outpatient primary care rotation will include preventive, acute and chronic patient encounters that include women’s health and care across the life span.

PHAS 6103. Primary Care Supervised Clinical Practice Experience. 4 Credit Hours.
This clinical rotation course is part of a series of supervised clinical practice (SCP) opportunities for students who have completed the didactic phase of the Physician Assistant curriculum. SCP experiences enable students to meet program expectations, and acquire the competencies needed for entry level clinical PA practice. This outpatient primary care rotation will include preventive, acute and chronic patient encounters that include women’s health and care across the life span.

PHAS 6104. Pediatrics Supervised Clinical Practice Experience 4. 4 Credit Hours.
This clinical rotation is part of a series of supervised clinical practice (SCP) opportunities for students who have completed the didactic phase of the Physician Assistant curriculum. SCP experiences enable students to meet program expectations and acquire the competencies needed for entry-level clinical PA practice. This outpatient pediatric rotation will include preventive, acute and chronic patient encounters.

PHAS 6105. Emergency Medicine Supervised Clinical Practice Experience. 4 Credit Hours.
This clinical rotation course is part of a series of supervised clinical practice (SCP) opportunities for students who have completed the didactic phase of the Physician Assistant curriculum. SPC experiences enable students to meet program expectations, and acquire the competencies needed for entry-level clinical PA practice. Students will encounter the types of patients essential to preparing them for entry into practice. This emergency medical rotation will include acute and emergent patient encounters that include women’s health and care across the life span.

PHAS 6106. Inpatient Medicine Supervised Clinical Practice Experience. 4 Credit Hours.
This clinical rotation course is part of a series of supervised clinical practice experience (SCPE) opportunities for students who have completed the didactic phase of the Physician Assistant curriculum. SCPEs enable students to meet program expectations, and acquire the competencies needed for entry-level clinical PA practice. This inpatient rotation will include preventative, acute and emergent patient encounters that include pre- and post-surgical care, women’s health and care across the life span.

PHAS 6107. Women’s Health Supervised Clinical Practice Experience. 4 Credit Hours.
This clinical rotation is part of a series of supervised clinical practice experience (SCPE) opportunities for students who have completed the didactic phase of the Physician Assistant curriculum. SCPEs enable students to meet program expectations and acquire the competencies needed for entry-level clinical PA practice. This women’s health rotation will include preventative, acute, chronic and emergent patient encounters across the life span.

PHAS 6108. General Surgery Supervised Clinical Practice Experience. 4 Credit Hours.
This clinical rotation is part of a series of supervised clinical practice experience (SCPE) opportunities for students who have completed the didactic phase of the Physician Assistant curriculum. SCPEs enable students to meet program expectations and acquire the competencies needed for entry-level clinical PA practice. This general surgery rotation will include acute, chronic and emergent patient encounters that include pre-surgical, post-surgical and intra-surgical care, as well as women’s health and care across the life span.

PHAS 6109. Behavioral Medicine Supervised Clinical Practice Experience. 4 Credit Hours.
This clinical rotation is part of a series of supervised clinical practice experience (SCPE) opportunities for students who have completed the didactic phase of the Physician Assistant curriculum. SCPEs enable students to meet program expectations, and acquire the competencies needed for entry-level clinical PA practice. This psychiatry rotation will include preventative, acute, chronic, and emergent patient encounters that include women’s health and care across the life span.

PHAS 6110. Supervised Clinical Research Experience. 4 Credit Hours.
This clinical phase rotation course is a supervised research month opportunity for students who have completed the didactic phase of the Physician Assistant curriculum. This course is designed to provide practical application of skills learned during PHAS 6013 Scientific Inquiry. During this rotation, students will have the opportunity to explore research design, statistical reasoning, and interpretation of medical/scientific literature. This rotation will enhance the students’ understanding and interpretation of medical literature and the application of evidence for practice decisions. The learner will have an opportunity to critically analyze medical and scientific literature/research and demonstrate the results of their team’s research project headed by faculty mentors.
PHAS 6111. Elective 1 Supervised Clinical Practice Experience. 4 Credit Hours.
This clinical rotation course is part of a series of supervised clinical practice experience (SCPE) opportunities for students who have completed the didactic phase of the Physician Assistant curriculum. SCPEs enable students to meet program expectations, and acquire the competencies needed for entry-level clinical PA practice. This elective rotation can include preventative, acute, chronic, and emergent patient encounters that include surgical care, women's health and care across the life span.

PHAS 6112. Elective 2 Supervised Clinical Practice Experience. 4 Credit Hours.
This clinical rotation is part of a series of supervised clinical practice experience (SCPE) opportunities for students who have completed the didactic phase of the Physician Assistant curriculum. SCPEs enable students to meet program expectations, and acquire the competencies needed for entry-level clinical PA practice. This elective rotation can include preventative, acute, chronic, and emergent patient encounters that include surgical care, women's health and care across the life span.

PHAS 6113. Elective 3 Supervised Clinical Practice Experience. 4 Credit Hours.
This clinical rotation is part of a series of supervised clinical practice experience (SCPE) opportunities for students who have completed the didactic phase of the Physician Assistant curriculum. SCPEs enable students to meet program expectations, and acquire the competencies needed for entry-level clinical PA practice. This elective rotation can include preventative, acute, chronic, and emergent patient encounters that include surgical care, women's health and care across the life span.

PHAS 6114. Elective 4 Supervised Clinical Practice Experience. 4 Credit Hours.
This clinical rotation is part of a series of supervised clinical practice experience (SCPE) opportunities for students who have completed the didactic phase of the Physician Assistant curriculum. SCPEs enable students to meet program expectations, and acquire the competencies needed for entry-level clinical PA practice. This elective rotation can include preventative, acute, chronic, and emergent patient encounters that include surgical care, women's health and care across the life span.

PHAS 6115. Elective 5 Supervised Clinical Practice Experience. 4 Credit Hours.
This clinical rotation is part of a series of supervised clinical practice experience (SCPE) opportunities for students who have completed the didactic phase of the Physician Assistant curriculum. SCPEs enable students to meet program expectations, and acquire the competencies needed for entry-level clinical PA practice. This elective rotation can include preventative, acute, chronic, and emergent patient encounters that include surgical care, women's health and care across the life span.

PHAS 6120. Endocrinology. 1.5 Credit Hour.
This course provides students with aspects of medical care related to the endocrine system. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Instruction in health disparities and diverse populations is included.

PHAS 6121. Gastroenterology. 2 Credit Hours.
This course provides students with aspects of medical care related to the gastroenterology system. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Instruction in health disparities and diverse populations is included.

PHAS 6122. Orthopedics-Rheumatology. 2 Credit Hours.
This course provides students with aspects of medical care related to the musculoskeletal system. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Instruction in health disparities and diverse populations is included.

PHAS 6123. Infectious Disease. 1 Credit Hour.
This course provides students with aspects of medical care related to infectious diseases. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Instruction in health disparities and diverse populations is included.

PHAS 6124. Women's Health. 1.5 Credit Hour.
This course provides students with aspects of medical care related to the women's health. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Instruction in health disparities and diverse populations is included.

PHAS 6125. Emergency Medicine. 1.5 Credit Hour.
This course provides students with aspects of medical care related to the medical and trauma patient, review of signs and symptoms and differential diagnoses. The materials will include the initial assessment of the medical and trauma patient, review of signs and symptoms and accompanying physical findings, methods of diagnosis, and treatment of a spectrum of emergent illnesses and injuries. The course will be organized by chief complaint and will cover the pertinent diseases processes/injuries to aid in the creation of learners' differential diagnoses.

PHAS 6126. General Surgery. 1.5 Credit Hour.
This didactic phase course covers various topics concerning general surgical care of patients. Emphasis is given to presenting signs and symptoms, laboratory and imaging interpretation and the diagnosis and treatment of selected surgical disorders.

PHAS 6127. Gerontology. 1 Credit Hour.
This course provides students with aspects of medical care based on an organ system approach. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Health disparities will be included. The organ systems will be covered as they relate to specific geriatric patients: cardiovascular, dermatologic, otorhinolaryngology, endocrine, gastrointestinal/nutritional, hematologic, musculoskeletal, infectious disease, neurologic, psychiatric, pulmonary, and genitourinary/reproductive.
PHAS 6128. Pediatrics. 1 Credit Hour.
This course provides students with all aspects of pediatric medical care based on an organ system approach. It will provide students with an opportunity to develop an understanding of common pediatric disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Health disparities will be included. Special emphasis is placed on childhood growth and development focusing on expected developmental milestones.

PHAS 6129. Hematology-Oncology. 0.5 Credit Hours.
This course provides students with aspects of medical care related to hematology and oncology. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Instruction in health disparities and diverse populations is included.

PHAS 6130. Renal-Genitourinary. 1.5 Credit Hour.
This course provides students with aspects of medical care related to the renal and genitourinary systems. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Instruction in health disparities and diverse populations is included.

PHAS 6131. Clinical Skills 1. 0.5 Credit Hours.
This course provides the student with knowledge and skills necessary to perform selected clinical procedures using accepted sterile techniques. The student will have the opportunity to demonstrate an understanding of the indications, contraindications, rationale and potential complications with additional emphasis on patient preparation, required materials, aseptic technique, procedure steps, wound care, patient safety and education. Faculty will facilitate lecture and laboratory experience that will focus on demonstration and performance based training. Activities will range from observation to participation in procedure skills utilized during the clinical phase of their studies.

PHAS 6132. Clinical Skills 3. 1 Credit Hour.
This course is a continuation of Clinical Skills 2, and provides the student with additional knowledge and skills necessary to perform selected clinical procedures using accepted sterile techniques. The student will have the opportunity to demonstrate an understanding of the indications, contraindications, rationale and potential complications with additional emphasis on patient preparation, required materials, aseptic technique, procedure steps, wound care, patient safety and education. Faculty will facilitate lecture and laboratory experience that will focus on demonstration and performance based training. Activities will range from observation to participation in procedure skills utilized during the clinical phase of their studies.

PHAS 6133. Cardiology. 3.5 Credit Hours.
This course provides students with all aspects of medical care related to selected cardiovascular disorders. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Health disparities will be included.

PHAS 6134. Pulmonology. 2 Credit Hours.
This course provides students with all aspects of medical care related to selected pulmonary disorders. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Health disparities will be included.

PHAS 6135. Dermatology. 1 Credit Hour.
This course provides students with aspects of medical care related to dermatology. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Instruction in health disparities and diverse populations is included.

PHAS 6136. Otolaryngology. 1.5 Credit Hour.
This course provides students with aspects of medical care related to the otolaryngology related organ systems. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Instruction in health disparities and diverse populations is included.

PHAS 6137. Clinical Skills 2. 1 Credit Hour.
This course is a continuation of Clinical Skills 1, and provides the student with additional knowledge and skills necessary to perform selected clinical procedures using accepted sterile techniques. The student will have the opportunity to demonstrate an understanding of the indications, contraindications, rationale and potential complications with additional emphasis on patient preparation, required materials, aseptic technique, procedure steps, wound care, patient safety and education. Faculty will facilitate lecture and laboratory experience that will focus on demonstration and performance based training. Activities will range from observation to participation in procedure skills utilized during the clinical phase of their studies.

PHAS 6138. Neurology. 1.5 Credit Hour.
This course provides students with aspects of medical care related to the neurologic system. It will provide students with an opportunity to develop an understanding of human disease states. Instruction will include recognition of disease state through data collection, assessment, management, patient education, and disease prevention. Instruction in health disparities and diverse populations is included.

Physiology (PHYL)

Courses

PHYL 3014. Research in Endocrinology of Aging. 0 Credit Hours.
The course consists of student participation in research on glucocorticoid-induced gene expression during aging and food restriction.

PHYL 3016. Ion Channel Research. 0 Credit Hours.
The course includes student participation in ongoing basic research on the molecular mechanisms of signaling pathways acting on ion channels. Techniques may include patch-clamp, electrophysiology, molecular biology and biochemistry.

PHYL 4000. Special Topic. 1-42 Credit Hours.
This is a self-designed course created by both the student and the department to cover a specific topic. A Course Approval Form must be completed along with documentation of the designed course description.
PHYL 4016. Ion Channel Research. 4 Credit Hours.
The course addresses fundamental mechanisms of cell excitability in neurons and other excitable tissues. The format is a combination of lectures, readings, discussions, a laboratory demonstration, and online simulations (where available). Examples of the latter include activities to simulate the resting membrane potential and action potentials. The module will emphasize contemporary issues in the scientific literature as well as translational science where dysfunction in ion channels underlie common disorders such as Alzheimer’s Disease, Myasthenia Gravis, Cystic Fibrosis, Long QT Syndrome, and Epilepsy to name just a few. PHYL 5041 is a co-requisite for Fundamentals of Neuroscience I as it is the first module of that course, but it also can be taken as a standalone one-hour course.

PHYL 5042. Cardiovascular Physiology. 1 Credit Hour.
This course explores the physiological mechanisms by which the cardiovascular system carries out its principle function. Mechanisms that produce and regulate cardiac pumping, organ blood flow, capillary fluid and solute exchange, and arterial blood pressure are examined. The nature and importance of various local, neural, and hormonal mechanisms are emphasized. Integrated control of cardiovascular function in situations requiring cardiovascular adjustments (e.g., exercise, blood pressure alterations) are also covered. Students may take the full series but are only required to take three out of the four courses (PHYL 5041, 5042, 5043, and 5044).

PHYL 5043. Respiratory & Renal Physiology. 1 Credit Hour.
This course covers the physiology of respiratory and renal function in the human body. Our focus is on basic mechanisms of function, role in body homeostasis, as well as dysfunction of both systems associated with pulmonary and renal disease. Two sessions are set aside for discussion around significant advances in each field. One or more recently published articles will serve as the focus for each of these discussions sessions. Students may take the full series but are only required to take three out of the four courses (PHYL 5041, 5042, 5043, and 5044).

PHYL 5044. Metabolism/Hormones/GI System. 1 Credit Hour.
The course serves to expose students to the current state of knowledge in the field of endocrinology and metabolism, including reproductive physiology, and the related topics of the physiology of the digestive tract. Three sessions are assigned to advanced topics. In these three sessions students will engage in a discussion format centered around one recent important publication. The lecturer will lead the discussion with the aim of showing how the topics the students have been exposed to integrate one with another, providing the context for present-day discoveries.

PHYL 5045. Mammalian Physiology. 4 Credit Hours.
The course begins with fundamental processes that govern membrane transport, membrane potential, and excitation-contraction coupling. The course then proceeds to coverage of organ system function including cardiovascular, respiratory, renal, gastrointestinal and endocrine/metabolic physiology. Lecture material is enhanced by supplemental discussion of research literature encompassing molecular biology, integrative function, and pathophysiological implications. Students may take the full course but are only required to take three out of the four modules (PHYL 5041, 5042, 5043, and 5044).
PHYL 6020. Regulation of Glucose Metabolism. 3 Credit Hours.
The normal regulation of glucose metabolism will be reviewed integrating whole body, organ, cellular, and molecular control mechanisms. Dysregulation of these control mechanisms in diabetes and other common metabolic disorders such as obesity and the metabolic syndrome will be examined in detail. State-of-the-art in vivo and in vitro techniques essential for the study of normal and deranged glucose homeostasis will be discussed in depth. Diabetic microvascular (nephropathy, retinopathy, neuropathy) and macrovascular complications and their relationship to impaired glucose metabolism will be reviewed. Lastly, pharmacologic therapy of diabetes and its associated complications will be discussed.

PHYL 6071. Supervised Teaching. 1 Credit Hour.
A student enrolled in this course is expected to participate in the teaching program of the Department.

PHYL 6090. Seminar. 1 Credit Hour.
The course is comprised of research presentations by Physiology graduate students. This course is required of all students each semester.

PHYL 6091. Selected Topics of Physiology. 2 Credit Hours.
Students must choose at least two courses selected from among the offerings in: (1) Cardiovascular; (2) Cell Biology in Neural Science; (3) Endocrine and Metabolism; (4) Molecular Physiology; and (5) Ion Channels in Disease. Courses that may be substituted for one of these selections: (1) INTD 5040 - Fundamentals of Neuroscience I: Molecular, Cellular, and Developmental Neuroscience; (2) INTD 5043 - Fundamentals of Neuroscience II: Systems Neuroscience; (3) CSBL 6048 - Biology of Aging; and (4) CSBL 6058 - Neurobiology of Aging. Not all selected topics are offered each semester. Please discuss this with the Academic Coordinator for more details. Substituted courses in conflict with Physiology course schedule will require approval from COGS.

PHYL 6097. Research. 1-12 Credit Hours.
If a track chooses to give a seminar course, the specific course requirements will be determined by the track. The sub-designations for each track are: (1) Biology of Aging; (2) Cancer Biology; (3) Cell & Molecular Biology; (4) Genetics, Genomics & Development; (5) Membrane Biology & Cell Signaling; (6) Metabolism & Metabolic Disorders; (7) Microbiology & Immunology; (8) Molecular Biophysics & Biochemistry; (9) Molecular, Cellular, & Integrative Physiology; (10) Neuroscience; and (11) Pharmacology.

PHYL 6098. Thesis. 1-12 Credit Hours.
Registration for at least one term is required of M.S. candidates. Prerequisite: admission to candidacy for Master of Science degree.

PHYL 6291. Seminar 2. 1 Credit Hour.
Presentation and discussion of recent research advances by outside scientists.

PHYL 7099. Dissertation. 1-12 Credit Hours.
Registration for at least two terms is required of Ph.D. candidates. Prerequisites: admission to candidacy for the Ph.D. degree.

Prosthodontics (PROS)

Courses

PROS 5015. Concepts of Occlusion. 1 Credit Hour.
Various concepts of occlusion with special emphasis on the clinical application of gnathology are the focus of this course. The laboratory phase includes the development of a functional occlusion through the cusp-fosa additive wax method and an occlusal equilibration technique.

PROS 5021. Advanced Prosthodontics I. 1 Credit Hour.
This fall course for first-year advanced prosthodontics students is designed to provide the postdoctoral student with the didactic basis for advanced clinical prosthodontics care.

PROS 5022. Advanced Prosthodontics I. 1 Credit Hour.
This spring course for first-year advanced prosthodontics students is designed to provide the postdoctoral student with the didactic basis for advanced clinical prosthodontics care.

PROS 5032. Clinical Prosthodontics I. 4 Credit Hours.
This fall course for first-year advanced prosthodontics students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics as a first course in a progressively more complex clinical prosthodontics curriculum. Each student will have the opportunity to maintain a comprehensive prosthodontics practice involving fixed, removable, and implant treatment procedures.

PROS 5033. Clinical Prosthodontics I. 3 Credit Hours.
This spring course for first-year advanced prosthodontics students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics as a second course in a progressively complex clinical prosthodontics curriculum. Each student will have the opportunity to maintain a comprehensive prosthodontics practice involving fixed, removable, and implant treatment procedures.

PROS 5044. OMS/Prosthodontics Seminar I. 0.5 Credit Hours.
This fall course for first-year prosthodontics students is a seminar devoted to the discussion and coordination of treatment of patients under joint management by Oral & Maxillofacial Surgery and Graduate Prosthodontics.

PROS 5045. OMS/Prosthodontics Seminar I. 0.5 Credit Hours.
The spring course for first-year prosthodontics students is a seminar devoted to the discussion and coordination of treatment of patients under joint management by Oral & Maxillofacial Surgery and Graduate Prosthodontics.

PROS 5049. Overview of Maxillofacial Pros. 0.5 Credit Hours.
This course introduces the graduate student to the discipline of maxillofacial prosthetics. Emphasis is placed on treating patients requiring prosthetic devices for the head and neck area due to surgery or trauma.

PROS 5050. Dental Implantology. 1 Credit Hour.
This course offers graduate level students an introduction to the basics of the osseointegrated implant surgical and prosthetic technique. Lectures on advanced concepts of osseointegration therapy related to several implant systems are included.

PROS 5053. Advanced Implant Prosthodontics. 1.5 Credit Hour.
The objective of this course is to offer each student an opportunity to obtain background information, knowledge, and skills associated with dental implant treatment modalities.

PROS 5067. Supervised Teaching 1. 1.5 Credit Hour.
This course provides first-year prosthodontics residents the opportunity to teach complete denture laboratory skills to predoctoral students under the supervision of experienced prosthodontic educators.

PROS 5068. Supervised Teaching 1. 2 Credit Hours.
This spring course provides first-year prosthodontic residents the opportunity to teach complete denture laboratory skills to predoctoral students under the supervision of experienced prosthodontic educators.
PROS 5072. Literature Review Seminar 1. 1 Credit Hour.
This fall course for first-year prosthodontics students is the first of six courses given in a three-year continuum of classical literature review seminars. The broad field of prosthodontics literature is systematically reviewed with the objective of providing the postdoctoral student with a background of prosthodontic knowledge and history.

PROS 5073. Literature Review Seminar 1. 1 Credit Hour.
This spring course for first-year prosthodontics students is the second of six courses given in a three-year continuum of classical literature review seminars. The broad field of prosthodontics literature is systematically reviewed with the objective of providing the postdoctoral student with a background of prosthodontic knowledge and history.

PROS 5095. Research. 1 Credit Hour.
This summer course for advanced prosthodontics students is the first of three in the first year designed to offer opportunity to review the literature and to design and complete a laboratory or clinical research project under the direction of a faculty advisor. Research should result in a paper by certificate students suitable for publication in a peer-rated journal. Students in the masters programs will be expected to collect and analyze data for a thesis that must be defended as the culmination of research efforts.

PROS 5096. Research. 1 Credit Hour.
This summer course for advanced prosthodontics students is the second of three in the first year designed to offer an opportunity to review the literature and to design and complete a laboratory or clinical research project under the direction of a faculty advisor. Research should result in a paper by certificate students suitable for publication in a peer-rated journal. Students in the master's degree programs will be expected to collect and analyze data for a thesis that must be defended as the culmination of research efforts.

PROS 5097. Research 1. 1-9 Credit Hours.
This course offers the student an opportunity to review the literature and to design and complete a laboratory or clinical research project under the direction of a faculty advisor. Research should result in a paper by certificate students suitable for publication in a peer-rated journal. Students in the master's degree programs will be expected to collect and analyze data for a thesis that must be defended as the culmination of research efforts.

PROS 6000. Introduction to Advanced Prosthodontics for Interns. 1 Credit Hour.

PROS 6022. Advanced Prosthodontics 2. 1 Credit Hour.
This fall continuation course for second-year advanced prosthodontic students is designed to provide the postdoctoral student with the didactic basis for advanced clinical prosthodontic care.

PROS 6023. Advanced Prosthodontics 2. 1 Credit Hour.
This spring continuation course for second-year advanced prosthodontics students is designed to provide the postdoctoral student with the didactic basis for advanced clinical prosthodontic care.

PROS 6031. Clinical Prosthodontics 2. 4.5 Credit Hours.
This fall course for second-year advanced prosthodontic students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics as a third clinical course in a progressively more complex clinical prosthodontics curriculum. Each student will have the opportunity to maintain a comprehensive prosthodontic practice involving fixed, removable, and implant treatment procedures (including surgical placement of implants).

PROS 6032. Clinical Prosthodontics 2. 4.5 Credit Hours.
This spring course for advanced prosthodontic students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics as a course in a progressively more complex clinical prosthodontic curriculum. Each student will have the opportunity to maintain a comprehensive prosthodontic practice involving fixed, removable, and implant treatment procedures (including surgical placement of implants).

PROS 6033. Clinical Prosthodontics 3. 8 Credit Hours.
This fall course for advanced prosthodontic students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics in a progressively more complex clinical prosthodontics curriculum. Each student will have the opportunity to maintain a comprehensive prosthodontic practice involving fixed, removable, implant and maxillofacial prosthodontic patients.

PROS 6034. Clinical Prosthodontics 3. 6.5 Credit Hours.
This spring course for advanced prosthodontic students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics in a progressively more complex clinical prosthodontics curriculum. Each student will have the opportunity to maintain a comprehensive prosthodontic practice of fixed, removable, implant, and maxillofacial prosthodontists.

PROS 6036. Maxillofacial Prosthodontics. 1 Credit Hour.
This clinical course provides the opportunity to experience treating patients on the Maxillofacial Prosthetics Service. Patients with congenital and acquired defects are treated under the supervision of the maxillofacial prosthodontics faculty.

PROS 6037. Clinical Prosthodontics. 2 Credit Hours.
This clinical course for Perio-Pros residents in their 3rd and 5th years is designed to provide complex clinical treatment experiences that integrate skills from both specialties. Each student will have the opportunity to maintain a comprehensive integrated Perio-Pros practice.

PROS 6043. Geriatric Dentistry. 0.5 Credit Hours.
The objective of this course is to provide the clinical and didactic background necessary to address the limitations geriatric patients pose for prosthodontic specialty level diagnosis, planning and treatment.

PROS 6046. OMS/Prosthodontics Seminar 2. 0.5 Credit Hours.
This fall semester course for second-year advanced prosthodontic students is the third in a continuum of seminar courses devoted to the discussion and coordination of treatments of patients under joint management of the Oral and Maxillofacial Surgery and Prosthodontics programs.

PROS 6047. OMS/Prosthodontics Seminar 2. 0.5 Credit Hours.
This spring semester course for second-year advanced prosthodontics students is the fourth in a continuum of seminar courses devoted to the discussion and coordination of treatments of patients under joint management of the Oral and Maxillofacial Surgery and Prosthodontics programs.

PROS 6048. Oral & Maxillofacial Surgery and Prosthodontics Seminar 3. 0.5 Credit Hours.
This fall semester course for third year advanced prosthodontics students is a continuation of seminar courses devoted to the discussion and coordination of treatments of patients under joint management of the Oral & Maxillofacial Surgery and Prosthodontics programs.
PROS 6049. Oral & Maxillofacial Surgery and Prosthodontics Seminar 3. 0.5 Credit Hours.
This spring semester course for third year advanced prosthodontics students is a continuation of seminar courses devoted to the discussion and coordination of treatments of patients under joint management of the Oral & Maxillofacial Surgery and Prosthodontics programs.

PROS 6069. Supervised Teaching 2. 2 Credit Hours.
This fall course is the first of two second-year advanced prosthodontics courses that provide students with the opportunity to teach fixed prosthodontic laboratory skills to predoctoral students under the supervision of experienced prosthodontic educators.

PROS 6070. Supervised Teaching 2. 2 Credit Hours.
This spring course is the second of two second-year advanced prosthodontics courses that provide students with the opportunity to teach fixed prosthodontic laboratory skills to predoctoral students under the supervision of experienced prosthodontic educators.

PROS 6071. Supervised Teaching 3. 2 Credit Hours.
This course is the first of two third-year advanced prosthodontics courses that provide students with the opportunity to teach prosthodontic clinical skills to predoctoral students under the supervision of experienced prosthodontic educators.

PROS 6072. Supervised Teaching 3. 2 Credit Hours.
This course is the second of two third-year advanced prosthodontics courses that provide students with the opportunity to teach prosthodontic skills to predoctoral students under the supervision of experienced prosthodontic educators.

PROS 6073. Literature Review Seminar 2. 1 Credit Hour.
This fall course for second-year advanced prosthodontics students is the third of six courses given in a three-year continuum of classical literature review seminars.

PROS 6074. Literature Review Seminar 2. 1 Credit Hour.
This spring course for second-year advanced prosthodontics students is the fourth of six courses given in a three-year continuum of classical literature review seminars.

PROS 6075. Literature Review Seminar 3. 1 Credit Hour.
This fall course for third year advanced prosthodontics students is the fifth of six courses given in a three-year continuum of classical literature review seminars.

PROS 6076. Literature Review Seminar 3. 1 Credit Hour.
This fall course for third year advanced prosthodontics students is the sixth of six courses given in a three-year continuum of classical literature review seminars.

PROS 6092. Research 2. 2 Credit Hours.
This summer course for advanced prosthodontics students is the first of three research courses in the second year. It is designed to offer an opportunity to review the literature and to design and complete a laboratory or clinical research project under the direction of a faculty advisor. Research should result in a paper suitable for publication in a peer-rated journal. Students in the master's programs will be expected to collect and analyze data for a thesis which must be defended as the culmination of research efforts.

PROS 6093. Research 2. 2 Credit Hours.
This summer course for advanced prosthodontics students is the first of three research courses in the 2nd year. It is designed to offer an opportunity to review the literature and to design and complete a laboratory or clinical research project under the direction of a faculty advisor. Research should result in a paper suitable for publication in a peer-rated journal. Students in the masters programs will be expected to collect and analyze data for a thesis which must be defended as the culmination of research efforts.

PROS 6096. Research 3. 2 Credit Hours.
This fall course for advanced prosthodontic students is the second of three research courses in the 3rd year. It is designed to offer an opportunity to review the literature and to design and complete a laboratory or clinical research project under the direction of a faculty advisor. Research should result in a paper by certificate students suitable for publication in a peer-rated journal. Students in the masters programs will be expected to collect and analyze data for a thesis which must be defended as the culmination of research efforts.

PROS 6097. Research 3. 2 Credit Hours.
This course for third-year students in advanced prosthodontics is offered in the fall only for M.S. Prosthodontic degree students and in both the fall and spring for certificate students who matriculated in 2011. It is designed to offer an opportunity to review the literature and design and complete a laboratory or clinical research project under the direction of a faculty advisor. Certificate program research should result in a paper suitable for publication in a peer-rated journal or a scholarly presentation at an approved specialty venue.

PROS 6098. Thesis. 1-9 Credit Hours.
Completion of an acceptable thesis is required for the Master of Science in Prosthodontics degree. Registration in this course for at least one semester is required of all degree candidates. Admission to candidacy for the Master of Science degree is required in order to enroll in this course.

PROS 6121. Advanced Prosthodontics 3. 1 Credit Hour.
This fall continuum course provides an open forum for a wide variety of faculty and guest consultants on topics of special interest to the specialty of prosthodontics.

PROS 6122. Advanced Prosthodontics 3. 1 Credit Hour.
This spring continuum course provides an open forum for a wide variety of faculty and guest consultants on topics of special interest to the specialty of prosthodontics.

PROS 7018. Fixed Prosthodontics. 1 Credit Hour.
This course is designed to be adjunct to and to complement the preclinical course so that the student correlates previous instruction in the clinical care of patients in need of crowns and/or fixed partial dentures.

PROS 7019. Fixed Prosthodontics Clinic. 4.5 Credit Hours.
This clinical course consists of diagnosis and treatment planning, instruction in making complete and partial veneer crown preparations and modifications, management of supportive tissues, provision of adequate pain control for restorative procedures, fabrication and insertion of provisional as well as cast restorations, and instruction to patients in the care and maintenance of restorations.
PROS 7091. Removable Partial Denture Prosthodontics Lecture. 0.5 Credit Hours.
This didactic course is designed to acquaint the student with a variety of approaches that may be used in treating the partially edentulous mouth. Lectures cover critical steps in treatment of the partially edentulous patient, stabilization of periodontically weakened teeth, intracoronal and other attachments used in partial denture construction, swinglock partial dentures, removable partial overdentures, and cancer therapy as it relates to prosthodontic treatment.

PROS 7092. Removable Partial Dentures Clinic. 1.5 Credit Hour.
A clinical experience designed to place continued emphasis on diagnosis, treatment planning, design principles, mouth preparation, and dental laboratory coordination. The student is given the opportunity to correlate biological and mechanical information in clinical care of patients requiring removable partial dentures. The student is required to complete treatment for one partial denture patient during the junior year.

PROS 7095. Complete Dentures Lecture. 1 Credit Hour.
This course offers a series of lectures designed to present more sophisticated concepts in the prosthodontic treatment of edentulous and partially edentulous patients not included in previous courses. Lecture topics include preparation of the tissues for dentures, complete denture esthetics, occlusal systems for complete dentures, single complete dentures, immediate dentures, overdentures, maintenance care for the complete denture patient, and relining of dentures.

PROS 7099. Complete Dentures Clinic. 2.5 Credit Hours.
This clinical course consists of diagnosis and treatment planning, management of supportive tissues, fabrication and placement of complete dentures, and instruction to patients in the care and maintenance of complete dentures. The clinical experiences encourage students to correlate biological and biomechanical information into the prosthodontic treatment of edentulous and partially edentulous patients.

PROS 8001. Dental Implantology. 0.5 Credit Hours.
This course is designed to be an ever-evolving lecture series designed to provide senior dental students with more information regarding advanced topics in implant dentistry. The premise of this course is to provide evidenced-based materials regarding the latest information and current topic of interest in the field of implant dentistry. Lecture topics may include but are not limited to advanced treatment planning, immediate provisionalization (Non-loaded) of dental implants, the controversy of connecting an implant to a natural tooth, implant esthetics, advanced prosthodontic techniques, and implant and the maxillofacial patient.

PROS 9021. Adv Prosthodontics 2. 5 Credit Hours.
This continuation course for second-year advanced prosthodontic students is designed to provide the postdoctoral student with the didactic basis for advanced clinical prosthodontic care.

PROS 9022. Advanced Prosthodontics 2. 5 Credit Hours.
This continuation course for second-year advanced prosthodontic students is designed to provide the postdoctoral student with the didactic basis for advanced clinical prosthodontic care.

PROS 9023. Advanced Prosthodontics 2. 5 Credit Hours.
This continuation course for second-year advanced prosthodontics students is designed to provide the postdoctoral student with the didactic basis for advanced clinical prosthodontic care.

PROS 9024. Adv Prosthodontics 3. 5 Credit Hours.
This course is designed to provide the postdoctoral student with the opportunity to gain the prerequisite background and clinical experience in prosthodontic procedures. Fixed, removable, and overdenture concepts and treatment procedures will be emphasized.

PROS 9029. Clinical Prosthodontics 2. 4.5 Credit Hours.
This fall course for second-year advanced prosthodontic students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics as a fifth clinical course in a progressively complex clinical prosthodontic curriculum. Each student will have opportunity to maintain a comprehensive prosthodontic practice involving fixed, removable, and implant treatment procedures.

PROS 9030. Clinical Prosthodontics 2. 2 Credit Hours.
This summer course for second-year advanced prosthodontics students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics as a fourth clinical course in a progressively complex clinical prosthodontic curriculum. Each student will have the opportunity to maintain a comprehensive prosthodontic practice involving fixed, removable, and implant treatment procedures.

PROS 9031. Clinical Prosthodontics 1. 6 Credit Hours.
This course provides instruction in the laboratory procedures and clinical aspects of complete dentures, removable partial dentures, fixed, and implant prosthodontics. Residents are required to understand laboratory techniques and dental materials and to perform all phases of laboratory support related to clinical prosthodontics.

PROS 9032. Clinical Pros 1. 2 Credit Hours.
This spring course for advanced prosthodontic students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics as a sixth clinical course in a progressively complex clinical prosthodontic curriculum. Each student will have the opportunity to maintain a comprehensive prosthodontic practice involving fixed, removable, and implant treatment procedures.

PROS 9040. Hosp Maxillofacial Rotation. 1.5 Credit Hour.
Rotation in the Maxillofacial Prosthetics Department gives residents clinical exposure to geriatric and maxillofacial patients. 3rd year residents provide treatment for a patient requiring an obturator prosthesis. Residents with special interest in maxillofacial prosthetics may have the opportunity to treat additional maxillofacial patients that require other various prostheses.

PROS 9073. Literature Seminar 1. 3 Credit Hours.
This course for second-year advanced prosthodontics students is one of a series of courses given in a three-year continuum of classical literature review seminars.

PROS 9074. Literature Seminar 2. 3 Credit Hours.
This course for second-year advanced prosthodontics students is one of a series of courses given in a three-year continuum of classical literature review seminars.

PROS 9075. Literature Seminar 2. 3 Credit Hours.
This course for second-year advanced prosthodontics students is one of a series of courses given in a three-year continuum of classical literature review seminars.

PROS 9076. Literature Seminar 3. 3 Credit Hours.
The broad field of prosthodontics literature is systematically reviewed with the objective of providing the postdoctoral student with a background of prosthodontics knowledge and history.

PROS 9077. Literature Seminar 3. 3 Credit Hours.
The broad field of prosthodontics literature is systematically reviewed with the objective of providing the postdoctoral student with a background of prosthodontics knowledge and history.

PROS 9097. Research. 1-9 Credit Hours.
The student develops a research protocol and background literature search for a clinical, laboratory, or animal model research project.
Psychiatry (PSYC)

Courses

PSYC 3005. Psychiatry Clerkship. 6 Credit Hours.
The psychiatric clinical clerkship is designed to familiarize the student with the personality traits, illnesses, and emotional disturbances that affect health and productivity. It is an opportunity for the student to develop and strengthen clinical skills in interviewing patients, formulating treatment plans, and carrying out treatment with patients who have psychiatric illness. The clerkship is arranged so the student may select the assignment area on the basis of particular interest, i.e., an inpatient/outpatient setting. The student's role in the clerkship is arranged to allow for considerable experience in the working relationship between patient and "physician" in the treatment process. Seminars have been developed to allow the student an in-depth appreciation of the various psychiatric states and emotional problems that affect the general practice of medicine. The student-staff ratio allows for small groups of students to meet with faculty, thereby enhancing learning. The clerkship is an opportunity for the students to look at their personal feelings and values and understand how they influence patient care, to learn how to deal with psychiatric disease, and to become more comfortable in dealing with the personalities of patients with organic disease. Prerequisites: Successful completion of all required preclinical courses is prerequisite to enrollment in any of the clinical clerkships.

PSYC 4000. Special Topic. 4 Credit Hours.
This is a self-designed course created by both the student and the department to cover a specific topic. A Course Approval Form must be completed along with documentation of the designed course description.

PSYC 4001. Clinical Psychiatry. 4 Credit Hours.
The fourth-year medical student inpatient rotation is designed as a bridge between the role of third-year clerk and the very active, responsible role of the intern. The fourth-year medical student will act as the primary psychiatrist under the supervision of a full-time attending. The student will be an integral member of the team, and will participate in all team activities. All activities for this experience will be on an inpatient psychiatric service at the University Hospital, Veterans' Administration Hospital, in San Antonio. These are busy units with brief lengths of stay. The student will have the opportunity to gain considerable experience with crisis management of serious mental illness as well as an understanding of acute exacerbations of chronic mental illness.

PSYC 4015. Geriatric Psychiatry UT/VA. 4 Credit Hours.
This course teaches student how to manage the developmental, psychological, and neurodegenerative changes associated with aging. Students rotate through academic geriatric psychiatry clinics that treat elders with mood, anxiety, thought, and cognitive disorders. Students rotate through VA memory clinics where they learn how to administer, score, and interpret psychometric assessments and how to treat and prevent cognitive decline.

PSYC 4020. Consultation-Liaison. 4 Credit Hours.
The course includes participation in the evaluation and management of medical and surgical inpatients with psychiatric conditions at the University Hospital or the VA. Students commonly treat patients diagnosed with delirium, depression following severe suicide attempts, illness anxiety disorder, and abuse. Student learn the interface between medicine and psychiatry and how to assess decisional capacity.

PSYC 4023. Child & Adolescent Psychiatry. 4 Credit Hours.
To gain clinical experience in both inpatient and outpatient child/adolescent psychiatry, the student will attend the Clarity Child Guidance Center outpatient psychiatry clinics. Inpatient experience will be at the Clarity Child Guidance Hospital. The student may also rotate one half-day a week at selected sites including the Bexar County Juvenile Detention Center, the Cyndi Taylor Krier Secure Juvenile residential treatment center, the Roy Maas Youth Alternatives outpatient clinic, and attend seminars with the child and adolescent psychiatry residents. Experiences may be adjusted to fit students' individual interests.

PSYC 4024. Telepsychiatry. 4 Credit Hours.
The rotation introduces the medical student to some of the technical, legal, and patient care issues arising from the use of telehealth technologies. Telehealth is defined as providing services remotely through technology including phone contact and videoconferencing. This technology is being used increasingly to provide needed psychiatric services for underserved rural areas. Studies have demonstrated non-inferiority of services provided through telehealth services. Medical students will participate in a 1:1 supervised experience with a faculty member providing telepsychiatry for mental health evaluation and treatment using a Tandberg unit from the remote site in San Antonio to an originating clinical site in VA Texas Valley Coastal Bend Healthcare System (VATVCBHCS). There are no in-person patient contacts during this rotation as all services are provided through videoconferencing to the originating VA clinics. This educational experience will be provided under the supervision of the telehealth psychiatrist located on site in San Antonio with the medical student. Notes and orders will be documented through the VA's Computerized Patient Record System (CPRS). Patients will be asked to complete clinical rating scales at the time of the appointment and a satisfaction survey following each clinical encounter, which are tracked for quality improvement purposes. The rotation will include 1/2 hour weekly didactic sessions for the students. Material will include information on clinical skills such as interviewing, mental status exam, and diagnostics as they are performed using the videoconferencing equipment.
PSYC 4044. Sleep Medicine Psychiatry. 4 Credit Hours.
Learning Objectives: Obtain sleep history in compassionate, caring and empathic manner. Perform focused clinical examination with skilled bedside manners and respect for patient’s privacy and dignity. Demonstrate basic understanding of common sleep disorders and their impact on health and well-being. Understanding of basic sleep physiology and neurotransmitters involved in sleep and wake regulation. Understanding of pharmacology of commonly used sleep and wake promoting medications. Basics of polysomnographic testing. Understanding of different sleep stages and EEG features. Describe and discuss Spielman’s 3P model of insomnia. Brief Description: Sleep medicine is a relatively new medical discipline that has grown tremendously and has become an independent discipline over the last 30 years. Sleep is a fundamental part of our lives, and about one-third of our life is spent sleeping. It is a multidisciplinary field with overlap with psychiatry, neurology, ENT and pulmonology. Asking about sleep is an integral part of a psychiatric consultation. Almost all of the psychotropic medications have an effect on sleep architecture. Understanding sleep can help enhance comprehension and understanding of psychiatric illness. Many psychiatric patients have comorbid sleep disorders and vice versa. There is a need for sleep medicine trained physicians; in recent years an increasing number of residents are pursuing further training in sleep medicine. The sleep medicine elective at the University of Texas School of Medicine is a flexibly structured clinical experience for clinical students. The course consists of various experiences in the (1) sleep medicine outpatient clinic (2) in a 4 bed sleep laboratory at the VA medical center and (3) at the University Hospital affiliated sleep lab and clinic. Students will receive an introduction to common sleep disorders including insomnia, parasomnia, sleep related breathing disorders, hypersomnias and sleep related movement disorders. There will be an opportunity to learn how to obtain a sleep history and perform a focused sleep related examination. Students will observe board certified physicians every other week interpret polysomnograms, multiple sleep latency tests and actigraphy. This four-week elective is tailor made to fit the interest, learning needs and aspirations of the student. At times, opportunities will be available to spend time with a sleep psychologist learning basics of Cognitive Behavioral Therapy for insomnia and dental sleep exposure. Prerequisites: Successful completion of the internal medicine, psychiatry and neurology clerkships.

PSYC 4045. Community Psychiatry and Substance Use Disorder MS4 Clinical Elective. 4 Credit Hours.
Learning objectives: Substance use disorder is a common psychiatric condition encountered with high frequency in psychiatric and other medical practice areas. However, physicians and other health professionals often receive little training in how to manage substance use disorder in routine clinical practice. In this 4-week elective experience, the student will 1) Assist in evaluation of typical community psychiatry outpatients, learn to effectively screen for substance use problems and learn to manage this psychiatric co-occurring condition in the outpatient setting. 2) Assist in formal substance use disorder evaluation and treatment in the Be Well substance use disorder treatment clinic including group psychotherapies and medication management of opioid, alcohol, and other substance use disorders. 3) Read and discuss 3-4 journal articles on substance use disorder topics over the 4-week period. 4) Receive and read other directed readings from the course directors relevant to patients treated in the clinics. Conditions: Medical students must complete the Psychiatry MS3 rotation prior to this elective. No visiting students may be enrolled. Most medical students will have very limited or no exposure to a comprehensive outpatient substance use disorder treatment clinic in their standard psychiatry rotation. This elective fills an important gap in training exposure that can benefit not only students applying to psychiatric residencies but also those applying to general medicine or other medical specialty residencies. Location: University Plaza Bldg., 7526 Louis Pasteur, 3rd floor. Types of instructional methods: Clinical demonstration and observation with attending physicians, residents, psychotherapists; 1:1 discussion with course director/ co-director during weekly 1-hour meetings. Average number of contact hours per week: 20 hours When offered and number of students: 1-2 students (per period) by mutual agreement and approval with the course director for all periods throughout academic year (course director reserves right to exclude occasional periods based on vacation times, etc.) Assessment: Direct feedback to student and completion of the standard on-line medical student evaluation instrument. Additional information: this course is an elective, it involves interprofessional interactions, there is no travel requirements, and no enrollment of visiting students. No Memorandum of Understanding is needed with the clinic (already exists) and no medical equipment. Prerequisites: Medical students must complete the Psychiatry MS3 rotation prior to this elective; No visiting students may be enrolled.

PSYC 7000. Off Campus. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty member prior to the beginning of the rotation (at least one week before the course begins). Credit will not be given for any rotation that has not been approved in advance. Required paperwork includes: “Course Approval” form, a written letter or email for acceptance form the physician preceptor with the start and end dates of the course/rotation, and a course description of your learning objectives and responsibilities during the rotation. Forms must include a complete address and telephone number for the off campus location or residence address for the student while at the off campus site. Forms will not be approved after the rotation has already begun. Contact the department for assistance with enrolling in this course.

Radiation Oncology (RADO)

Courses

RADO 4000. Special Topic. 4 Credit Hours.
This is a self-designed course created by both the student and the department to cover a specific topic. A Course Approval Form must be completed along with documentation of the designed course description.
RADO 4003. Clinical Radiation Medicine. 4 Credit Hours.
Participation in daily operations at the Cancer Therapy and Research Center includes treatment planning conferences, simulation, computer planning, applied physics, treatment setups, etc. Assistance is provided in consultations, follow-up clinics, and inter-departmental activities and ongoing projects. Emphasis is on radiation oncology. Responsibility is given according to capability and interest.

RADO 7000. Radiation Oncology Off-Campus. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty member prior to the beginning of the rotation (at least one week before the course begins). Credit will not be given for any rotation that has not been approved in advance. Required paperwork includes: "Course Approval" form, a written letter or email for acceptance form the physician preceptor with the start and end dates of the course/rotation, and a course description of your learning objectives and responsibilities during the rotation. Forms must include a complete address and telephone number for the off campus location or residence address for the student while at the off campus site. Forms will not be approved after the rotation has already begun. Contact the department for assistance with enrolling in this course.

Radiology (RADI)

Courses

RADI 4001. General Diagnostic Radiology. 4 Credit Hours.
This course is designed as an introduction to diagnostic radiology. The primary goals of the course are directed toward introducing the student to the different diagnostic imaging modalities available and teaching the student to select the appropriate radiologic examinations for different clinical problems. Students will have the opportunity to receive a working knowledge of diagnostic radiology through lectures, individual projects, reading assignments, participation in subspecialty rotations, teaching conferences, and study of the American College of Radiology teaching file.

RADI 4006. Pediatric Radiology. 4 Credit Hours.
By being with the pediatric radiologist on a one-on-one basis through most of the working day, the student will have the opportunity to gain some insight as to the radiologist's role as a clinician, consultant, and teacher; and acquire some knowledge of general pediatrics, neonatology, urology, orthopaedics, and other specialties. The student may attend Diagnostic Radiology Lectures.

RADI 4007. Review Of Radiology for the Intern. 0.5 Credit Hours.
This is a refresher course in Clinical Diagnostic Radiology. In a large group format, a Radiology faculty member will review with the participants the basics of evaluating the chest X-ray, chest CT, abdominal CT, spinal, head, and pediatric cases. In addition, time will be spent on reviewing the appropriate studies to order for the work-up of various clinical scenarios.

RADI 4020. Mammography- A Multidisciplinary Approach. 4 Credit Hours.
This elective is intended to educate students in the subject of mammography with a multidisciplinary approach. Students will be allowed to spend 2 days each week in medical oncology, surgical oncology, or radiation therapy. Students will primarily be assigned to the mammography section of radiology, learning what criteria are used to detect breast cancer and participating in the work-up of lesions and witnessing biopsies. In addition, they will attend tumor board once a week that is multidisciplinary one day per week will set aside for library student and the students will be asked to research a topic or participate in a project regarding mammography. We intend that this elective will thoroughly educate those who are interested in mammography and help them understand how our specialty is integrated with many other disciplines.

RADI 4202. General Diagnostic Radiology. 4 Credit Hours.
By being with the pediatric radiologist on a one-on-one basis through most of the working day, the student will have the opportunity to gain some insight as to the radiologist's role as a clinician, consultant, and teacher; and acquire some knowledge of general pediatrics, neonatology, urology, orthopaedics, and other specialties. The student may attend Diagnostic Radiology Lectures.

RADI 5001. Basic Radiation Safety. 1 Credit Hour.
This course provides the student with the opportunity to gain a conceptual understanding of the radiation protection principles involved in the research, diagnostic, and therapeutic uses of radiation sources. This course will cover the safe receipt, use, storage, and disposal of radiation sources in the biomedical research setting. The contents of this course fulfill HSC training requirements in order to use radioactive materials on campus. Successful participants will earn three HSC safety certificates of completion: Basic Radiation Safety Training, Basic Laser Safety Training, and Basic Laboratory Safety Training.

RADI 5005. Fundamentals Of Radiation Dosimetry. 3 Credit Hours.
The aim of this course is to introduce the students to the fundamentals of radiation dosimetry, including dosimetry quantities, interactions with matter, cavity theory and calibration protocols. More specifically, the topics that will be covered during this course are the following: 1) Introduction/Ionizing Radiation, 2) Quantities for describing interactions, 3) Exponential attenuation, 4) Charged particle and radiation equilibria, 5) Absorbed dose in radioactive media, 6) Radioactive decay, 7) X-ray interactions with matter, 8) Charged particle interactions with matter, 9) Cavity theory, 10) Dosimetry Fundamentals, and 11) Calibration protocols.

RADI 5007. Statistics in the Radiological Sciences. 2 Credit Hours.
An overview of biomedical statistics methods and basic applications to experimental design with special emphasis given to those methods used in radiation detection, image analysis, and evaluations of diagnostic efficacy. Students will learn the theory behind these methods and apply them to actual and simulated problems in the Radiological Sciences using the R statistical programming environment.

RADI 5010. Medical Biophysics. 3 Credit Hours.
This course is an introduction to the basic principles of biophysics as applied to medicine and biology. Emphasis will be placed on non-imaging topics of medical biophysics such as mechanics, thermodynamics, diffusion, electrical conduction, biomagnetism, and light spectroscopy.

RADI 5011. Radiation And Nuclear Physics. 3 Credit Hours.
This course reviews nuclear structure, interactions of radiation with matter, and the statistical nature of radiation. The course covers gas, scintillation, and solid-state detector technologies and their applications, including spectroscopy.
RADI 5015. Physics Of Diagnostic Imaging 1. 3 Credit Hours.
This course introduces the student to the basic principles and radiological practice using noninvasive imaging systems. Topics include production of x-rays, interaction of radiation with matter, and the physics of imaging using computed tomography, ultrasound, and magnetic resonance. Prerequisite: consent of instructor.

RADI 5018. Physics Measurements In Imaging Lab. 2 Credit Hours.
This is a laboratory course focusing on performance of measurements used in quality assurance (QA), system characterization, and acceptance testing of medical imagers. Corequisites: RADI 5015.

RADI 5020. Principles Of Health Physics 1. 3 Credit Hours.
This course covers the basic principles of protection dealing with the major forms of ionizing radiation.

RADI 5025. Molecular Oncology & Radiobiology. 1.5-3 Credit Hours.
This course is an overview of the physics and chemistry of radiation biology; the biological effects of ionizing and non-ionizing radiations and hyperthermia at the cellular and tissue levels and whole body and late effects.

RADI 5030. Neuroscience Imaging Laboratory. 1 Credit Hour.
Students are assigned to rotate in 6 laboratories at the RIC: MRI, PET, TMS, ERP, animal imaging, and optical imaging. In each lab, students will have the opportunity for hands-on experience on subject preparation, data acquisition, and processing.

RADI 5050. Human Neuroelectrophysiology. 3 Credit Hours.
A detailed study of the electrophysiological basis of human behavior, with an emphasis on event-related brain potentials associated with cognitive function, perception, and action. See instructor for prerequisite coursework.

RADI 5090. Radiological Sciences Seminar. 1-9 Credit Hours.
Enrolled students are required to attend a minimum of 9 faculty/outside speaker seminars per semester and complete an evaluation sheet on each seminar attended. To fulfill the number of seminars, students may include seminars offered by disciplines other than their own. A list of seminars of interest to the students will be supplied on the first class day. Students must also prepare a PowerPoint presentation on a Radiological Sciences topic and present their seminar for critique by program faculty. Excessive misses will result in lower grades. Prerequisites: consent of instructor;

RADI 6015. Physics Measurements in Imaging 2. 3 Credit Hours.
Students will study and work with advanced methods for evaluating the performance of clinical imagining systems, including x-ray imaging, fluoroscopy, mammography, ultrasound, x-ray CT and MRI. Testing will follow procedures described in publications of the AAPM and ACR and used to achieve compliance with the regulations and recommendations of the DSA, MQSA, ACR, NRC, MIPP and State of Texas’ Radiation Control Program. Students will study the procedures and then use "best practices" to perform the tests in a clinical setting. Methods for evaluating nuclear medicine equipment shall also be reviewed and carried out, but in a less intensive manner. Prerequisites: RADI 5015, RADI 6049, RADI 6012, RADI 6016.

RADI 6016. Physics of Diagnostic Imaging 2. 3 Credit Hours.
This course includes theory and applications of various forms of electronic imaging systems; advanced diagnostic imaging principles involving mathematical image analysis, digital image processing, digital image display, and concepts of electronic imaging. Prerequisite: consent of instructor.

RADI 6017. Neuroimaging Methods. 3 Credit Hours.
This course will deal extensively with several noninvasive brain imaging techniques to study the functional organization of the human and animal brains. Methods covered include positron-emission tomography (PET), event-related potentials, magneto-encephalography, optical imaging, voltage and calcium imaging, autoradiography, as well as transcranial magnetic stimulation. The course will only touch upon anatomical and functional MRI as well as high field MRI, as students will receive exhaustive MRI training from other classes. Course format will include both lectures on the several methods and seminars in which recent technical advances in the field are discussed. Prerequisite: consent of instructor.

RADI 6018. Foundations Of Neuroscience Imaging. 3 Credit Hours.
This course will explore several advanced topics in cognitive neuroimaging techniques. Examples of such topics include strategies to study the functional and/or anatomical organization of the human brain and paradigms used for studying a variety of brain functions. Students interested in functional MRI as well as DTI will have an opportunity to gain extensive knowledge and experience.

RADI 6020. Advanced Topics In Cognitive Neuroscience. 3 Credit Hours.
This course will explore several advanced topics in cognitive neuroscience. It includes exhaustive study of a brain function in normal and in disease states. Brain functions include but are not limited to sensation, perception, action, language, motion, and cognition.

RADI 6021. Prin/Health Physics 2. 3 Credit Hours.

RADI 6022. Programming Medical for Physics. 1 Credit Hour.
The purpose of the course is to demonstrate to students the usefulness of programming for medical physics. The Matlab programming language is chosen because it enables rapid coding and data visualization. Students will first be taught basic programming techniques. Then, they will be shown specific examples of these techniques being applied to medical physics. Finally, they will create a final program, which performs a task of the student's choosing and utilizes several concepts from the course. Students will be graded based upon their attendance and programming projects. Must have familiarity with the field of medical physics.
RADI 6023. Introduction To Clinical Medical Physics Practice. 1-9 Credit Hours.
This course allows students to observe professional medical physicists in a clinical setting and learn the roles of various other medical professionals in the Radiology and Radiation Oncology medical clinic. Students participate in simple tasks related to medical physics data and are shown how to evaluate data to provide reports and tables. Students are also trained in basic safety and ethical issues in clinical medicine and the professional conduct of the medical physicist, following the guidelines established in AAPM Report 109. This material is intended to cover ethical issues in clinical medicine and in the professional conduct of the medical physicist. The term ethics is used here in the sense of a permissible standard of conduct for members of profession. While different people may have different opinions of what is ethical professions always have certain ethical standards or codes of conduct that are compiled in written form and are generally by practitioners. In addition to becoming familiar with written codes of conduct, the student shall be introduced to commonly encountered situations in which a choice of actions is available, some of which would be considered unethical and some of which be considered ethical, according to current standards of care of practice. These would include more specific issues that arise with respect to recent patient privacy concerns and legislation specific to the Health Insurance Portability and Accountability Act (HIPAA) and compliance both in clinical practice and research. A case-based approach in a seminar setting with class participation is utilized. This allows the student to put him or herself in the place of an individual who faces an ethical dilemma and to explore variations of the case that is presented. Other faculty members are also encouraged to attend, to offer comments, and to relate situations that they encountered either first- or second-hand.

RADI 6024. Radiological Anatomy & Physiology. 3 Credit Hours.
This course will provide students with an opportunity to learn anatomy, physiology, and commonly used medical terminology as it relates to radiologic imaging. Anatomic and physiologic features will be illustrated with radiologic images in formats commonly encountered in clinical radiology. By the end of the course, students are expected to be familiar with basic medical terminology and have a good understanding of medical anatomy, physiology, and some basic pathology as related to specific organs for which radiologic images are commonly applied.

RADI 6025. Therapy Clinical Rotation 1. 12 Credit Hours.
The first clinical rotation is designed to give an introduction and an overview of all the clinical processes and the basic safety training. In detail the student will cover the following topics: employee orientation, radiation oncology orientation, HIPAA training, introduction to radiation protection, introduction to radiation therapy, introduction to LINACs, etc. Students will be responsible to read, comprehend, and learn the selected Task Group reports. Students will be evaluated of their knowledge by weekly quizzes and a final oral exam held at the end of the course. Successful completion of the course will be accomplished when the student is knowledgeable and understands the recommendations for a practicing clinical physicist. Learning is accomplished through attendance of didactic lectures, homework assignments, presentations of class projects, and a comprehensive oral exam. Prerequisites: RADI 5005, RADI 6030, and RADI 6031.

RADI 6026. Clinical Therapy Rotation 2. 12 Credit Hours.
In the second semester of the clinical rotation, the students will cover the following topics: on board MV and kV imaging, ExacTrac design, function and daily, monthly QA, Linac Annual QA and the RPC process, TBI and TSE, IMRT planning, LDR planning and the COMS eye plaque process, patient safety, and learn shielding techniques for CT, kV imaging, LINAC and isotopes.

RADI 6027. Imaging Physics Clinical Rotation 1. 12 Credit Hours.
The first clinical rotation is designed to give an introduction and an overview of all the clinical processes and the basic safety training. In detail the student will cover the following topics: employee orientation, clinical radiology department orientation, HIPAA & MIPPA training, introduction to safety in the radiology clinic, introduction to general radiography, introduction to hard copy devices and image displays, electronic medical records orientation, introduction to ultrasounds imaging, introduction to mammography, regulations and professional recommendations.

RADI 6030. Physics Of Radiotherapy. 3 Credit Hours.
Theory, design, and operation of radiation-producing equipment used in radiation therapy are introduced. Exposure and absorbed dose calculations, patient dosimetry, treatment planning, and use of computers in radiation therapy are covered.

RADI 6031. Physics Measurements In Radiotherapy I. 3 Credit Hours.
Performance of measurements on radiation therapy equipment used to determine therapy treatment parameters is the opportunity for study in this course.

RADI 6032. Therapy Clinical Rotation 3. 12 Credit Hours.
In the third semester of the clinical rotation, the students will cover the following topics: treatment plan checks, weekly chart checks, brachytherapy planning and QA, LINAC design, SRS Treatment Planning (SRS) and daily, monthly and annual QA, participation in all aspects of SBRT treatment and treatment planning QA.

RADI 6033. Advanced Radiotherapy Physics. 3 Credit Hours.
This course includes the coverage of advanced radiation therapy special topics: intensity modulated radiation therapy, advanced brachytherapy, and radiation therapy shielding.

RADI 6034. Therapy Clinical Rotation 4. 12 Credit Hours.
In the fourth semester of the clinical rotation, the students will cover the following topics: medical dosimetry rotation, ultrasound, PET, MRI, SPECT imaging in radiotherapy and acceptance and commissioning of major equipment.

RADI 6035. Physics Measurements In Radiotherapy 2. 3 Credit Hours.
In this course students will have the opportunity to gain further didactic and hands-on familiarity with radiation therapy measurement equipment (ion chambers, films, TLDs, water tanks, profilers, etc.) and learn daily clinical practices. Students will have the opportunity to learn the roles of a radiation oncology team, the generation of radiation therapy treatment plans, patient quality assurance, and advanced, specialized radiation therapy techniques. Learning can be accomplished through attendance of didactic lectures, homework assignments, presentations of class projects, and a comprehensive oral exam. Prerequisites: RADI 5005, RADI 6030, and RADI 6031.

RADI 6038. Methods in Dosimetry & Shielding Design. 2.5 Credit Hours.
The goal of the course is to teach students the guidelines established by the American Association of Physicists in Medicine (AAPM) and the National Council of Radiation Protection (NCRP) relating to patient dosimetry and shielding design of radiological facilities. Students will be responsible to read, comprehend, and learn the selected Task Group reports. Students will be evaluated of their knowledge by weekly quizzes and a final oral exam held at the end of the course. Successful completion of the course will be accomplished when the student is knowledgeable and understands the recommendations for a practicing clinical physicist. Learning is accomplished through attendance of weekly lectures, assignments (presentation of assigned reports and guidelines), and class discussion.
RADI 6039. Imaging Physics Clinical Rotation 2. 12 Credit Hours.
In the second semester of the clinical rotation, topics covered include safety in the radiologic clinic, nuclear medicine and MRI, introduction to fluoroscopy, computed tomography, magnetic resonance imaging, nuclear medicine and regulations, professionalism and ethics.

RADI 6040. Imaging Physics Clinical Rotation 3. 12 Credit Hours.
The third clinical rotation will include safety in radiology clinic, advanced general radiography, advanced breast imaging and image-guided stereotactic breast biopsy, dental radiography and cone beam CT, dual-energy x-ray absorptiometry (DEXA), advanced fluoroscopic imaging and special procedures, intermediate nuclear medicine and regulations, professionalism and ethics.

RADI 6042. Non-Ionizing Radiation Biology. 1-9 Credit Hours.
This course is an overview of the biological and known or potential health effects of non-ionizing radiation, with attention to radio frequency radiation in the microwave range, extremely low frequency (ELF) field exposures, LASER emissions, and ultraviolet (UV) light exposure.

RADI 6043. Imaging Physics Clinical Rotation 4. 12 Credit Hours.
The fourth clinical rotation will include safety in radiology clinic, imaging informatics, advanced imaging informatics, advanced magnetic resonance imaging, advanced nuclear medicine physics, regulations, professionalism and ethics.

RADI 6049. Intro To Magnetic Resonance. 2 Credit Hours.
This course presents the basics of the practice of magnetic resonance as the experimentalist or clinician first meets them. The approach begins with images, equipment, and scanning protocols. The student will have the opportunity to face issues pertinent to practice with theoretical background added as experience grows. Through this approach, key ideas are introduced in an intuitive style that is faithful to the underlying physics.

RADI 6050. Magnetic Resonance Imaging. 2 Credit Hours.
This course explores the physics of magnetic resonance image formation through discussion of imaging problems, reviews of current research topics with an emphasis on quantitative methods using MRI, and hands-on experience in MRI laboratories. Prerequisites: RADI 6049.

RADI 6051. Statistical Parametric Mapping. 3 Credit Hours.
Course content includes principles of NMR Spectroscopy as applied to the resolution of molecular structural problems in chemistry, biology, and medicine, and principles and methods for designing BOLD contrast MRI experiments and evaluating fMRI data.

RADI 6060. Biophotonics and Optical Imaging. 3 Credit Hours.
Optical methodologies for imaging, diagnosis, and therapy are rapidly advancing in biology and medicine. This course will review basic elements of optics and optical sources, especially lasers and light-emitting solid state devices, in the context of biomedical applications. Dosimetry, tissue optics, and the principles of laser-tissue interaction will be considered in depth. Current medical uses of lasers will be surveyed, along with their scientific and technical foundations. The course will conclude with several case studies of research areas that are currently hot topics in biomedical optics.

RADI 6062. Cognitive Neuroscience. 3 Credit Hours.
Cognitive Neuroscience deals with the neural basis of cognition and behavior, including considerations of perception, attention, motor control, language, learning, memory, executive function, spatial cognition, emotion, and social cognition. It also presents discussions on neurocognitive development and the evolution of the human brain. Unlike courses in basic neuroscience, this course has a more human focus, presenting in-depth discussions of neuroimaging techniques and literature. In addition, it focuses on psychological models of cognitive function derived from psychological experimentation, human lesion studies, and computational modeling. Cognitive Neuroscience presents an integrated view of the psychology and neurobiology of human cognition and behavior. By the end of the semester, students will have had the opportunity to: (1) become highly familiar with the structure of the human nervous system; (2) become conversant about the physical basis and limitations of neuroimaging techniques; (3) become familiar with the principal brain areas thought to be involved in a host of human cognitive competencies and behaviors, including perception, action, emotion, and language; and (4) understand how psychological theory and neural theory come together to form the foundation of cognitive neuroscience.

RADI 6071. Supervised Teaching. 1-12 Credit Hours.
This course is a presentation of lectures and supervised teaching under the direction of faculty.

RADI 6097. Research. 1-12 Credit Hours.
This course is supervised research under the guidance of a faculty member.

RADI 6098. Thesis. 1-12 Credit Hours.
Registration for at least two terms is required for M.S. candidates. Prerequisites: admission to candidacy for the Master of Science degree.

RADI 7000. Off Campus. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty member prior to the beginning of the rotation (at least one week before the course begins). Credit will not be given for any rotation that has not been approved in advance. Required paperwork includes: "Course Approval" form, a written letter or email for acceptance form the physician preceptor with the start and end dates of the course/rotation, and a course description of your learning objectives and responsibilities during the rotation. Forms must include a complete address and telephone number for the off campus location or residence address for the student while at the off campus site. Forms will not be approved after the rotation has already begun. Contact the department for assistance with enrolling in this course.

RADI 7005. Treatment Planning Techniques In Radiation Therapy. 3 Credit Hours.
The goal of the course is to provide an overview of the physics and clinical elements that contribute to the development of computerized treatment plans in radiation therapy. The commissioning and acceptance testing of a planning system will be discussed and demonstrated in several planning platforms. Anatomy specific treatment planning will be described, including imaging of the specific disease, as well as contouring and plan development. Multiple plans will be generated for each site using different planning modalities, such as 2D, 3D, and IMRT.
RADI 7006. Treatment Planning Techniques in Radiotherapy 2. 3 Credit Hours.
This course is a continuation of RADI 7005. It presents an in-depth study of multidisciplinary treatment of the cancer patient from the clinician’s viewpoint. Students are required to master concepts specific to site-specific disease including: histopathology, etiologic and epidemiology factors, detection and diagnosis, tumor stage and grade, routes of metastases, dose fractionation and prognostic factors. This course is designed to approach each cancer type by anatomic system, addressing treatment factors with increasing degrees of complexity. Assigned exercises organized by treatment site and procedure type will be carried out under the direct supervision of an assigned advisor. These will be both simulated and real case assignments. The course is taught as a didactic course with applied planning. Didactic instruction will be provided by medical residents while practical planning instruction will be applied by a medical dosimetrist.

RADI 7010. Motor Learning And Brain Imaging. 3 Credit Hours.
This course is designed for the advanced student (doctoral or postdoctoral) to obtain a comprehensive overview of the field of motor learning from behavioral and brain imaging perspectives. Topic coverage will include general motor learning and speech motor learning (with reference to treatment of motor speech disorders). The course will be structured in a seminar format. The course will explore measurement methods and issues in motor learning and the neural substrates of learning in intact and disordered subject groups.

RADI 7099. Dissertation. 1-12 Credit Hours.
Registration for at least one term is required for Ph.D. candidates. Prerequisites: admission to candidacy for Doctor of Philosophy degree.

Rehabilitation Medicine (REHB)

Courses
REHB 4000. Special Topic. 4 Credit Hours.
Brain Injury Rehabilitation rotation will enable students to obtain experiences in the neurologic rehabilitation of persons with brain injury. Brain injury etiologies treated include traumatic brain injury, encephalopathy secondary to metabolic, toxic, and anoxic insults, aneurismal and AVM bleeds and occasional strokes. The rotation will involve significant neuromedical and rehabilitative involvement with inpatient care, brain injury consult service, outpatient care, and, as appropriate with care of low level brain injury patients.

REHB 4001. Clinical Rehabilitation Medicine. 4 Credit Hours.
This course is especially recommended for students planning to specialize in Family Practice, Neurology, Neurosurgery, Orthopaedics, Internal Medicine, or Rheumatology. The student will have the opportunity to participate in patient-care activities and limited exposure to electrodiagnostic procedures under the direct supervision of faculty and residents. The student will have exposure to Rehabilitation Medicine from an outpatient and consultative perspective and is required to attend teaching conferences, lectures, rounds, etc. (University Hospital and/or VA Hospital). No late drops will be accepted.

REHB 4002. Introductory Inpatient Rehabilitation. 4 Credit Hours.
The course will provide in-depth exposure to inpatient rehabilitation and the major rehabilitation areas. The course will include experience in diagnosis and comprehensive rehabilitation management of inpatients with strokes, spinal cord injuries, neurologic disorders, rheumatoid arthritis, amputations, chronic pain, and other major disabling conditions. The student must attend teaching conferences, lectures, and rounds. Comprehensive work-ups and close follow-up of patients will be required (University Hospital). No late drops will be accepted.

REHB 4003. Intro Pediatric Rehabilitation. 4 Credit Hours.
This course is especially recommended for students planning to specialize in Pediatrics or Family Medicine. The course includes inpatient and outpatient experience emphasizing comprehensive team rehabilitation of children with spina bifida, childhood spinal cord injury, cerebral palsy, brain damage in childhood, juvenile rheumatoid arthritis, and other chronic disabling diseases of childhood and adolescence. The student must participate in patient care under supervision of faculty and residents and attend teaching conferences. This course includes exposure to adults with congenital conditions and mental retardation (Christus Santa Rosa Children's Hospital and University Hospital). No late drops will be accepted.

REHB 4005. Combined Rehabilitation. 4 Credit Hours.
The course is required for students planning to specialize in Physical Medicine and Rehabilitation and recommended for those desiring a broad Rehabilitation Medicine exposure. The course will provide an overview of the specialty of PM&R allowing faculty/resident-supervised participation in patient care activities related to Rehabilitation Medicine consultations, electrodiagnostic procedures, Inpatient Rehabilitation, and Pediatric Rehabilitation. Students must also attend teaching conferences, clinics, lectures, rounds, etc. (University Hospital, VA Hospital, Christus Santa Rosa Children's Hospital). No late drops will be accepted.

REHB 4006. Intro Spinal Cord Injury. 4 Credit Hours.
This course is especially recommended for students planning to specialize in Family Practice, Neurosurgery, Neurology, Orthopaedics, Internal Medicine, and Plastic Surgery. This rotation will provide the student with the opportunity to actively participate in the management of patients who have sustained a spinal cord injury. Working in a state-of-the-art spinal cord injury facility, students are required to participate in treating patients in virtually all aspects of their injury, from acute care, to rehabilitation evaluation and treatment, to eventual discharge and outpatient follow-up. Students must become an integral part of an interdisciplinary team under the supervision of faculty and residents (VA Hospital and/or University Hospital). No late drops will be accepted.

REHB 4007. Hyperbaric Medicine & Wound Care. 4 Credit Hours.
This course is designed to introduce the student to the principles of wound care, advanced wound therapies, and hyperbaric medicine. The student will have the opportunity to observe monoplace and multiple hyperbaric medicine treatments; will review theory of the use of hyperbaric in the 14 UHMS approved therapies. Complication and controversies of HBO use will be discussed in lecture format. The student is required to review common wound problems, diabetes infection, nutrition, venous stasis, and arterial insufficiency. Advanced treatment modalities will be observed and reviewed - wound vac, collagen, apligraf, OASIS, debriding agents. (University Center for Community Health (Texas Diabetes Institute)). No late drops will be accepted.
REHB 4008. Rehabilitation Engineering. 4 Credit Hours.
This course is especially recommended for students planning to specialize in Family Practice, Neurology, Neurosurgery, Orthopaedics, Internal Medicine, or Rheumatology. The student will have the opportunity to participate in patient-care activities and have limited exposure to orthotics, prosthetics, and pedorthotics procedures under the direct supervision of faculty and residents. The student will have exposure to Rehabilitation Medicine from an outpatient/inpatient perspective and is required to attend clinics to experience comprehensive rehabilitation management of inpatients with strokes, spinal cord injuries, neurologic disorders, rheumatoid arthritis, amputations, and other major disabling conditions requiring orthotheses, prosthetics, and pedorthotics. The student will have exposure to the gait lab to experience research and an understanding of gait. (University Hospital and University Center for Community Health (Texas Diabetes Institute)). No late drops will be accepted.

REHB 4009. Polytrauma. 4 Credit Hours.
This course is recommended for students planning to specialize in PM&R, Neurosurgery, Neurology, Emergency Medicine, Orthopedics, Family Medicine or Internal Medicine. This course will enable students to obtain experiences in the neurologic rehabilitation of persons with brain injury, which includes traumatic brain injury and encephalopathy secondary to metabolic, toxic and anoxic etiologies.

REHB 7000. Off Campus. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty member prior to the beginning of the rotation (at least one week before the course begins). Credit will not be given for any rotation that has not been approved in advance. Required paperwork includes: "Course Approval" form, a written letter or email for acceptance form the physician preceptor with the start and end dates of the course/rotation, and a course description of your learning objectives and responsibilities during the rotation. Forms must include a complete address and telephone number for the off campus location or residence address for the student while at the off campus site. Forms will not be approved after the rotation has already begun. Contact the department for assistance with enrolling in this course.

Respiratory Care (RESC)

Courses

RESC 3002. Fundamentals of Respiratory Care. 5 Credit Hours.
The course will present the principles of chemistry and physics as they apply to respiratory care. Students will have the opportunity to gain hands-on experience with basic respiratory care equipment. Specific types of therapy are examined to understand the principles of application to patients, indications, hazards, contraindications, select, assemble, and troubleshoot equipment. Equipment will include oxygen delivery services, aerosol generators, medication delivery devices, pressure ventilators, gas delivery, metering and analyzing devices, percussor, positive pressure devices, environmental devices, manometers, gauges, and vacuum systems.

RESC 3005. Respiratory Care Pharmacology. 3 Credit Hours.
This course introduces the physiologic and pharmacologic basis of pulmonary and cardiac medications. Students will study several aspects of the formulation and preparation of the most commonly prescribed respiratory drugs. Pharmacodynamics and pharmacokinetics will be discussed along with drug formulation, drug dosage calculations, indications, contraindications and side effects of cardiac and pulmonary medications. Topics covered include an overview of bronchactive agents, anti-inflammatory drugs, anti-asthmatics, neuromuscular blocking agents, diuretics, cardiac drugs and drugs that affect the central nervous system.

RESC 3007. Cardiopulmonary Physiology. 5 Credit Hours.
This course provides an in-depth study of cardiac and pulmonary anatomy and physiology, as well as the diagnostic procedures commonly used in the hospital to evaluate these systems. Topics include the function of the respiratory system, ventilatory mechanics, gas transport in the blood, natural and chemical regulation of breathing, circulation, blood flow and pressure, and cardiac output. The heart-lung relationship and clinical applications of these phenomena in the cardiopulmonary system will be emphasized.

RESC 3008. Introduction to Clinical Practice. 1 Credit Hour.
The introduction to clinical practice provides the students the opportunity to observe and attain clinical competencies related to respiratory care procedures in general medical and surgical floors. This course introduces students to the clinical respiratory care procedures. Topics include: introduction to the hospital and patient assessment, medical gas therapy, aerosol therapy, airway clearance therapy, hyperinflation therapy and airway care.

RESC 3009. Introduction to Critical Care. 3 Credit Hours.
This course provides the students the opportunity to observe and achieve competencies related to respiratory care procedures in the critical care units, the diagnostic labs, and other specialty areas. The topics include initiation of mechanical ventilation, patient stabilization and monitoring, measurement and evaluation of hemodynamic variables, bronchial hygiene, evaluation for weaning, extubation, arterial line samples, arterial puncture, blood gas analysis, and noninvasive monitoring. Clinical Practice observation and previous semester courses are a prerequisite to take this course.

RESC 3010. Cardiopulmonary Pathophysiology I. 4 Credit Hours.
Provides a comprehensive approach to etiology, pathophysiology, clinical manifestations, diagnosis, treatment and prognosis of common pulmonary diseases and syndromes. Main topics include obstructive and restrictive pulmonary disorder.

RESC 3011. Introduction to Patient Assessment. 5 Credit Hours.
This course will introduce the student to the fundamentals of respiratory assessment to include review of existing data in the patient record, patient history, physical examination, oximetry, blood gases, respiratory monitoring, pulmonary function assessment, laboratory studies, chest and upper airway radiographs, ventilation/perfusion scans, bedside EKG interpretation, cardiovascular monitoring, and nutritional assessment. The student will be introduced to the concepts associated with chronic care and disease management.

RESC 3018. Diseases Affecting the Respiratory System. 4 Credit Hours.
The course provides a comprehensive approach to etiology, pathophysiology, clinical manifestations, diagnosis, treatment, and prognosis of common pulmonary diseases and syndromes. Main topics include obstructive and restrictive pulmonary and cardiovascular disorders. Non-respiratory disorders impacting cardiopulmonary function commonly encountered in the critical care unit will be discussed.
RESC 3019. Clinical Practice 1. 3 Credit Hours.
This course introduces students to clinical practice in basic respiratory care procedures. Topics include: introduction to the clinical affiliate, patient assessment, medical gas therapy, oxygen therapy, and aerosol therapy. In addition, hyperinflation therapy, airway clearance therapy, airway care using nasal, endotracheal and tracheal tubes is introduced in basic care situations. Case presentations are required to integrate clinical and classroom theory.

RESC 3020. Cardiopulmonary Pathophysiology 2. 3 Credit Hours.
Provides a comprehensive approach to etiology, pathophysiology, clinical manifestations, diagnosis, treatment and prognosis of common diseases and syndromes that affect the respiratory system. Non-respiratory disorders impacting cardiopulmonary function commonly encountered in the critical care unit will be discussed including renal and cardiovascular diseases.

RESC 3023. Pulmonary Function Testing. 3 Credit Hours.
This course provides a comprehensive overview of diagnostic tests used to evaluate normal and abnormal pulmonary function. Students will have the opportunity to perform, interpret and evaluate various tests of lung functions, including spirometry, measurement of lung volumes, diffusing capacity and metabolic measurements. Additionally, students will learn how to operate, calibrate and do quality control on pulmonary function and gas analysis equipment.

RESC 3029. Clinical Practice 2. 4 Credit Hours.
Critical respiratory care is introduced to include all tasks presented in Clinical Practice I as applied to the intensive care unit. In addition, tracheostomy care, ventilator monitoring, arterial puncture and blood gas analysis, endotracheal intubation, EKG services, and bronchoscopy observation are introduced. Case presentations are required to integrate clinical and classroom theory. Prerequisites: RESC 3019.

RESC 3030. Respiratory Care across the Life Span. 3 Credit Hours.
This course will be available ONLY for degree completion students online. This course will provide students with a holistic view of how respiratory therapists interact with patients of all ages. Principles, practices, theories and therapeutics related to cardiopulmonary health and disease across the neonatal, pediatric, adolescent, adulthood and geriatric periods will be covered. Presenting respiratory care as a continuum will provide students with a unique developmental overview, designed to enhance their didactic and clinical acumen.

RESC 3031. Critical Respiratory Care Management. 5 Credit Hours.
This course provides a study of invasive and non-invasive patient monitoring techniques and equipment. Invasive topics will include arterial pressure monitoring, central venous and pulmonary artery catheters, as well as cardiac output measurement. Non-invasive monitoring topics include pulse oximetry, transcutaneous monitoring, inductance plethysmography, capnography and electrocardiogram. It also covers instruction on the phase of adult critical care and continuous mechanical ventilation. The history of mechanical ventilation, modes of mechanical ventilatory support, implementation, patient stabilization, monitoring, hemodynamics, ventilator weaning and discontinuance will be covered.

RESC 4009. Clinical Practice 3. 5 Credit Hours.
Students will have an opportunity to further develop skills required in the intensive care of the respiratory patient. Topics include comprehensive ventilator management, measurement and evaluation of hemodynamic variables, noninvasive monitoring, and pulmonary function laboratory. Specialty rotations include: intubation, hyperbaric oxygen therapy units, cardiac catheterization, cholecardiography, pulmonary rehabilitation and home care. This course also introduces the student to neonatal and pediatric care. Case presentations are required to integrate clinical and classroom theory. This clinic also includes a review of respiratory care as it pertains to the national credentialing examinations administered by the National Board for Respiratory Care (NBRC).

RESC 4012. Disease Management, Rehabilitation, and Extended Care. 4 Credit Hours.
This course provides an overview of the concepts, procedures, and equipment utilized in the delivery of long-term care to persons with a chronic cardiopulmonary disorder. The development and implementation of disease management programs for the care of patients with asthma, COPD, and other chronic conditions is presented. Pulmonary rehabilitation, patient education, and smoking cessation programs are reviewed. Provision of health care services in the home and other nonacute settings is examined, along with technological and procedural aspects of cardiopulmonary equipment.

RESC 4013. Leadership and Management in Respiratory Care. 3 Credit Hours.
This course is an introduction to management principles and problems and their relation to health care organizations. The duties and obligations of the healthcare manager are covered and related to various leadership strategies. The student will develop an understanding of their own personal leadership style and how to effectively utilize their strengths in a leadership capacity. The primary focus is on hospital-based respiratory care departments and alternative settings. Open to seniors only.

RESC 4014. Clinical Practice 1. 9 Credit Hours.
Students will have an opportunity to develop skills required in the basic floor and intensive care of the respiratory patient. Topics include patient assessment, oxygen therapy, aerosol therapy, hyperinflation therapy, airway clearance therapy, airway care using the various tracheal tubes, initiation of mechanical ventilation, comprehensive ventilator management, measurement and evaluation of hemodynamic parameters, invasive and noninvasive monitoring, arterial blood gas puncture and analysis.
RESC 4015. Education in Respiratory Care. 3 Credit Hours.
This course is an introduction to basic principles and techniques used in respiratory care education. Topics include patient education, inservice education, course design, objectives, lesson-plan development, learning activities, use of media, development of presentations, testing, and evaluation. Senior status is required.

RESC 4017. Introduction to Research. 3 Credit Hours.
This course provides an overview of the basic principles of research, research design and statistical analysis as it relates to healthcare professionals, with the goal of encouraging involvement in research after graduation. Students will develop a hypothesis, write a problem statement, review the literature, and evaluate the literature.

RESC 4018. Clinical Practice 1 Seminar. 3 Credit Hours.
Case presentations are required to integrate clinical and theory. Review of respiratory care with an emphasis on problem solving and decision making. Self Assessment credentialing examinations will be administered for preparation of the national credentialing examination. Current issues relevant to respiratory care will be discussed to include new treatments and technologies, and issues related to critical care, professional development and practice.

RESC 4021. Issues and Trends. 4 Credit Hours.
Current issues relevant to the cardiopulmonary sciences and respiratory care will be explored. Health care delivery systems, new trends in organization and management, new treatments and technologies, ethical issues in health care, as well as issues related to professional development and practice will be discussed in the capstone course for advanced standing students. For Bachelor Degree completion students only.

RESC 4024. Clinical Practice 2. 9 Credit Hours.
This clinical course develops skills for caring for critically ill patients in the adult, pediatric and neonatal units. Topics include: Patient Assessment, medical gas therapy, lung expansion therapy, airway clearance therapy, mechanical ventilation, patient stabilization and monitoring, evaluation of hemodynamic parameters, evaluation of ventilator weaning, intubation and extubation, all monitoring devices, labor and delivery and patient transport. In addition, tracheostomy care, ventilator monitoring, arterial puncture and blood gas analysis, endotracheal intubation, EKG, Pulmonary function diagnostics and bronchoscopy observation.

RESC 4028. Clinical Practice 2 Seminar. 3 Credit Hours.
Case presentations are required to integrate clinical and theory. Emphasis will be placed on decision making and problem-solving as they relate to neonatal and pediatric cardiopulmonary critical care. Current issues relevant to the neonatal and pediatric respiratory critical care will be discussed. Review of respiratory care will continue as it pertains to the Therapist Multiple Choice and Clinical Simulation credentialing examinations administered by the National Board for Respiratory Care (NBRC).

RESC 4029. Clinical Specialization. 6 Credit Hours.
Students will have an opportunity for in-depth application and reinforcement of critical care competencies. In addition, students are provided the opportunity to develop an area of specialization. Specialization areas may include neonatal/pediatrics, adult critical care, pulmonary function laboratory, advanced diagnostics, pulmonary rehabilitation, home care, management, research, or education. Prerequisites: RESC 4009.

RESC 4030. Research Practice and Principles. 3 Credit Hours.
This course provides an opportunity to expand research knowledge in practice and principles. This course provides the student with an opportunity to expand research knowledge into application. The course will provide a study of the research process including IRB application, design, data collection and reporting. Topics include scientific method, theory, development of research questions, issues of measurement, models of experimental and non experimental designs. The learner will conduct a research project and write a manuscript.

RESC 4040. Capstone Project. 4 Credit Hours.
The capstone course is focused on a project on current issues in any area of cardiopulmonary sciences, including quality improvement, disease management, clinical critical care, leadership or management or patient education. The project shall focus on the theory, analysis and current practices and issues.

RESC 4091. Independent Study. 1-6 Credit Hours.
This course includes independent reading, research, discussion, and/or writing under the direction of a faculty member. The course may be repeated.

RESC 5002. Introduction to Respiratory Care. 5 Credit Hours.
This course will introduce the student to respiratory therapies, protocols and hands-on experience with respiratory care equipment to gain experience. Specific modes of therapy are examined to recognize principles of application to patients, indications, hazards, contraindications, and efficacy. The equipment this course will focus include; medical gases, oxygen delivery devices, humidifiers, aerosol generators, pressure ventilators, gas delivery, metering and analyzing devices, percursors, environmental devices, manometers, gauges and vacuum systems, manual resuscitators, artificial airways, intubation equipment, maintenance of artificial airways, tracheostomies secretion removal devices.

RESC 5005. Pharmacology. 4 Credit Hours.
This course presents the physiologic and pharmacologic basis of cardiopulmonary medications. This course describes several aspects of formulation and preparation of the most commonly prescribed respiratory drugs. Indications, contraindication, and side effects of drugs related to the cardiopulmonary system will be included.

RESC 5010. Cardiopulmonary Physiology. 5 Credit Hours.
This course provides a study of cardiopulmonary anatomy and physiology. Topics include the function of the respiratory system, ventilatory mechanics, gas transport in the blood, natural and chemical regulation of breathing, circulation, blood flow and pressure, and cardiac output. The cardiopulmonary relationship and clinical applications of these phenomena in the cardiopulmonary system will be emphasized.

RESC 5011. Patient Assessment. 5 Credit Hours.
This course provides the fundamentals of respiratory assessment beginning with the review of existing data in the patient record, patient history, physical examination, oximetry, blood gases, respiratory monitoring, laboratory studies, chest and upper airway radiographs, ventilation/perfusion scans, bedside EKG interpretation, cardiovascular monitoring, and nutritional assessment. These data, procedures, and equipment will be utilized in the delivery of care to patients with chronic cardiopulmonary disorders in alternate care settings. Cardiopulmonary rehabilitation, tobacco education programs, respiratory therapy protocols, and case management will be incorporated into patient care plans.
RESC 5012. Respiratory Care Professional Issues and Trends. 3 Credit Hours.
An online course will provide the student with current trends and issues relevant to cardiopulmonary care. Health care delivery systems, management, treatments and technologies, ethical issues in health care, as well as issues related to professional development and practice will be discussed.

RESC 5013. Management & Leadership in Health Profession. 3 Credit Hours.
Leadership principles and management of respiratory care departments, health care organizations and programs will be studied.

RESC 5014. Advanced Critical Respiratory Care Management. 4 Credit Hours.
An overview of the various areas comprising cardiopulmonary diagnostics. Topics include advanced hemodynamic monitoring, ventilation/perfusion scanning, cardiac catheterization, and noninvasive cardiology. In addition, extracorporeal membrane oxygenation, mechanical circulatory assistance, and perfusion technology will be introduced.

RESC 5015. Education in Respiratory Care. 3 Credit Hours.
This course is an introduction to basic principles and techniques used in respiratory care education. Topics include patient education, inservice education, course design, objectives, lesson-plan development, learning activities, use of media, development of presentations, testing, and evaluation.

RESC 5017. Introduction to Research. 3 Credit Hours.
This course provides an introduction to the methods of scientific research to include research design and statistical analysis. Critical review of the components of research reports will be performed to include definition of the problem, review of the literature, research design, data analysis and results.

RESC 5020. Diseases Affecting the Cardiopulmonary System. 4 Credit Hours.
This course provides a broad approach to etiology, pathophysiology, clinical manifestations, diagnosis, treatment and prognosis of pulmonary diseases and disorders. This course will stress the obstructive, restrictive pulmonary and cardiovascular diseases. Non-respiratory disorders impacting cardiopulmonary function will be discussed.

RESC 5023. Cardiopulmonary Diagnostics and Pulmonary Function Testing. 3 Credit Hours.
This course focuses on normal and abnormal cardiopulmonary function utilizing diagnostic tools. The course provides hands on opportunities to perform, interpret, and evaluate various cardiopulmonary diagnostic results to include the operation, calibration, quality control, and maintenance of pulmonary function and gas analysis equipment.

RESC 5030. Pediatric & Neonatal Respiratory Care. 4 Credit Hours.
This course describes the most important concepts associated with neonatal and pediatric patient care. From fetal growth and development, through assessment and determining treatment plans for the most common neonatal and pediatric cardiopulmonary diseases. This includes cardiopulmonary congenital diseases, gastrointestinal, and neurologic diseases. The course also includes hands on opportunities to work with the respiratory care equipment used to care for neonates and pediatric patients.

RESC 5031. Critical Care & Mechanical Ventilation. 5 Credit Hours.
This course describes the role of the respiratory therapist in the critical care setting. Instruction and hands on opportunities will be provided to set-up, operate and maintain mechanical ventilators and related equipment. The course will include the history of mechanical ventilation, modes of mechanical ventilatory support, implementation, patient stabilization, monitoring, hemodynamics, ventilator weaning and discontinuance.

RESC 5041. Clinical Practice Introduction. 1 Credit Hour.
This clinical practice introduction provides the student the opportunity to observe and achieve competencies related to respiratory care procedures in general medical and surgical floors. Introduces students to clinical respiratory care procedures. Topics include: introduction to the clinical affiliate, patient assessment, medical gas therapy, aerosol therapy, incentive spirometry, positive pressure breathing, chest physiotherapy and airway care.

RESC 5042. Critical Care Introduction. 3 Credit Hours.
This clinical observation provides the students the opportunity to observe and achieve competencies related to respiratory care procedures in the adult, pediatric and neonatal critical care units, the diagnostic and pulmonary labs, and other specialty areas. The topics include initiation of mechanical ventilation, patient stabilization and monitoring, measurement and evaluation of hemodynamic variables, bronchial hygiene, evaluation for weaning, extubation, arterial line samples, arterial puncture, blood gas analysis, and noninvasive monitoring. Prerequisites: RESC 5041.

RESC 6001. Respiratory Care Professional Issues and Trends. 4 Credit Hours.
Current trends and issues relevant to cardiorespiratory care will be explored. Health care delivery systems, management, treatments and technologies, ethical issues in health care, as well as issues related to professional development and practice will be discussed.

RESC 6002. Advanced Respiratory Care Across the Life Span. 4 Credit Hours.
This course will provide students with a holistic view of how respiratory therapists interact with patients of all ages. Principles, practices, theories and therapeutics related to cardiopulmonary health and disease across the neonatal, pediatric, adolescent, adulthood and geriatric periods will be covered. Presenting respiratory care as a continuum will provide students with a unique developmental overview, designed to enhance their didactic and clinical acumen.

RESC 6003. Professional Issues in Healthcare. 1 Credit Hour.
This interdisciplinary course will provide an overview of professional and ethical issues facing allied health professionals. Topics to be discussed include responsibilities of the health care practitioner, life and death decisions, patient confidentiality, substance abuse, whistle blowing, and informed consent. Ethics in research and other critical issues related to health care problems will be also be addressed. Collaborative activities and simulated cases will be used to enhance discussion among students.

RESC 6011. Clinical Seminar 1. 2 Credit Hours.
Case presentations are required to integrate clinical and theory. Review of respiratory care with an emphasis on problem solving and decision making. Practice board credentialing examinations will be administered for national board examinations preparation. Current issues relevant to respiratory care will be explored to include new treatments and technologies, and issues related to professional development and practice. Prerequisite: Second year status.
RESC 6019. Clinical Practice 1. 12 Credit Hours.
This course provides students the opportunity to further develop both basic and advance skills required in the intensive care of the respiratory patient. Topics include: patient assessment, medical gas therapy, aerosol therapy, incentive spirometry, positive pressure breathing, chest physiotherapy, airway care, initiation of mechanical ventilation, patient stabilization and monitoring, evaluation of hemodynamic variables, bronchial hygiene, evaluation for weaning, endotracheal intubation, extubation, arterial line sampling, arterial puncture, blood gas analysis, and non-invasive monitoring. The students will also complete a pulmonary function, bronchoscopy observation, long-term care, and pediatric rotations. Prerequisite: Satisfactory completion of first year course work.

RESC 6029. Clinical Practice 2. 12 Credit Hours.
This course provides an opportunity to acquire clinical experience in the intensive care of neonatal and pediatric patients. Topics include: patient assessment, medical gas therapy, aerosol therapy, incentive spirometry, chest physiotherapy, airway care, initiation of mechanical ventilation, patient stabilization and monitoring, evaluation of hemodynamic variables, bronchial hygiene, evaluation for weaning, endotracheal intubation, monitoring (invasive and non-invasive), labor and delivery assistance, and transport. Students are also given the opportunity to further develop their adult critical care skills.

RESC 6030. Research Project 1. 2 Credit Hours.
This course provides the student with guided activities to develop an appropriate research question and research methodology for completion of the required research requirements.

RESC 6031. Research Project 2. 2 Credit Hours.
Guided activities to develop an appropriate research question and research methodology and begin data collection for completion of the required program research requirements. Prerequisite: Second year status.

RESC 6032. Clinical Practice 3. 8 Credit Hours.
This course provides an opportunity to advance the students clinical experience in a specialization area. This includes the adult, neonatal and pediatric intensive care units in the areas of patient assessment and monitoring (invasive and non-invasive), mechanical ventilation, ECMO, airway care, labor and delivery assistance and transport. The specialization area may include diagnostics, education, leadership or research.

RESC 6033. Clinical Seminar 2. 2 Credit Hours.
Case presentations are required to integrate clinical and theory. Emphasis will be placed on decision making and problem-solving as they relate to neonatal and pediatric respiratory care. Current issues relevant to the neonatal and pediatric respiratory care will be discussed. Review of respiratory care will continue as it pertains to the Therapist Multiple Choice and Clinical Simulation credentialing examinations administered by the National Board for Respiratory Care (NBRC). Successful completion of the National Board for Respiratory Care (NBRC) Therapist Multiple Choice Self Assessment examination is required in order to meet course requirements. Prerequisite: Second year status.

RESC 6034. Research Project 3. 2 Credit Hours.
Guided activities to develop an appropriate research question, research methodology, completion of data collection and analysis for completion of the required program research requirements. Prerequisite: Second year status.

RESC 6035. Clinical Seminar 3. 2 Credit Hours.
Case presentations are required to integrate clinical and theory. Emphasis will be placed on decision making and problem-solving as they relate to clinical respiratory care and disease management. Current issues relevant to respiratory care will be discussed ethical issues in health care, smoking cessation, palliative care, and issues related to professional development and practice. Review of respiratory care as it pertains to the credentialing examinations administered by the National Board for Respiratory Care (NBRC) will continue. Successful completion of the National Board for Respiratory Care (NBRC) self-assessment examinations are required in order to meet course requirements.

RESC 6040. Capstone. 3 Credit Hours.
The capstone course is a focused on a project on current issues in any area of cardiopulmonary sciences, including quality improvement, disease management, clinical critical care, leadership or management or patient education. The project shall focus on the theory, analysis and current practices and issues.

RESC 6150. Independent Study. 1-6 Credit Hours.
This course will be arranged through RESC faculty. Topic and mode of study are agreed upon by student and instructor. Semester hours are variable and credit hours will be determined by topic/project and rigor. The course is offered all terms. The course may be repeated for credit when topics vary (1-6 SCH). Graduate student standing and consent of instructor is required. Open for Cross Enrollment on Space Available Basis.

RESC 6301. Advanced Patient Assessment and Care Plan Development. 3 Credit Hours.
Advanced patient evaluation and the design and implementation of evidence-based respiratory care plans will be emphasized. Evidence-based practice and critical diagnostic thinking are reviewed and applied to the review of the medical record, patient interview, physical assessment and evaluation of diagnostic studies. Assessment of oxygenation, ventilation, and arterial blood gases are reviewed. Diagnostic techniques and interpretation are discussed. Pulmonary function testing, diagnostic bronchoscopy and other diagnostic studies are also described. Acute and critical care monitoring, sleep studies and maternal and perinatal/neonatal patient assessment are overviewed. The student will integrate assessment findings in the development and evaluation of care plans for specific disease states and conditions.

RESC 6302. Advanced Critical Care and Ventilatory Support. 3 Credit Hours.
Provides advanced instruction over all phases of adult critical care and continuous mechanical ventilation. Principles of critical-care are reviewed followed by a discussion of respiratory failure to include recognition, causes, and treatment. Principles of mechanical ventilation are then reviewed, and resources provided regarding the operation and features of the major critical care ventilators. An in-depth discussion of the indications for, and implementation of invasive and noninvasive mechanical ventilatory support is provided and patient stabilization and adjustment of ventilatory support is described, to include patient assessment and monitoring. High-frequency ventilation, extracorporeal membrane oxygenation, use of inhaled nitric oxide, and mechanical ventilatory assistance are described and point-of-care ultrasound, as well as other diagnostic and supportive techniques used in the ICU are reviewed. An overview of neonatal and pediatric critical respiratory care is provided, followed by an in-depth discussion of ventilator discontinuation.
Restorative Dentistry (RESD)

Courses

RESD 5044. Occlusion & TMD. 0.5 Credit Hours.
Residents will receive instruction for providing a limited occlusal equilibrium due to disorders such as local traumatic occlusion. The course will also cover recommended techniques for full-mouth occlusal equilibrium. A series of patients presenting with TMD-like symptoms will be presented, and diagnoses, perpetuating factors, and potential treatments will be discussed. The clinical portion of the course will involve residents taking impressions and bite registrations on their partners, sending these to a laboratory for splint fabrication, and inserting these appliances on their partners. Residents will have the opportunity to learn to palpate the masticatory and cervical musculature, in addition to the TMJ's of their partners.

RESD 5095. Research Methodology 2-Thesis Proposal. 0.5 Credit Hours.
This course is a continuation of ORTH 5094 Research Methodology I.

RESD 6021. Advanced Dental Materials. 3.5 Credit Hours.
Students have an opportunity to become acquainted with sophisticated research equipment through hands-on exposures. Measurements of mechanical, physical, and chemical properties of commonly used dental materials give the student the opportunity to envision and formulate research projects in dental materials.

RESD 7010. Operative Dentistry Lecture. 1.5 Credit Hour.
A series of lectures designed to present more sophisticated didactic material in areas not included in the first and second year preclinical courses. This course serves as a forum for discussion of individual clinical problems and their solutions which are of interest to the class as a whole.

RESD 7011. Operative Dentistry Clinic. 4.5 Credit Hours.
Students are given the opportunity to commence the clinical practice of operative dentistry. Each student is expected to achieve competency in the restoration of teeth with various restorative materials. Students application of knowledge of proper patient management is assessed.

RESD 8051. Senior Esthetic Dentistry. 0.5 Credit Hours.
This course is designed to present available alternatives in esthetic dentistry, indication and clinical applications for each alternative, new materials designed for the concepts of esthetic dentistry, and appropriate methods of patient communication and patient management. Emphasis will be placed on clinical applications, efficacy of materials, precise communication with the laboratory concerning veneer shade information, and methods of doing chair-side color modifications.

Selective (SELC)

Courses

SELC 7007. General Practice Emergency Care. 0 Credit Hours.
The Dental Emergency Care Course (DECC) is designed to provide practical clinical experience in the diagnosis and treatment of emergency dental care problems. The course includes, on a limited basis, more comprehensive treatment of patients of record where it is determined that an acute problem might develop if comprehensive treatment or retreatment is delayed. DECC is conducted during the summer months from the end of Junior Clinic in May until the beginning of Senior Clinic in July. Student selection occurs during the months of December and January before the start of the selective. Students who desire to participate in this selective need to successfully complete junior year of dental school.

SELC 7009. Orthodontic Summer Clinic. 0 Credit Hours.
This course gives the student an opportunity to work with orthodontic graduate students treating comprehensive cases. Students will have the opportunity to actively participate in all aspects of patient care and resident training.

SELC 7010. Commissioned Officer Student Training and Extern Program (COSTEP). 0 Credit Hours.
Health professional students, including dental students, are commissioned as reserve officers in the Public Health Service Commissioned Corps and called to active duty for further professional clinical training during summer months (U.S. citizenship required). Assignments of dental students are made according to the training and skills of the applicants and the needs of the PHS agencies. The agency that predominantly selects dental students for clinical assignments is the Indian Health Service. The deadline for application is December 21 each year. Application packets are available from the Public Health Service (http://www.usphs.gov) and the Dental Dean's Office. Duration of assignment is 31-120 days. Attendance is mandatory and failure to complete or withdraw from the course will result in a WF entry on the student's transcript. 160 clinic hrs/2-5 students (varies)/31-120 days/ Rising DS 4.

SELC 7011. Summer Clinical/Community Externship. 0 Credit Hours.
Rising sophomore students are selected to provide dental care to patients enrolled in community clinics that are affiliated with the Dental School under the supervision of the community clinic dental directors. The clinics are located primarily in communities along the U.S./Mexico border of Texas. Rising sophomore and junior students will be selected to assist senior dental students, and to develop and implement patient education and community outreach services for the clinic. Duration of assignment will be 2 weeks. Attendance is mandatory and failure to complete or withdraw from the course will result in a WF entry on the student's transcript. Students must complete evaluation forms at the end of the rotation.

SELC 7027. Research Protocol Development. 0 Credit Hours.
In this elective course, the student, with guidance of the mentor, is required to review the literature and develop a research protocol. Credit for the elective course will be awarded by the mentor contingent on the approval of the protocol by the mentor and the Associate Dean for Research. To apply for this elective, the student must be in good academic standing as determined by the Associate Dean for Academic Affairs. If placed on academic probation, students may become ineligible to complete the elective course. Enrollment in this elective may be extended through the following semester, provided that the Associate Deans for Research and Academic Affairs approve the extension and the mentor reports satisfactory progress. A student may withdraw from this elective course at any time without recording of withdrawal on the transcript. By arrangement/year round.
SELC 7028. Research Completion of Individually Design. 0 Credit Hours.
In this elective course the student, with guidance of the mentor, will complete individually following the approved protocol. The student must continue to be in good academic standing to apply for and to complete this elective course. Enrollment in this elective can be extended from semester to semester when the mentor reports satisfactory progress. Student participation in the AADR student research fellowships or NIDCR summer Research Training Programs fulfills the requirements of the elective. Withdrawal from this elective course will result in entry on the transcript as WP or WF as determined by the mentor. Credit for the course is contingent on verification by the mentor that the research has been completed satisfactorily up to abstract submission and acceptance at a national/international scientific meeting. By arrangement/year round.

SELC 7029. Manuscript Preparation And Presentation. 2 Credit Hours.
In this elective course, the student, with guidance of the mentor, is required to help prepare an abstract and extended abstract, not to exceed six pages, suitable for incorporation into a peer-reviewed publication. The student must also present their research at a national/international scientific meeting and the annual Dental School Science Symposium. A copy of a published abstract, the extended abstract, and paperwork showing completion of all required coursework must be submitted to the Dental School research committee by the end of March the senior year for review. A student must be in good academic standing to participate in this elective course. The mentor will award a grade for the elective course. Withdrawal from the elective course will result in entry on the manuscript as WP or WF as determined by the mentor. By arrangement/year round.

SELC 7032. Pediatric Dentistry Clinical Externship Program. 0 Credit Hours.
The Pediatric Dentistry summer selective course is a two week long clinical course, in which rising seniors are offered the opportunity to provide comprehensive Pediatric Dental Care at the UTHSCSA Pediatric Dental Clinic, and the Ricardo Salinas Clinic. This selective course will provide students with broad clinical experiences, ranging from the simple preventive procedures to the more complex operative and surgical procedures encountered in Pediatric Dentistry.

SELC 7088. Community Service Elective. 0.5-9 Credit Hours.
This selective offers an opportunity for students to receive credit for a minimum of 32 hours of documented community service. Service hours can be filled by participating in school-wide or community agency service projects or helping the Department of Comprehensive Dentistry with health fairs. Students will be able to choose the activities they participate in from a list of approved activities. The service activities will take place during hours outside the curriculum (usually weekend; some evenings/pending availability of the student). This selective is open to all students by permission.

SELC 7094. Teaching Fundamentals. 1 Credit Hour.
During SELC 7094, dental students and dental hygiene students interview faculty members to assess the advantages and issues of an academic career, analyze teaching strategies, assess the learning environment in their educational program and gain hands-on experience in course planning. During the course, student teams design a new course for their academic program and present it to classmates. The course is the first of three selective courses in the Teaching Honors Program. Dental students and dental hygiene students who complete all three courses (SELC 7094, SELC 7095 and SELC 7096) are recognized with “Distinction in Dental Education”. Withdrawal with notification is permitted at any time without recording on the transcript. Enrollment is limited to 1st, 2nd, 3rd and 4th year dental students, Dental Hygiene B.S. Completion students and Dental Hygiene Masters degree students.

SELC 7095. Second Year Classroom Teaching Seminar. 1 Credit Hour.
The course goal is to provide dental students with opportunities to function as a classroom teacher by planning and delivering instruction followed by: (1) self-assessment, (2) feedback from students, and (3) feedback from the THP Director. The selective is limited to THP students pursuing the Distinction in Dental Education. Prerequisites: SELC 7094.

SELC 7096. Special Educational Projects. 1 Credit Hour.
The goal of SELC 7096 are to provide dental students with an opportunity to conduct a research or educational development projects related to dental or dental hygiene education and complete an assessment of the project. Withdrawal with notification is permitted at any time without recording on the transcript. Enrollment limited to: DS1-DS4 students, Dental Hygiene B.S. Completion students and Dental Hygiene Master’s Degree students.

SELC 7097. Preclinical Orthodontic Techniques. 0.5 Credit Hours.
DS 2 students will have the opportunity to learn the necessary skills to fabricate appliances for conducting limited treatment, orthodontic problems. This is a pass/fail selective. Withdrawal is permitted before the 2nd session of the selective without transcript recording, but subsequent withdrawal or failure will be recorded on the transcript. Students must complete this course to be eligible for Invisalign certification.

SELC 7099. Dental Spanish Selective. 0 Credit Hours.
This selective is designed for those students who are interested in acquiring basic conversational skills in the Spanish language as it pertains to dentistry. The course is not a Spanish language class and will focus mainly on teaching dental students how to interact with their Spanish-speaking patients in the dental office setting. This selective will be planned and conducted by dental students. The Hispanic Student Dental Association will assume responsibility for implementing this course annually.

SELC 7106. Endodontics Pain Research. 0 Credit Hours.
This selective will provide advanced training in basic or clinical research on orofacial pain mechanisms. This course is ideal for those students interested in pursuing the research honors program or a PhD program. By arrangement/juniors & seniors/24 students/Contact course juniors and seniors director for estimated time commitment.
SELC 7107. Periodontal Flap Design Elective. 0 Credit Hours.
Each participant is required to attend lecture and seminar presentations, and participate in laboratory sessions devoted to learning the fundamental aspects of periodontal flap surgery. The learning activities will include (1) seminars on flap design, surgical anatomy, and avoidance of complications; (2) video presentations of periodontal surgical techniques; (3) bench-top exercises in flap design and creation; and (4) bench-top exercises in periodontal suturing. Recorded as CR (successful completion) on the transcript. Withdrawal at any time, with prior notice to the course director, is permitted without transcript recording.

SELC 7108. Basic Periodontal Surgery Elective. 0 Credit Hours.
Each dental student will have the opportunity to participate in the surgical treatment planning, surgical procedure (both as an assistant and surgeon), and postoperative follow-up care of one periodontal surgical procedure (e.g., flap for access and crown lengthening). Second- and third-year periodontal postdoctoral students will mentor each case. For this elective, all surgeries and POT visits take place on Wednesday mornings only. The first meeting of the selective will be an orientation to discuss the logistical plan, time commitments, student expectations, fee structure, etc. Approximately three hours of lecture will also be included. The remaining sessions will be in the Periodontics Postgraduate Clinic. To accommodate the scheduling of the surgery and to include the postoperative operative appointments, which are performed at 1, 2, and 6 weeks after surgery, students must be available throughout the elective time period noted above (keep in mind your rotation and other selective schedules).

SELC 7109. Graduate Orthodontic Clinic Rotation. 0 Credit Hours.
The objective of this 16 hour selective is to provide interested undergraduate students with the opportunity to assist orthodontic graduate students performing comprehensive orthodontic treatment. Students must have completed SELC 7097 Preclinical Orthodontic Techniques to participate, since they will be asked to perform clinic procedures other than assisting. Two students are pre-selected for the Thursday afternoon clinic; there will be 2 students in the Spring and 2 students in the Fall. 2 hours per week on Thursdays for a total of 16 hours - primarily for DS III students Restricted to the Fall and Spring semesters.

SELC 7114. Interprofessional Community Service Learning 1 (IPCSL 1). 0 Credit Hours.
This is an innovative interprofessional community service learning (CSL) course for medical, dental, senior dental hygiene, nursing, and pharmacy students. The goal of this course is to promote social accountability among health professional students through the integration of meaningful service learning with the core competencies of interprofessional education. This course enables students from various health science professions to learn with, from, and about each other and each other’s roles on a health care team as they examine social determinants of health and social justice issues while applying these principles in a structured service learning practicum.

SELC 7115. Interprofessional Community Service Learning 2 (IPCSL 2). 0 Credit Hours.
This is an innovative interprofessional community service learning (CSL) course for medical, dental, senior dental hygiene, nursing, and pharmacy students. The goal of this course is to promote social accountability among health professional students through the integration of meaningful service learning with the core competencies of interprofessional education. This course enables students from various health science professions to learn with, from, and about each other and each other’s roles on a health care team as they examine social determinants of health and social justice issues while applying these principles in a structured service learning practicum. Selective 7114 is recommended but not necessary.

SELC 7117. Third Year Clinical Teaching Experience. 0 Credit Hours.
This selective is limited to THP students pursuing the Distinction in Dental Education. The course goal is to provide dental students with opportunities to function as a teacher in the clinical setting by planning and conducting “Preparing for Patient Care” workshops for 2nd year students followed by: (1) self-assessment, (2) feedback from the students who attended the workshops, and (3) feedback from the THP Director and/or faculty members who observed the students’ workshops. Prerequisites: Prior completion of these THP courses: SELC 7122, SELC SELC 7094, and SELC 7095.

SELC 7118. Fourth Year Teaching Rotations. 0 Credit Hours.
This selective is limited to THP students pursuing the Distinction in Dental Education. The course goal is to provide dental students with opportunities to function as a preclinical lab instructor in the "Dental Hand Skills Development Module" for 1st year students, and to function as an "Instructor for a Day" in the GPGs. In the later rotation, THP seniors will take the place of a GPG core faculty member and provide instruction for 3rd year students for a full clinic session. Prerequisites: SELC 7122, SELC 7094, SELC 7095, SELC 7069.

SELC 7119. Advanced Studies on Human Disease Processes. 0 Credit Hours.
This course offers a series of comprehensive, in-depth lecture/case presentations of human disease processes to prepare second or third year dental students to take the National Board of Medical Examiners (NBME) Comprehensive Basic Science Exam (CBSE). This exam is required for the application and subsequent entry of our graduating students into an Oral and Maxillofacial Surgery specialty program. The course consists of lecture/case presentations that are extensions of subjects presented in the DS 2 General Pathology course (PATH 6019) given in the fall semester of the second year of dental school. The course is focused on reinforcing topics presented in PATH 6019 as well as introducing new disease processes and concepts that were not covered. The course will be offered when at least three (3) second or third year dental students enroll. Because the nature of this course by design is highly interactive, it will be limited to a maximum enrollment of eight (8) students who are in excellent academic standing; and preference will be given to those dental students who are anticipating entrance into an Oral and Maxillofacial Surgery specialty program. The first portion of the course will begin the first week in September of the fall semester after completion of the basic science portion of PATH 6019 and continue through the organ systems portions of the General Pathology course in early December. The second portion of the course will begin in spring semester in concert with the Oral and Maxillofacial Pathology course (PATH 6021).
SELC 7120. Preventive Dentistry Outreach. 0 Credit Hours.
Paired groups of DS I students are required to participate in a two-week rotation during the summer session between the freshman and sophomore years. The students will be based at either Mercy Ministries of Laredo or UT Brownsville School of Public Health. Students must participate in outreach to include dental education on dental disease prevention and oral health promotion and will work alongside clinic outreach staff (e.g., Promotoras and Social Workers) and dental care providers (dental, dental hygienists, and dental assistants). Activities will include clinical preventive patient education, dental surveys, dental assisting, and preventive dentistry clinical procedures. Students are required to develop a health promotion and disease prevention project (e.g., patient handout, educational flip chart, presentation, etc.). This tool will be implemented and continue to be used in future outreach by the program. Students will also have the opportunity to rotate to the office of a private practitioner as a part of this program. This is a work-study selective; students will be employed by UTHSCSA and receive selective credit. Ability to communicate in Spanish is essential. 2-week rotation.

SELC 7122. Academic Dental Career Mentorship. 0 Credit Hours.
First year students will meet with faculty members to learn about academic careers: why did the faculty member choose to work in a dental school, what are the benefits of an academic career and what are the limitations of an academic career. Additionally, students learn about the roles and responsibilities of dental school faculty members in teaching, research, administration and service. Participating students prepare summaries of what they have learned about academic careers, submit these to the course director for review and then participated in a wrap-up seminar where teams of students share and discuss their experience and identify “take-home messages”, insights and surprises about academic careers in dentistry. Dental students can take this course as a stand-alone selective without committing to the THP.

SELC 7123. Primary Dental Care/Outreach Laredo-IPE. 0 Credit Hours.
Rising fourth year dental students participate in a primary care/preventive dentistry elective training program. Together medical, nursing and “promotoras” from Mercy Ministries, collaborate with our faculty and dental students, providing an interdisciplinary approach to our training program. Dental care is provided in a community health clinic with conventional dental equipment and also using portable dental equipment. Dental students participate in a two week rotation and practice in accordance with their level of training and ability. Patients are adults and represent local community and “colonia” residents as well as referrals from a “battered women’s shelter”. All are from lower socio-economic border areas of Webb County in Laredo, Texas. Dental care is provided under the direct supervision of Dental School faculty. Students that participate become familiar with the oral health needs of various segments of the population and gain invaluable clinical experience and patient management skills.

SELC 7124. PreClinical and Clinical Teaching Practicum. 0 Credit Hours.
This selective is for 3rd and 4th year students pursuing the Distinction in Dental Education (School of Dentistry Teaching Honors Program; TBP) who plan and conduct teaching for student peers in preclinical and clinical topics and skills. The course goals are to enhance TBP students’ capacity to: (1) design and implement hands-on workshops to help their student colleagues acquire fundamental technical and procedural skills that will assist their learning in preclinical laboratory courses, and (2) function effectively as a clinical instructor on a GPG during the “Clinical Instructor Activity” (CIA) during the 4th year of the TBP using effective coaching, demonstration and feedback skills. Prerequisites: Completion of Years 1 and 2 in the TBP.

SELC 7126. Diagnosis and Treatment Planning Selective. 0 Credit Hours.
Students will screen new prospective patients. If acceptable for treatment by a dental student, the students, working in teams, will conduct a comprehensive examination and develop a treatment plan. The goal is to have the patient ready for patient care when the academic year begins. Student must be in dental school for one year before taking this course.

SELC 7127. Urgent Care. 0 Credit Hours.
This is a clinical experience for rising DS 3 and 4. It will be a similar experience as the DEC during the academic year. Patients who are not patients of record will be examined and treated or referred to treatment as necessary. DS 3 and 4 students will work in pairs. For the rising senior, a two week time period is required to fulfill the expectations of a required 2 week summer clinical selective. For rising DS 3, a minimum of 1 week is required for a summer selective credit; This will give the CD some flexibility depending on how many DS 3 students want to have this opportunity. Students must have permission by the course director to register for the selective and for a specific time period. Students must be in Dental School for two years before registering for this selective.

SELC 7128. Diagnosis and Treatment Planning. 0 Credit Hours.
This is a clinical experience for rising DS 2, 3 and 4. Patients will be assigned for an initial screening; if acceptable for treatment by a dental student, the students, working in teams, will conduct a comprehensive examination and develop an appropriate treatment plan. The goal is to have the patient ready for patient care by the rising 3rd year student (preferably) when the academic year begins. The rising DS 4 will take a leadership role as the leader of the oral health care team. He/she will assign appropriate tasks to rising DS 2 and DS 3 that are consistent with the level of skill these students have developed. This will be a two week time commitment in the GPG clinics Students must have permission by the course director to register for the selective and for a specific time period. Students must be registered dental students.

SELC 7130. Introduction To Graduate Prosthodontics. 2 Credit Hours.
The objective of this selective is to familiarize rising DS 3 and/or DS 4 students with a post-doctoral Prosthodontics residency. Students will be introduced to complex and challenging situations in clinical Prosthodontics through interaction with residents and by participation in all phases of clinical treatment and laboratory procedures for a complete denture patient treatment. The selective will occur over a 2 week period and will be scheduled to accommodate patient availability. Due to the interactive nature of clinical treatment, enrollment will be limited to two dental students. Withdrawal, with notice to the course director, will be permitted without recording of the withdrawal on the student’s transcript.

SELC 7131. Advanced Placement in Oral & Maxillofacial Surgery 1. 0 Credit Hours.
This selective will provide more breadth and in-depth knowledge of oral and maxillofacial surgery (OMS) to 3rd and 4th year dental students who are interested in the surgical specialties. The didactic venues for this course include morbidity and mortality conferences, seminars and literature review sessions that are part of the OMS residency curriculum, and case presentations involving orthodontics and prosthodontics. No more than two students will usually be selected for this course; selections will be at the course director’s discretion based on faculty interview and an application which includes a letter of interest. There are no prerequisites for this selective. Student evaluation will be based on a completed portfolio and their seminar/conference attendance. No remediation will be offered and students can withdraw any time without prejudice.
SELC 7132. Advanced Placement in Oral and Maxillofacial Surgery 2. 0 Credit Hours.
This selective is for 4th year students interested in furthering both their didactic and clinical experiences in OMS. The goal of this course is to further strengthen the students capacity to critically appraise new OMS information, increase their surgical skills, and expose them to the unique environments that exist in the operating room and/or hospital emergency department. Requirements: Completion of APOMS I and successful completion of the OMS summer selective or an equivalent experience. No more than two students will usually be selected; selection is at the course director’s discretion based on a student’s clinical proficiency, faculty interview, application and letter of intent to specialize OMS. Students will be evaluated based on their clinical proficiency, portfolio and seminar/conference attendance. No remediation will be offered and students can withdraw at any time. Prerequisite: SELC 7131.

SELC 7133. Dental Gross Anatomy Teaching Selective. 0 Credit Hours.
The Dental Gross Anatomy Teaching Elective allows qualified dental students to serve as teaching assistants for the CSBL 5016 Dental Gross Anatomy course which is offered during the fall semester. This elective is designed to: 1) provide an environment and an experience for dental students to develop, strengthen and practice effective teaching skills in human gross anatomy to near-peer students in CSBL 5016; 2) provide an experience for dental students to improve and augment anatomical knowledge and understanding through study of the dissected human body and their applications to dentistry; 3) provide an opportunity to develop and strengthen skills in communication, interpersonal relations, conflict management and teamwork.

SELC 8023. Wonderful World Of Periodontics. 0 Credit Hours.
Periodontal therapy includes a variety of sophisticated surgical modalities with many different objectives. Having a basic understanding of these surgical procedures and their outcomes can give a general dentist a basis for improving communications with patients related to periodontal treatment needs. This course will showcase advanced periodontal surgical procedures and their outcomes through case presentations made by Periodontics postdoctoral students.

SELC 8032. Senior South Texas Rotation. 0 Credit Hours.
Senior dental students will be required to provide basic dental care and preventive services to patients in a community-based clinic in South Texas. The participating community clinic and time schedules will be available in the Dental Dean’s Office/Office of External Affairs. A minimum of 2 weeks will be scheduled by arrangement. Attendance is required. Withdrawal permitted with appropriate transcript entry. Seniors may participate for a maximum of 4 weeks based on availability. Housing will be provided. Participants will be scheduled based on the list of students who register for the course. Students must complete evaluation forms at the end of the rotation.

SELC 8035. Mission Dental Care Program. 0 Credit Hours.
Short-term Mission Trips Fall & Spring / SA-CMDA Dental students at all levels of education and experience participate in a primary care/preventive dentistry elective training program in which primary dental care is provided in a non-conventional setting, using portable dental equipment. Students participate in accordance with their level of training and ability, by providing needed dental care to patients of all ages from lower socio-economic background in San Antonio, and border areas of South Texas and other select dentist shortage areas. This helps our students become familiar with the oral health needs of various segments of the special needs population. Dental care is provided under the direct supervision of Dental School faculty, including adjunct faculty from the private sector. The mission trips are coordinated and organized by the San Antonio Christian Medical-Dental Association. The healthcare delivery environment also involves medical teams. Physicians, medical students, nurses, and pharmacy students, also provide care, offering interdisciplinary / inter-professional training opportunities.

SELC 8060. Advanced Graduate Clinic Rotation. 1.5 Credit Hour.
The objective of this 40 hour selective is to provide interested undergraduate students with the opportunity to assist orthodontic graduate students performing comprehensive orthodontic treatment. Students must have completed SELC 7097 Preclinical Orthodontic Techniques to participate, since they will be asked to perform clinic procedures other than assisting. Two students are pre-selected for the Thursday afternoon clinic; there will be 2 students in the Spring and 2 students in the Fall. 4 hours per week on Thursdays for a total of 40 hours - primarily for DS III students restricted to the Fall and Spring semesters.

SELC 8087. RESPECT - Interprofessional. 0 Credit Hours.
Future health professionals who will be working together in clinical settings would benefit from clinical education and training opportunities that promote the appreciation of the skills of other team members providing health care to patients. The course is an interdisciplinary clinical training opportunity for dental, dental hygiene, medical and nursing students to work together in teams to evaluate the level of health and wellness of an underserved population by utilizing the student run free medical and dental/dental hygiene clinics at the SAMM Transitional Living and Learning Center (TLLC) a homeless transitional center. Course limited to four senior or fourth-year dental students. Permission required by course director.
SELC 8088. Pre-Prosthetic Surgery Selective. 0 Credit Hours.
The course is for select DS2, DS3, DS4 students. There is a need for many patients to have surgery to improve their outcome for wearing of removable dental prosthesis. Ideally, the patients would go to a dental residency program to have this surgical care. Oftentimes, they need a more affordable option. Providing these services at an undergraduate level allows patients to proceed with the recommended care at a cost they can afford. Students benefit by learning principles of wound healing and patient management considerations; many of these patients have complex medical, functional, pharmacological, or cognitive issues. Students are also expected to prepare in advance of the procedures for medical emergencies that might occur based on the patients' health history. Suturing and documentation skills will be enhanced beyond what is already taught in their dental curriculum. While Geriatrics often work with many students with pre-prosthetic surgery case planning and the actual treatment, selective credit on students' transcripts is proposed when a student completes eight surgical experiences. Enrollment in the course will be at the approval of the course director. It will be a Credit course if eight pre-prosthetic surgical cases are completed. If enrolled, and eight cases are not completed, there will be no credit, no reflected penalty, on transcript for this selective. Students can drop at any time. Students can express interest at any level from DS2:DS4 with no time limit for accomplishing the eight cases. The selective is year round and spaces are limited.

SELC 8094. Enteral Conscious Sedation And Emergency Procedures. 0.5 Credit Hours.
This is the TSBDE approved two-day course in oral sedation. This course is necessary in order to apply for and be granted a permit in Enteral Sedation by the State Board of Dental Examiners.

SELC 8099. Exciting Orthodontic Literature Review. 0 Credit Hours.
Selectees will have the opportunity to review classic articles in clinical and research areas of Orthodontics. This course is designed to provide a springboard for those students entering graduate programs. Withdrawal will be permitted at any time without recording of the withdrawal on the transcript. Two absences will be permitted. Participants will be selected from the list of students who register for the course.

SELC 8117. CAD-CAM (Cerec 3D) Dentistry. 0.5 Credit Hours.
The course consists of four half-day sessions and is designed for students who will intensify their clinical skills of CAD-CAM dentistry. Students will be given the information needed to keep up-to-date with the latest techniques and software. A maximum of 8 students are encouraged per course session.

SELC 8130. Clinical Occlusion. 0 Credit Hours.
The goal of this course is to relate the concepts and principles of occlusion learned during previous years to the treatment of the normal patient as well as the patient with damaged dentitions. The purpose of this course in Occlusion is two-fold. First, the course is a continuation of basic occlusion concepts and their relationship to general dentistry. Second, the course will introduce disorders of the natural dentitions. The role occlusion in diagnosis and treatment of these disorders will be explained. Techniques include occlusal splint appliance and pre-restorative occlusal adjustment will be presented. This course will be delivered in two parts. The first part is related to lectures and the one to laboratory procedures.

SELC 8131. Research in Dental Education (RIDE). 0 Credit Hours.
This selective is for students pursuing the Distinction in Dental Education who desire to acquire skills in educational research beyond the core expectations of the THP. The course goal is to enhance the capacity of participants to design research studies that explore educational issues, to obtain funding to support research and to disseminate findings via publication. RIDE has 3 components: designing educational research, grant writing, and writing for publication. Students work in teams to plan and implement an educational research project. During seminars on grant writing, teams develop and present a grant application project and receive a critique. During seminars writing for publication, participants complete writing exercises, critique a manuscript and write an abstract, which is presented to the class for peer feedback.

SELC 8132. Academic Dental Careers Fellowship Program (ADCFP). 0 Credit Hours.
The ADCFP is a 12 month fellowship to prepare students to enter academic dentistry. Students begin ADCFP at the ADEA meeting in the spring of their 3rd year and conclude at ADEA in their 4th year. Students complete ADCFP in collaboration with 2 faculty mentors. ADCFP students and mentors complete workshops on teaching strategies, curriculum innovation and education issues at the ADEA meetings and webinar on leadership, research and career planning. Students do supervised classroom, lab and clinical teaching and interview 10 faculty with different job foci to learn roles, functions and career development issues. Students conduct a research project and meet regularly with their faculty mentors to discuss their progress, culminating in a poster presentation at the ADEA meeting summarizing their fellowship experiences.

SELC 8160. Molar Endodontics Selective. 1 Credit Hour.
The molar endodontics elective allows students to initiate an appreciation for the knowledge and skills needed for successful endodontic treatment of uncomplicated molar teeth. The course is partially self-directed involving self-study of textbook materials in Vital Source Bookshelf and other reading and video assignments in Canvas. Pre-clinical projects on extracted molar teeth are required prior to clinical participation. Students who successfully complete the course, including satisfactory completion of two patient molar treatments under Endodontic faculty supervision, will be allowed to treat selected pre-approved molar cases in the General Practice Clinic. Each GP Group nominates up to 3 participants. Contact your GP Group Leader for their nomination to the Course Director. Instructor approval is required. Available after completion of Endo 7043. Withdrawal is permitted at any time without recording on the transcript. Prerequisites: ENDO 6041, 6142 and 7043.

SELC 8175. Geriatric Dentistry. 1 Credit Hour.
Rising Senior dental students will have the opportunity to provide primary dental care and prevention services to a dynamic and diverse population of medically and functionally challenged older adults. The format of the summer selective is similar to that of the DS3 Geriatrics rotation, but with more patients, more treatment, and more discussions within each treatment session. Each summer selective session is two weeks and the treatment schedule is determined by the course director. Once enrolled and started, students are not allowed to miss sessions as patients will be scheduled.
SELC 8176. Advanced Oral & Maxillofacial Radiology Selective. 0 Credit Hours.
Students will have the opportunity to work with oral and maxillofacial radiology residents under the supervision of the program director. Students will have the opportunity to learn about Cone Beam CT technology and the different machines the program operates, as well as learn about the selection criteria. He/she will have the opportunity to observe and participate in the report writing service that the Oral and Maxillofacial Radiology (OMFR) program provides on a national level.

SELC 8181. General Dentistry Implant Selective. 0 Credit Hours.
This course provides a select group of DS-IV students who are planning to become general dentists the opportunity to place and restore implants. The course will consist of a pre-clinic rotation during the summer break, followed by didactic and clinical sections during the course of the academic year. Patients will present with uncomplicated implant placement.

SELC 8185. Fast CATS: Academic Detailing. 1 Credit Hour.
Participants will attend a two-day "Evidence-Based Practice: Academic Detailing" workshop, prepare two Critically Appraised Topics with a faculty member, receive training in academic detailing skills, and visit five private-practice dental offices during the summer break. The office visits may be made in the student’s hometown or anywhere in the U.S. The purpose of the visits is to present and receive feedback on new concepts.

SELC 8528. Oral & Maxillofacial Surgery. 0 Credit Hours.
This course is designed to provide additional clinical experiences in support of the competency statements for the school specifically as they relate to the management of more difficult Oral Surgery patients. During the rotation, students will be encouraged to attend hospital rounds and scheduled resident and student seminars. The majority of clinic time will be treating more difficult clinic cases. Management of patients with multiple system disease and more difficult surgeries will be emphasized. Every attempt will be made to assign students cases where the high-speed surgical drill is required. The rotation is a minimum of 2 weeks in length. The time scheduled in the OMS clinic will be determined by departmental needs and availability of space. Any students interested in observing in the Emergency Clinic in the hospital please contact Dr. Spackman. Students are required to attend all clinic sessions for which they have signed up.

SELC 8530. Teaching Excellence And Academic Skills (TExAS). 0 Credit Hours.
Participants will acquire skills for success in academic dentistry with focus on factors that influence memory and learning, teaching strategies for classroom and clinical practice, assessment best practices, helping struggling students, educational scholarship and career planning. TExAS also will include a theme devoted to a four-year longitudinal assessment map for a competency, present a lecture, be observed teaching in classroom, lab or clinic, counsel struggling students in teaching simulations, assess the school’s learning environment, design an educational activity to promote cultural competency, critique an educational research study, design an educational research study, develop a career plan and receive career coaching, and complete an OSTE (Objective Structured Teaching Evaluation).

Speech Language Pathology (MSLP)

Courses

MSLP 5000. Neurological Bases of Speech, Hearing and Language. 3 Credit Hours.
This course presents neuroanatomy, neurophysiology, and the structure and function of the central and peripheral nervous system that form the neurologic foundation for speech, hearing and language.

MSLP 5001. Speech Production and Speech Perception. 3 Credit Hours.
This course addresses the physiology of speech production, the acoustic characteristics of speech, the relationship between articulation and acoustics and the processes by which listeners perceive speech. Theories of speech production and perception are discussed. The lifespan issues related to speech, dialectal and/or cultural characteristics of normal speech and the acoustic and perceptual characteristics of abnormal speech are also addressed.

MSLP 5002. Speech Sound Disorders. 3 Credit Hours.
This course addresses development and disorders of articulation and phonology in pediatric populations. Relevant assessment skills are developed. Theories, current assessment batteries, and procedures of contemporary interventions are discussed.

MSLP 5003. Audiological Service Delivery in Speech-Language Pathology Laboratory. 1 Credit Hour.
This course reviews the anatomy and physiology of hearing and the basics of hearing science. Content areas covered include types of hearing loss, forms of hearing assessment, and principles of intervention and rehabilitation. Skills related to participating in hearing screening, hearing assessment and intervention for practicing speech-language pathologists are addressed in lab-based activities.

MSLP 5004. Research Methods. 3 Credit Hours.
This course addresses the skills in understanding and critiquing research reports. Principles and criteria for evaluating published research, including statistical analyses, issues of validity and evidence-based practice are discussed. Students will begin the development of a research project which must be completed prior to graduation.

MSLP 5005. Clinical Methods in Speech-Language Pathology 1. 2 Credit Hours.
This is the first of the two courses taught in simulated student clinical lab. This course emphasizes basic clinical methods and skills for beginning graduate students in speech-language pathology with an emphasis on assessment. Students will practice administering, scoring and interpreting common standardized tests. Clinical note-writing and documentation are modeled and discussed.

MSLP 5006. Aphasia and Related Disorders. 3 Credit Hours.
This course examines adult onset aphasia and related language disorders. The content areas covered include theoretical foundations, pathophysiology, symptomatology, assessment and diagnosis, and clinical management.

MSLP 5007. Motor Speech Disorders. 3 Credit Hours.
This course addresses motor speech disorders: Apraxia of Speech and Dysarthria. The content areas covered include theoretical models, neuropsychopathology, symptomatology, various instruments and tests for assessment and differential diagnosis as well as clinical management of both developmental and adult-onset motor speech disorders.
MSLP 5008. Language Disorders in Children: Preschool and School Age. 3 Credit Hours.
This course addresses language development and disorders of both preschool and school-age children, and adolescents. Both primary and secondary language disorders are included. The content areas covered include underlying etiologies, clinical characteristics, assessment batteries and evidence-based intervention strategies.

MSLP 5009. Dysphagia in Adults and Children. 3 Credit Hours.
This course addresses swallowing disorders in both adult and children in various populations across the age span. Content areas covered include normal anatomy and physiology of swallowing, evaluation of disordered oropharyngeal swallowing using both instrumental and noninstrumental examination tools with special emphasis on videofluoroscopic swallow study (VFSS) procedures and analysis, and evidence-based treatment strategies for swallowing disorders.

MSLP 5010. Clinical Methods in Speech-Language Pathology 2. 2 Credit Hours.
This is the second of the two courses taught in simulated student clinical lab. This course emphasizes more advanced clinical methods and skills for beginning graduate students in speech-language pathology with an emphasis on intervention. Topic areas covered include various published and evidence-based clinical protocols and operational procedures in management.

MSLP 5011. Evidence-Based Practice, Professional Issues, and Ethics. 2 Credit Hours.
This course provides an overview of professional issues for speech-language pathologists. Content areas include principles of evidence-based practice, regulatory and scope of practice issues, professional ethics, health care reimbursement, risk management, and other current professional and legal issues related to practicing speech-language pathologists.

MSLP 5012. Cognition and Communicative Disorders. 3 Credit Hours.
This course examines normal cognition and the effects of aging and dementia to the nondominant cerebral hemisphere as well as traumatic brain injury on communication. Both assessment and management of communication disorders arising from these conditions are addressed.

MSLP 5013. Voice and Resonance Disorders. 3 Credit Hours.
This course examines the acoustic, perceptual and physiological dimensions of normal and abnormal voice and resonance. For voice, differential diagnosis and management of hyperfunctional, psychogenic and organic voice disorders are addressed. For resonance, embryology, anatomy and physiology of normal and abnormal development of oral structures, cleft-palate and craniofacial anomalies associated with various syndromes and their effects on speech, hearing, and language development are addressed.

MSLP 5014. Fluency Disorders: Theory and Practice. 3 Credit Hours.
This course addresses childhood-onset and adult-onset fluency disorders. Content areas include identification of characteristics of typical and atypical dysfluency in children, determination of various linguistic, developmental, physiological and psychological aspects associated with the onset and maintenance of developmental stuttering, and the process of differential diagnosis of adult-onset neurogenic and psychogenic stuttering. Anatomical and functional changes associated with fluent and stuttered speech in recent neuroimaging studies are discussed. Evidence-based treatment approaches are explored.

MSLP 5015. Speech-Language Pathology Practicum 1. 4 Credit Hours.
This is a clinical practicum designed to help beginning student clinicians meet the American Speech-Language Hearing Association's (ASHA) required number of clinical hours in different practicum settings. The clinical coordinator is responsible for procuring appropriate placements to best match the needs between students and clinical practicum sites. Practicum settings may include hospitals, medical centers/clinics, rehabilitation centers, nursing homes, public and private schools, special needs schools, charter schools, and private practices.

MSLP 6000. Augmentative and Alternative Communication. 2 Credit Hours.
This course provides an introduction to current methods and basic strategies associated with the use of augmentative and alternative communication aids and approaches in patients with varying types of communicative disorders. The course addresses the knowledge and skills required for assessment and identification of potential AAC users, decision making, and instructional development and implementation.

MSLP 6001. Aging, Cultural and Linguistic Diversity. 3 Credit Hours.
This course addresses the cultural and linguistic diversity relevant to clinical practice in the profession of speech-language pathology. Students acquire a knowledge base regarding the interaction of culture, dialects, and bilingualism with communication disorders and learn to apply it to clinical situations.

MSLP 6002. Head Neck Cancer, Tracheostomy, and Mechanical Ventilation. 3 Credit Hours.
This is a two-part course. Part I covers assessment and management of speech, voice and swallowing disorders resulting from treatment for head and neck cancer. The voice and speech changes expected in patients receiving head and neck surgeries and treatment strategies are discussed. Part II covers the unique challenges of evaluation and treatment of speech and voice impairments demonstrated by patients requiring tracheostomy tube placement and/or ventilator support. Basic understanding of various tracheostomy tubes, one-way speaking valves and ventilators/ventilator settings are reviewed. Short- and long-term options for communication are discussed.

MSLP 6003. Applied Topics in Communication Disorders and Sciences. 2 Credit Hours.
In this course, scientific, clinical and professional issues in speech-language pathology are examined using a variety of formats including guest speakers in student development sessions, clinical rounds, and journal club. Development of oral presentation skills as well as analytical and clinical problem-solving skills is emphasized. The course meets two hours weekly.

MSLP 6004. Speech-Language Pathology Practicum 2. 4 Credit Hours.
This is a clinical practicum designed to help graduate student clinicians meet the American Speech-Language Hearing Association's (ASHA) required number of clinical hours in different practicum settings. The clinic coordinator is responsible for procuring appropriate placements to best match the needs between students and clinical practicum sites. Practicum settings may include hospitals, medical centers/clinics, rehabilitation centers, nursing homes, public and private schools, special needs schools, charter schools, and private practices.
Surgery (SURG)

Courses

SURG 3005. Surgery Clerkship. 8 Credit Hours.
The eight-week core surgery clerkship is divided into a four-week general surgery rotation and a four-week surgery specialty rotation. The goals of the third-year surgical curriculum are divided into 5 broad categories: 1. Preparation of the medical student for patient care/clinical skills, including a. performance of a focused history and physical examination on a surgical patient, b. interpretation of diagnostic tests and procedures for the surgical patient, c. performance of basic technical skills, d. demonstration of clinical reasoning and problem-solving skills for the surgical patient, e. formulation of a diagnostic and therapeutic plan for a surgical patient; 2. Increase fund of medical knowledge for a surgical patient, 3. Self-directed learning, 4. Application of best evidence-based practices to improve patient care and to prepare for daily activities, and 5. Development of interpersonal and communication skills, including: a. oral presentations to the surgical team, b. written notes in the medical record, c. relationship with patients and their families, d. relationship with the healthcare team, e. practice of professionalism in all settings. In order to achieve these goals, the student should have a sound knowledge of surgical anatomy and the pathophysiology of surgical illness. The student should have strong understanding of the patient's surgical disease process. The student should master basic technical skills by the end of the clerkship. The student should master a focused history and physical examination on a surgical patient. The student should propose and interpret diagnostic tests and procedures that are appropriate for the surgical disease. The student should develop a differential diagnosis and demonstrate clinical reasoning and problem-solving skills that integrate clinical data. The student should develop a logical diagnostic and therapeutic plan for surgical problems. The student should develop strong interpersonal relationships and communication skills with patients, their families and the healthcare team. The student should be well read and well prepared for operations and rounds, and begin to develop good habits for self-directed, lifelong learning. The student should demonstrate an understanding of best practices that improve the health of surgical patients. The student should provide competent, compassionate care for patients in all surgical settings.

SURG 4000. Special Topic. 4 Credit Hours.
This is a self-designed course created by both the student and the department to cover a specific topic. A Course Approval Form must be completed along with documentation of the designed course description.
Senior students function as "interns" on the oral maxillofacial surgery service. They admit and discharge oral maxillofacial patients. They perform history and physical examinations, and keep daily records on oral maxillofacial patients. They follow patients in the outpatient clinics, in the emergency department, in the intensive care units, and on general wards. They participate in operations for their patients. They participate in pre- and post-operative care of oral maxillofacial issues including outpatient sedation and anesthesia, dentoalveolar surgery, facial fractures, facial aesthetic and reconstructive surgery, management of facial and dental pain, and management of facial infections.

**SURG 4026. Plastic Surgery Selective. 4 Credit Hours.**
Senior students function as "interns" on the plastic surgery service. They admit and discharge plastic surgery patients. They perform history and physical examinations, and keep daily records on plastic surgery patients. They follow patients in the outpatient clinics, in the emergency department, in the intensive care units, and on general wards. They participate in operations for their patients. They participate in pre- and post-operative care of plastic surgery patients. They present cases, attend all conferences, and take call as designated by the plastic surgery service. They mentor third-year medical students on the plastic surgery service. They have exposure to a wide range of plastic surgery issues including complex wound management, aesthetic plastic surgery, facial fractures, reconstructive surgery of the head and neck, and breast, hand, and extremity.

**SURG 4031. Transplant Surgery Selective. 4 Credit Hours.**
Senior students function as "interns" on the transplant surgery service. They admit and discharge transplant patients. They perform history and physical examinations, and keep daily records on transplant patients. They follow patients in the outpatient clinics, in the emergency department, in the intensive care units, and on general wards. They participate actively in live renal and liver donor evaluation. They participate in operations for their patients, including liver resection and renal, pancreas, and liver transplants. They participate in the evaluation and procurement of the multiorgan cadaveric donor. They participate in pre- and post-operative care of transplant patients. They present cases, attend all conferences, and take call as designated by the transplant service. They present patients at formal multidisciplinary transplant rounds daily. They mentor third-year medical students on the transplant service. They participate in the evaluation and procurement of the multiorgan cadaveric donor. They have contact with gastroenterologists and nephrologists who care for patients on the transplant service. The students rotate at University Hospital and Santa Rosa Northwest Medical Center.

**SURG 4037. Pediatric Surgery Selective. 4 Credit Hours.**
Senior students function as "interns" under private practice pediatric surgeons who are clinical faculty at the Health Science Center. They admit and discharge pediatric surgery patients. They perform history and physical examinations, and keep daily records on pediatric surgery patients. They follow patients in the outpatient clinics, in the emergency department, in the intensive care units, and on general wards. They participate in operations for their patients. They participate in pre- and post-operative care of pediatric surgery patients. They present cases, attend all conferences, and take call as designated by the pediatric surgery service. They mentor third-year medical students on the pediatric surgery service. This rotation is intended for students who seek a career in pediatric surgery or primary care pediatrics. Opportunities for clinical research projects are available. The students rotate at Santa Rosa Children's Hospital.

**SURG 4038. Rural Surgery Elective. 4 Credit Hours.**
In this rotation, senior students work with a private practice general surgeon in a rural setting. Senior students function as a "junior partners" on this general surgery service. They admit and discharge general surgery patients. They perform history and physical examinations, and keep daily records on general surgery patients. They follow patients in the outpatient clinics, in the emergency department, in the intensive care units, and on general wards. They participate in operations for their patients. They present cases, attend all conferences, and take call as designated by the surgeon. The objectives of this rotation are: to introduce students to the socioeconomic problems that rural patients face with access to care, to discover how the internet and distance learning decrease isolation in rural communities, to encourage students to consider surgical practice in underserved rural communities. Housing for the student will be provided during the rotation.

**SURG 4040. Surgical Critical Care Selective. 4 Credit Hours.**
This course provides senior students with a broad exposure to surgical critical care. Students rotate through the surgical trauma ICU and have the opportunity to gain a great understanding of the principles and practice of surgical critical care. The student will have good exposure to cardiovascular and pulmonary physiology. They will have the opportunity to learn about modern concepts of resuscitation, ventilator management, vasopressor support, nutritional support, and infection control. They will have opportunity to place central lines, PA catheters, arterial lines, and perform intubation and bronchoscopy. They will have opportunity to examine and manage critically ill and injured patients in the ICU and keep medical records daily. They will have opportunity to present patients on formal rounds daily and participate in didactic critical care conference and trauma morbidity and mortality conference. They will have opportunity to take call as designated by the service.

**SURG 4042. General Surgery (UH). 4 Credit Hours.**
Students function as "interns" on this broad-based general and laparoscopic surgery service. They admit and discharge general surgical patients. They perform history and physical examinations, and keep daily records on general surgical patients. They follow general surgical patients in the outpatient clinics, in the emergency department, in the intensive care units, and on general wards. They participate in operations for their patients. They participate in pre- and post-operative care of general surgical patients. They present cases, attend all conferences, and take call as designated by the general surgical service.

**SURG 4043. General Surgery (Minimally Invasive Surgery- MIS). 4 Credit Hours.**
Students function as "interns" on this broad-based general and laparoscopic surgery service. They admit and discharge general surgical patients. They perform history and physical examinations, and keep daily records on general surgical patients. They follow general surgical patients in the outpatient clinics, in the emergency department, in the intensive care units, and on general wards. They participate in operations for their patients. They participate in pre- and post-operative care of general surgical patients. They present cases, attend all conferences, and take call as designated by the general surgical service.
Surgical service. They may mentor third year medical students on the surgical service. They participate in pre- and post-operative care of surgical patients. They present cases, attend all conferences, and take call as designated by the service. They mentor third-year medical students on the surgical service.

SURG 4047. Emergency Surgery. 4 Credit Hours.
Senior students function as "interns" on this emergency and trauma surgery service. They admit and discharge surgical patients. They perform history and physical examinations, and keep daily records on surgical patients. Although students will examine most patients in the emergency department, students will also examine patients in outpatient clinics, in intensive care units, and on general wards. They participate in operations for their patients. They participate in pre- and post-operative care of emergency and trauma surgical patients. They present cases, attend all conferences, and take call as designated by the service. They mentor third-year medical students on the emergency and trauma surgery service.

SURG 4048. Vascular Surgery University Hospital/VA Hospital. 4 Credit Hours.
Senior students function as "interns" on each vascular surgery UH/VA service. They admit and discharge vascular surgery UH/VA patients. They perform history and physical examinations, and keep daily records on vascular surgery UH/VA patients. They follow vascular surgery UH/VA patients in the outpatient clinics, in the emergency department, in the intensive care units, and on general wards. They participate in operations for their patients. They participate in pre- and post-operative care of vascular surgery UH/VA patients. They present cases, attend all conferences, and take call as designated by the service. They mentor third-year medical students on the vascular surgery UH/VA service. Students have the opportunity to learn to perform a complete vascular physical examination and learn to interpret vascular diagnostic studies. They will have the opportunity to learn the finer details of endovascular treatment of vascular diseases.

SURG 4049. Surgical Internship Readiness. 4 Credit Hours.
The purpose of this elective is to prepare senior medical students who are interested in a surgical career for their surgery internship. This elective provides an opportunity to work closely with surgical residents in a simulated surgical environment. Students will learn about modern concepts of resuscitation, ventilator management, vasopressor support, nutritional support, and infection control. They will have the opportunity to place central lines, PA catheters, arterial lines and perform intubation and bronchoscopy. They will examine and manage critically ill and injured patients in the ICU and keep medical records daily. They will present patients on formal rounds daily and participate in didactic critical care conference and trauma morbidity and mortality conference. They will take call as designated by the service.

SURG 4052. Bariatric Surgery (DHR). 4 Credit Hours.
Senior students function as "interns" under Bariatric surgeons at the Doctor's Renaissance Hospital (DHR). They admit and discharge surgical patients. They perform history and physical examinations, and keep daily records on surgical patients. They follow patients in the outpatient clinics, in the emergency department, in the intensive care units and on general wards. They participate in operations for their patients. They participate in pre- and post-operative care of surgical patients. They present cases, attend all conferences, and take call as designated by the surgical service. They may mentor third year medical students on the surgical service.
SURG 4057. Vascular Surgery (DHR). 4 Credit Hours.
Senior students function as “interns” on the vascular surgery service at the Doctor’s Renaissance Hospital (DHR). They admit and discharge vascular surgery patients. They perform history and physical examinations, and keep daily records on vascular surgery patients. They follow vascular surgery patients in the outpatient clinics, in the emergency department, in the intensive care units and on general wards. They participate in operations for their patients. They participate in pre- and post-operative care of vascular surgery patients. They present cases, attend all conferences, and take call as designated by the service. They mentor third year medical students on the vascular surgery service. Students learn to perform a complete vascular physical examination and learn to interpret vascular diagnostic studies. They will learn the finer details of endovascular treatment of vascular diseases.

SURG 5001. Oral Maxillofacial Surgery Clinical Skills Course. 8 Credit Hours.
The goal of Clinical Skills module is to develop the student’s bedside diagnostic skills. As a result of course lectures, readings, labs, longitudinal preceptor experience, and other Clinical Skills (CS) activities, you will be able to: (1) Perform a full history and physical and recognize specific abnormalities; (2) Record the history and physical examination in a coherent, standardized manner; (3) Construct a problem list and differential diagnosis based on the history and physical exam findings; (4) Deliver a concise organized oral presentation of the history and physical and interpretation of the findings in a standardized format.

SURG 7000. Off Campus. 4 Credit Hours.
All off campus rotations must be approved by the designated faculty member prior to the beginning of the rotation (at least one week before the course begins). Credit will not be given for any rotation that has not been approved in advance. Required paperwork includes: “Course Approval” form, a written letter or email for acceptance form the physician preceptor with the start and end dates of the course/rotation, and a course description of your learning objectives and responsibilities during the rotation. Forms must include a complete address and telephone number for the off campus location or residence address for the student while at the off campus site. Forms will not be approved after the rotation has already begun. Contact the department for assistance with enrolling in this course.

Translational Science Clinical Investigation (TSCI)

Courses

TSCI 5070. Responsible Conduct of Research. 2 Credit Hours.
This interdisciplinary course is designed to train participants in the responsible conduct of patient-oriented clinical research. Students will have the opportunity to learn to and, by the end of the course, be required to: (1) delineate a history of hallmark abuses of humans enrolled in clinical research; (2) describe the evolution of national and international codes and regulations guiding inclusion of human subjects in clinical investigations; (3) list the elements of informed consent and describe procedures and precautions for enrolling special populations into clinical investigation; (4) write a consent form in understandable language; (5) recognize different forms of scientific misconduct; (6) describe the role and processes of a peer review board to judge violations in research ethics; (7) develop strategies for self-assessment and validation of scientific objectivity in one’s own research; and (8) recognize the ethical responsibilities and consequences of whistle blowing.

TSCI 5071. Patient-Oriented Clinical Research Methods-1. 2 Credit Hours.
This interdisciplinary course is the first in a two-semester sequence designed to train participants in the conduct of patient-oriented clinical research. Students will have the opportunity to learn to and, by the end of the course, be required to: (1) define a research question; (2) effectively conduct a systematic review of the scientific literature; (3) design strategies for recruitment into a study; (4) delineate strategies for minimizing bias in cross-sectional and retrospective studies; and (5) read and interpret research reports of cross-sectional and case-control investigations.

TSCI 5072. Patient-Oriented Clinical Research Biostatistics-1. 2 Credit Hours.
This interdisciplinary course is the first in a two-semester sequence designed to train participants in the analysis and biostatistics of patient-oriented clinical research. Students will have the opportunity to learn to and, by the end of the course, be required to: (1) identify and summarize different categories of data; (2) set up and perform tests of hypotheses; (3) estimate sample sizes for survey and case-control studies; and (4) use statistical software packages to enter, summarize, graph, visualize, and analyze data.

TSCI 5073. Integrated Molecular Biology With Patient-Oriented Clinical Research. 1 Credit Hour.
This interdisciplinary course is designed to train participants on integrating molecular biology methods into patient-oriented clinical research. Students will have the opportunity to learn to: (1) appropriately use molecular terms in clinical investigation; (2) describe the events involved in protein synthesis; (3) describe the principles involved in molecular techniques (e.g., polymerase chain reactions, southern blots); (4) identify the appropriate specimens, collection, and handling requirements for each molecular technique; (5) identify and correct common sources of error in performing molecular techniques; (6) cite examples of clinical applications of molecular techniques in clinical medicine; and (7) apply molecular techniques in the laboratory to specific clinical problems.

TSCI 5074. Data Management, Quality Control And Regulatory Issues. 2 Credit Hours.
This interdisciplinary course is designed to train participants in the necessary data management and quality control procedures required for the conduct of patient-oriented clinical research. It consists of three segments: (1.) introduction to data management principles and standard practices; (2) development of the student’s own mentored research; and (3) introduction to bioinformatics.

TSCI 5075. Scientific Communication. 2 Credit Hours.
This interdisciplinary course is designed to train participants to write effectively in all aspects of conducting patient-oriented clinical research. Students will have the opportunity to learn to and, by the end of the course, be required to: (1) recognize and avoid errors in grammar, punctuation, and usage that are common in scientific writing; (2) construct units of writing whose structure, style, and logical continuity allows instant and clear comprehension; (3) construct concise, informative titles; (4) develop clear, comprehensive, abstracts for papers and grant proposals; (5) construct complete, well-rationalized sets of specific aims for grant proposals; and (6) effectively apply the 4-Point Rule (What is the question? How did we approach it? What happened? What does it mean?) to all forms of scientific writing.
TSCI 5076. Introduction To Informatics. 1 Credit Hour.
This elective course is designed for students interested in information technologies in the context of clinical investigation. It offers an overview of the field of informatics applied to biomedicine, covering specific applications and general methods, issues, capabilities and limitations of informatics systems. Student teams will conceive, design, specify, implement, evaluate and report on a software project in the domain of biomedicine. The projects will include proposal writing, peer review, and preparing final reports, as well as guest lectures from field experts.

TSCI 5077. Translational Science Training (TST) Practicum. 1-3 Credit Hours.
This elective course provides an opportunity for participation in unique clinical and translational research activities that are highly individualized for each student on the basis of prior experience and research interests.

TSCI 5078. Introduction to Intellectual Property, Technology Transfer and Commercialization. 1 Credit Hour.
This elective course provides an in-depth overview of the essential components encompassed in the protection of intellectual property, patents, licensing, technology transfer, and product commercialization. Content is provided through a series of lectures, assigned readings, literature reviews, class presentations, and discussions with faculty.

TSCI 5079. Practicum in Intellectual Property, Technology Transfer and Commercialization. 0.5-1 Credit Hours.
This elective course provides an opportunity for participation in unique and translational research activities that focus on the processes involved in the protection of intellectual property and the transfer and commercialization of technology. Activities are highly individualized for each student on the basis of prior experience and research interests.

TSCI 5080. Integrating Molecular Biology with Patient-Oriented Clinical Research Practicum. 1 Credit Hour.
This is the required practicum to TSCI 5073. This practicum is designed to provide the opportunity for highly individualized research activities for integrating molecular biology methods into patient-oriented clinical research.

TSCI 6001. Introduction To Translational Science. 1 Credit Hour.
This elective course provides an in-depth overview of the essential components encompassed by translational science. Content is provided through a series of lectures, assigned readings, literature reviews, class presentations, and discussions with faculty.

TSCI 6060. Patient-Oriented Clinical Research Methods-2. 2 Credit Hours.
This interdisciplinary course is the second in a two-semester sequence designed to train participants in the biostatistical analysis and patient-oriented clinical research. Students will have the opportunity to learn to and, by the end of the course be required to: (1) define criteria for inferring causation from observational studies; (2) design strategies for subject retention in a prospective study; (3) design strategies for monitoring progress in a randomized control trial; (4) delineate strategies for minimizing bias in cohort studies and randomized control trials; (5) compare and contrast the uses, strengths, and weaknesses of different clinical trial designs; (6) read and interpret research reports of cohort studies and randomized control trials; and (7) describe the steps in conducting a meta-analysis. Prerequisites: TSCI 5071.

TSCI 6061. Patient-Oriented Clinical Research Biostatistics-2. 2 Credit Hours.
This interdisciplinary course is the second in a two-semester sequence designed to train participants in the biostatistical analysis and patient-oriented clinical research. Students will have the opportunity to learn to and, by the end of the course, be required to: (1) perform a two-way analysis of variance and explain the results; (2) perform survival analysis; (3) compare and contrast the purpose and characteristics of different forms of interventional trials; and (4) plan the sample size, analysis, and stopping rules of a randomized clinical trial. Prerequisites: TSCI 5072.

TSCI 6064. Grantsmanship and Peer Review. 1 Credit Hour.
The purpose of this elective course is to provide an overview of the peer review process for research proposals as well as the essential components of grant management. Lecture and assignment topics will include: (1) funding agencies, missions, deadlines, and instruction; (2) Institutional Grantsmanship Issues; (3) National Institutes of Health (NIH) Organization (Institutes, Councils, Centers, and Budgets); (4) NIH Awards and Study Sections; (5) process and communications with the NIH; (6) interpreting and responding to written critiques; (7) mock study section meeting; and (8) grantsmanship after funding.

TSCI 6065. Health Services Research. 2 Credit Hours.
This course focuses on concepts and methods used in research focusing on health care quality, utilization, access, and safety. The seminar will utilize skills-based learning, small group activities, and outside assignments. By the end of the course, candidates will be required to: (1) Articulate underlying core concepts; (2) Describe basic methods used in health services research; (3) Identify relevant databases and data sources for health services research; (4) Critically appraise and interpret published reports of health services research; (5) Discuss current issues in HSR; (6) Understand how to incorporate health services concepts, methods, or tools into current research. Prerequisites: TSCI 5071 and TSCI 6060.

TSCI 6066. Instrument Development And Validation. 1 Credit Hour.
This elective course introduces methods to develop and evaluate self-report measures. The seminar is built on classical test theory with a focus on the practice of creative surveys. Participants should be able to (1) estimate various forms of reliability; (2) demonstrate various forms of validity evidence; and (3) explain how statistical analyses may be used to inform the validation process.

TSCI 6067. Genomic Healthcare. 1 Credit Hour.
This course prepares students to integrate genomic and other omics technology into patient care and clinical research. It begins with an introduction to genomics and overview of omics technologies. Students will explore the different resources of genomic information and have opportunities to apply these resources to keep abreast of current knowledge in their health topic of interest including the ethical individual and societal challenges ahead. Genomics in cancers is an active area in personalized medicine, and this topic will be discussed by a local cancer genomics expert. The course will also provide an introduction and overview of current applications of gene therapeutics to a variety of disorders. By the end of the course, students will have a working knowledge of the human genome and the tools for integrating this information into clinical research as well as conveying it to patients.
TSCI 6068. Cross-Cultural Adaptation Of Research Instruments. 1 Credit Hour.
This elective course introduces students to the concept of cross-cultural equivalence of research instruments - a prerequisite for making valid comparisons across two or more ethnic groups - and the process of cross-cultural adaptation used to achieve this equivalence. Students will have the opportunity to learn the multiple steps necessary to successfully cross-culturally adapt research instruments and how to assure content, semantic, technical, conceptual, and criterion equivalence of individual items and scales. A number of instruments used in cross-cultural research will be reviewed and critiqued with regard to their cross-cultural equivalence.

TSCI 6069. Statistical Issues, Planning, And Analysis Of Contemporary Clinical Trials. 2 Credit Hours.
This elective course will serve as an in-depth survey of the various clinical trial designs, analysis, and regulatory issues. Students will learn to apply statistical principles in designing clinical trials to minimize risk to patients while maximizing generalizable discovery. Specific topics include Phase I-V studies, adaptive designs, longitudinal and survival studies. Students will learn to specify the primary outcome and to estimate the required sample size for common trial designs. Clinical trial design and analysis is often complicated by idiosyncrasies such as missing data, and the methodology for handling these will be covered. Prerequisites: TSCI 5072 and TSCI 6061.

TSCI 6070. Biostatistics Methods For Longitudinal Studies. 2.5 Credit Hours.
This elective course will discuss a broad range of statistical techniques for deriving statistical inference from longitudinal studies. Main topics include design of longitudinal studies (power analyses and sample size estimation), analyses of repeated measured outcomes (continuous and discrete), analyses of time to event outcomes, techniques to address challenges associated with missing data and confounding, and rigorous casual modeling approaches. Students will learn to identify feasible and efficient statistical design of longitudinal studies and to conduct rigorous and robust statistical methods to analyze data arising from longitudinal studies. The goal is to develop students’ biostatistical competencies in conducting high-quality longitudinal studies in medical research. Prerequisites: TSCI 5072 and TSCI 6061.

TSCI 6097. Research. 1-12 Credit Hours.
The Research Course is set up for the student to conduct their Mentored Research Project with their supervising professor. This time is to be spent directly working on the project and includes, but is not limited to, writing consent forms, collecting data, analyzing data, and preparing a manuscript. After MSCI-TS COGS approval of the research project, students take three semester credit hours of research during each semester of the Master of Science in Clinical Investigation and Translational Science Degree Program.

TSCI 6098. Thesis. 1-12 Credit Hours.
An MSCI-TS Program Program student is required to enroll in Thesis the semester they submit their manuscript for approval by the MSCI-TS COGS. The 1.0 semester credit hour is required to graduate from the MSCI-TS Program.

TSCI 6100. Practicum In IACUC Procedures. 1 Credit Hour.
This elective course presents an in-depth introduction to the institutional program that provides oversight and regular review of projects that involve the care and use of animals. This includes consideration of the operational procedures of the Institutional Animal Care and Use Committee (IACUC) of the UT Health Science Center at San Antonio. Course objectives are achieved through a combination of readings, monthly attendance at selected IACUC meetings, and discussions with faculty.

TSCI 6101. Topics In Translational Science. 1 Credit Hour.
This research seminar course is designed to introduce graduate students to the field of Translational Science and to members of academic, business, health, and scientific communities who are actively engaged in Translational Science. This course will also provide a forum for students to discuss their own Translational Science research.

TSCI 6102. Practicum In IRB Procedures. 1 Credit Hour.
This elective course presents an in-depth introduction to the institutional program that provides oversight and regular review of research projects that involve human subjects. This includes consideration of the operational procedures of the multiple Institution Review Boards (IRB) of the UT Health Science Center at San Antonio. Course objectives are achieved through a combination of readings, monthly attendance at selected IRB meetings, and discussions with faculty.

TSCI 6103. Selected Topics In Advanced Research Ethics. 1-3 Credit Hours.
This elective course provides an in-depth understanding of a selected topic in research ethics. Students work independently to develop a detailed literature review specific to an area of research and are required to prepare a manuscript describing the results. Regular meetings with the Course Director will review progress towards course goals.

TSCI 6105. Topics In Cancer Prevention. 1 Credit Hour.
This course address current topics in cancer prevention science through a series of didactic lectures and discussions with cancer prevention faculty. Topics span the continuum of cancer prevention from basic cancer epidemiology and carcinogenesis, to cancers of special relevance in South Texas and interventions. An exposure to prevention clinical trials and disparity research will also be presented. Consent of instructor is required for registration.

TSCI 6106. Practicum In Cancer Prevention Science. 0.5-1 Credit Hours.
This elective course provides an opportunity for participation in unique clinical and laboratory cancer prevention research activities that are highly individualized for each student on the basis of prior experience and research interests. Consent of the instructor is needed for registration.

TSCI 7099. Dissertation. 1-12 Credit Hours.
Preparation and writing of the Doctoral dissertation. Registration for at least two terms is required of Ph.D. candidates.

Urology (UROL)

Courses

UROL 4000. Special Topic. 4 Credit Hours.
Students will work with faculty in the design, preparation for and execution of basic science or clinical research projects. Translational research studies may be available and are encouraged. Some projects will require that funding or IRB approval be obtained prior to initiation so students are encouraged to discuss their proposed projects well in advance with the appropriate faculty. Participation in some existing projects with faculty that are already in progress may be possible as well.
UROL 4027. Urology Selective. 4 Credit Hours.
Senior students are required to function as “interns” on the Urology service; perform history and physical examinations; keep daily records on urology patients; follow patients in the outpatient clinics, in the emergency department, in the intensive care units, and on general wards; participate in operations for their patients and in pre- and post-operative care of urology patients; present cases, attend all conferences, and take call as designated by the urology service; mentor third-year medical students on the urology service; and present one 10- to 15-minute lecture on a urologic topic of their choice. They are encouraged to participate in basic and clinical science research projects with urology faculty.

UROL 7000. Off Campus. 4 Credit Hours.
Senior students are required to function as “interns” on the Urology service; perform history and physical examinations; keep daily records on urology patients; follow patients in the outpatient clinics, in the emergency department, in the intensive care units, and on general wards; participate in operations for their patients and in pre- and post-operative care of urology patients; present cases, attend all conferences, and take call as designated by the urology service; mentor third-year medical students on the urology service; and present one 10- to 15-minute lecture on a urologic topic of their choice. They are encouraged to participate in basic and clinical science research projects with urology faculty.
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