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San Antonio, Texas 78229-3900

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Doris Lee, J.D., assistant vice president for student services
Alan A. Miller, editor (milleraa@uthscsa.edu)
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UT System Board of Regents

Officers
Colleen McHugh, Chairman
Paul Foster, Vice-Chairman
Janiece M. Longoria, Vice-Chairman
Francie A. Frederick, General Counsel

Members
Term scheduled to expire May 31, 2010*
Karim A. Meijer, Student Regent, Austin

Terms scheduled to expire February 1, 2011*
R. Steven “Steve” Hicks, Austin
Janiece M. Longoria, Houston
Colleen McHugh, Corpus Christi

Terms scheduled to expire February 1, 2013*
James D. Dannenbaum, Houston
Paul Foster, El Paso
Printice L. Gary, Dallas

Terms scheduled to expire February 1, 2015*
James R. Huffines, Austin
Wm. Eugene “Gene” Powell, San Antonio
Robert L. Stillwell, Houston

Terms expire depending on the date the successor is appointed, qualified, and takes the oath of office. The Student Regent serves a one-year term.

UT System Administrative Officers
Francisco G. Cigarroa, MD
Chancellor
Kenneth I. Shine, MD
Executive Vice Chancellor for Health Affairs and Interim Chancellor
Scott C. Kelley
Executive Vice Chancellor for Business Affairs

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<td><strong>Theresa Chiang, EdD</strong></td>
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<td>Vice President for Academic Administration</td>
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<td><strong>Deborah Morrill, MS</strong></td>
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<td><strong>Douglas L. Murphy, PhD</strong></td>
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<td><strong>William W. Dodge, DDS</strong></td>
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<td>Robin Brey, MD</td>
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<td>Associate Dean for Research School of Medicine</td>
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<td>Gabriel Martyak, DO, MBA</td>
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The Health Science Center

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**Mission, Role, and Scope**

**Mission Statement**

The mission of [The UT Health Science Center San Antonio](#) is to serve the needs of the citizens of Texas, the nation and the world through programs committed to excellence and designed to:

- Educate health professionals to provide the best possible health care for San Antonio, the entire South Texas community and the state of Texas; to apply state-of-the-art treatment modalities; and to continue to seek information fundamental to the prevention, diagnosis and treatment of disease.
- Play a major regional, national and international role as a leading biomedical education and research institution in the discovery of new knowledge and the search for answers to society’s health care needs.
- Be an integral part of the health care delivery system of San Antonio and the entire South Texas community, as well as an important component of the health care delivery system of Texas and the nation.
- Serve as a catalyst for stimulating the life science industry in South Texas, culminating in services and technology transfer that benefit local and state economies.
- Offer continuing education programs and expertise for professional and lay communities.

**Purpose**

The UT Health Science Center San Antonio’s purpose 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 and postgraduate 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.

The [Health Science Center](#), established in 1959, is a health institution of [The University of Texas System](#) and, as such, is committed to pursue the highest standards of achievement in instruction, student performance, research and scholarly accomplishment, patient care, and service. The Health Science Center has established itself as a major research institution, and its faculty plays a major role nationally in the discovery of new knowledge and the search for answers to society’s health care needs.

Faculty members engage in teaching, research, and patient care in a professional environment—one that encompasses a breadth of expertise that would be impossible to achieve in a single department or school. The [Health Science Center](#) will nurture this environment and will continue to support this integration. An important element of the educational effort is educating primary care health professionals of the highest quality.

Faculty members engage in research and patient care while serving the people of Texas. As members of the only comprehensive academic health science center located in South Texas, the faculty has the unique advantage of focusing research questions on diseases that are prevalent among the citizens of South Texas, the border region, and Mexico. As a leader in health care, the Health Science Center has the responsibility of providing programs and expertise for the ongoing education of the professional and lay communities. The Health Science Center, through its educational and research roles, provides the human and physical resources that facilitate the continuing development of the biosciences in the community and the region. Since the legislative chartering of the School of Medicine in 1959, The Health Science Center, with its five health professional schools, has developed into a major health sciences university in the state, nation, and world.

Through the undergraduate, graduate, and post-graduate programs, the faculty is committed to the education of health professionals whose lifelong career objectives will be to provide the best possible health care in the most cost-effective way, to
apply contemporary treatment modalities, and to seek information that is fundamental to the treatment and prevention of disease.

The Health Science Center offers more than 80 health-related degree specialties and pre- and post-baccalaureate certificate programs.

The institution consists of the Dental School, the Graduate School of Biomedical Sciences, the School of Medicine, the School of Health Professions, and the School of Nursing, and offers degrees and programs in health-related fields. A Doctor of Pharmacy program is offered jointly with The University of Texas at Austin. In addition, a component of the School of Public Health at The UT Health Science Center at Houston offers the Master of Public Health on this campus.

The Dental School develops and conducts high-quality educational programs offering the opportunity for qualified students to participate in a program leading to the Doctor of Dental Surgery degree, advanced educational programs in a variety of specialty areas, and advanced General Dentistry. The Dental School also offers advanced educational programs in General Dentistry and Pediatric Dentistry in Laredo, Texas. Dental faculty provide these programs in the Departments of Community Dentistry, Dental Diagnostic Science, Endodontics, General Dentistry, Orthodontics, Pediatric Dentistry, Periodontics, Prosthodontics, Restorative Dentistry, and Oral and Maxillofacial Surgery. The Dental School contributes significantly to the body of basic and applied knowledge related to oral health and provides oral health care services to the population of San Antonio and South Texas.

The Graduate School of Biomedical Sciences currently hosts doctoral programs in Biochemistry, Biomedical Engineering, Cellular and Structural Biology, Microbiology and Immunology, Molecular Medicine, Nursing, Pharmacology, Physiology, and Radiological Sciences. Masters degrees are offered in each of these disciplines as well as in several areas of oral health sciences (Dental Diagnostic Science, Endodontics, Periodontics, and Prosthodontics), Health Professions (Clinical Laboratory Sciences and Dental Hygiene), and Clinical Investigation. The Graduate School jointly administers, with The University of Texas at Austin, a program leading to the Doctor of Pharmacy degree (Pharm.D.). These programmatic vehicles 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. A compelling aspect of graduate education in a health science center environment is the opportunity for graduate students to interface with health professionals with diverse technological and conceptual capabilities and perspectives in the biomedical sciences. The proof of accomplishment or enduring value of any educational process must be accounted 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 have, during the past three-and-one-half decades, achieved outstanding success in their educational mission of preparing professional scientists who function well in academic, industrial, and government sectors.

The School of Medicine develops and conducts high-quality educational programs offering the opportunity for students to pursue the Doctor of Medicine degree and for residents and fellows to pursue a full range of residency and fellowship training. Medical clinical faculty provide these programs in the Departments of Medicine, Anesthesiology, Family and Community Medicine, Obstetrics and Gynecology, Ophthalmology, Orthopaedics, Otolaryngology-Head and Neck Surgery, Pathology, Pediatrics, Psychiatry, Radiation Oncology, Radiology, Rehabilitation Medicine, Surgery, and Urology. Conducting biomedical and other health-related research is an integral role of the School of Medicine.

The School of Health Professions develops and conducts high-quality educational programs that offer students the opportunity to become competent health care providers in health sciences. Included in the school’s programs are certificate, baccalaureate, post-baccalaureate certificate, and master’s degree programs. Certificate programs are offered in dental hygiene, dental laboratory technology, and emergency health sciences. Bachelor’s degrees are offered in clinical laboratory sciences, dental hygiene, dental laboratory sciences, emergency health sciences, and respiratory care. Post-baccalaureate certificates are offered in clinical laboratory sciences, molecular diagnostics, and cytogenetics. Master’s programs include a Master of Science in Clinical Laboratory Sciences with tracks in immunohematology and forensic/analytical toxicology, Master of Science in Dental Hygiene, Master of Deaf Education and Hearing Science, Master of Occupational Therapy, Doctor of Physical Therapy, and Master of Physician Assistant Studies. The Emergency Health Sciences Department provides paramedical training for San Antonio, Bexar County, and surrounding areas.

The School of Nursing develops and conducts high-quality educational programs offering the opportunity for students to participate in programs leading to the Bachelor of Science in Nursing, Master of Science in Nursing, and Doctor of Philosophy degrees. These educational programs benefit from a faculty that supports competent clinical practice, conducts research focused on patient care, and engages in community service.

Research and Teaching

Faculty excellence at the Health Science Center is demonstrated by 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 Health Science Center 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 and the combined resources of the Southwest Research Consortium—composed of the UT Health Science Center, The University of Texas at San Antonio (UTSA), the Audie L. Murphy Division of the South Texas Veterans Health Care System (VA), Trinity University, St. Mary’s University, the Southwest
The University of Texas Institute of Biotechnology (IBT) is located on a 160-acre site in the Texas Research Park, 20 miles west of the central campus. The IBT is joined by the adjacent South Texas Centers for Biology in Medicine and Sam and Ann Barshop Institute for Longevity and Aging Studies.

The Robert F. McDermott Clinical Science Building, on our Greehey Academic and Research Campus, houses the Research Imaging Center as well as research labs and teaching facilities for the Clinical Pharmacology and Clinical Pharmacy Programs and the Ophthalmology Department.

The Allied Health/Research (AHR) Building is adjacent to the McDermott Building and the Greehey Children’s Cancer Research Institute (GCCRI). The AHR Building houses seven School of Health Professions departments and a Graduate School of Biomedical Sciences research center. The departments residing in the AHR Building are: Clinical Laboratory Sciences, Dental Hygiene, Emergency Health Sciences, Occupational Therapy, Physical Therapy, Physician Assistant Studies, and Respiratory Care. The Graduate School’s Center for Biomolecular Structure Analysis has a suite of laboratories in the AHR Building for use by scientists throughout South Texas.

The Greehey Children’s Cancer Research Institute (GCCRI) is a unique and specialized cancer research center located at the UT Health Science Center’s Greehey Academic and Research Campus. The mission of the Greehey CCR 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 Greehey CCR is to impact the problem of cancer at all ages.

The Cancer Therapy & Research Center (CTRC) at the UT Health Science Center San Antonio is one of the nation’s leading academic research and treatment centers, serving more than 4.4 million people in the high-growth corridor of Central and South Texas including Austin, San Antonio, Laredo and the Rio Grande Valley. CTRC is one of the elite cancer centers in the country to be named a National Cancer Institute (NCI)-designated Cancer Center, and is one of only three in Texas. A world leader in developing new drugs to treat cancer, the CTRC Institute for Drug Development (IDD) is internationally recognized for conducting one of the largest oncology Phase I clinical drug programs in the world, and participates in the clinical and/or preclinical development of many of the cancer drugs approved by the U.S. Food & Drug Administration.

The Medical Arts & Research Center (MARC) is home to the physicians of UT Medicine San Antonio, the practice plan of the School of Medicine of the UT Health Science Center San Antonio. UT Medicine San Antonio is the largest multidisciplinary practice plan in South Central Texas representing more than 60 branches of medicine within the MARC. Situated at 8300 Floyd Curl Drive, the 250,000-square-foot MARC features state-of-the-art clinics, diagnostic imaging, an ambulatory center, endoscopic suites, operating rooms, physician’s offices and a pharmacy. The MARC will complement community physicians who will be invited to refer complex cases to UT Medicine San Antonio specialists and subspecialists.

The South Texas Research Facility (STRF), scheduled for completion in 2011, will be a 200,000-square-foot ultra-modern facility that will house the university’s growing research enterprise, including the Institute for Integration of Medicine and Science and the Center for Healthy Aging. The close proximity of the STRF to the MARC is expected to fuel translational research, thereby moving discoveries from the lab bench to use in the community.

Enrollment

Student retention in the School of Medicine and Dental School is 95 percent to 100 percent annually. Approximately 220 students are admitted to entering classes of the School of Medicine. Approximately 90 students are admitted to the Dental School each year.

The School of Nursing and School of Health Professions, with large undergraduate as well as graduate degree programs have more than 34 percent Hispanic student enrollment. Among its many academic offerings, the Graduate School of Biomedical Sciences prepares school teachers for future Ph.D.-level study by offering a Master of Science degree that equips them as master science teachers in their classrooms.

The Health Science Center offers more than 50 health-related degree specialties and several pre- and post-baccalaureate certificate programs.

Student Enrollment Statistics
(for school year 2009–2010)

<table>
<thead>
<tr>
<th>School Enrollments</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate School of Biomedical Sciences</td>
<td>424</td>
</tr>
<tr>
<td>School of Medicine</td>
<td>900</td>
</tr>
<tr>
<td>Dental School</td>
<td>399</td>
</tr>
<tr>
<td>School of Nursing</td>
<td>720</td>
</tr>
<tr>
<td>School of Health Professions</td>
<td>701</td>
</tr>
<tr>
<td>Advanced Dental Education</td>
<td>79</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>3,223</strong></td>
</tr>
</tbody>
</table>
Minority Enrollment

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>24%</td>
<td>775</td>
</tr>
<tr>
<td>All minorities</td>
<td>36%</td>
<td>1,182</td>
</tr>
</tbody>
</table>

Excludes multicultural or foreign students, and students who did not identify a race/ethnicity.

Degrees/Certificates Conferred

(for school year September 2008–August 2009)

<table>
<thead>
<tr>
<th>Degree Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate (Certificate only)</td>
<td>152</td>
</tr>
<tr>
<td>Baccalaureate</td>
<td>385</td>
</tr>
<tr>
<td>Masters</td>
<td>176</td>
</tr>
<tr>
<td>Doctoral</td>
<td>41</td>
</tr>
<tr>
<td>Professional (DDS, DO, MD, PharmD)</td>
<td>329</td>
</tr>
<tr>
<td>Baccalaureate-Level Certificate</td>
<td>7</td>
</tr>
<tr>
<td>Graduate-Level Certificate</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>1,140</strong></td>
</tr>
</tbody>
</table>

Size and Location

The Health Science Center is one of 15 institutions of The University of Texas System. The Health Science Center is composed of six campuses in San Antonio and South Texas.

The Joe R. and Teresa Lozano Long Campus is located on more than 100 acres in the heart of San Antonio’s South Texas Medical Center. A few blocks away is the 92-acre Greehey Academic and Research Campus. The 160-acre Texas Research Park Campus is in west Bexar County. The Cancer Therapy & Research Center (CTRC) is located between the Long and Greehey campuses on Floyd Curl Drive. The university’s South Texas campuses are located in Harlingen, Laredo, and Edinburg.

Students are enrolled in the Health Science Center’s five schools—the Dental School; the Graduate School of Biomedical Sciences; the School of Health Professions; the School of Medicine; and the School of Nursing. Also, programs leading to a Doctor of Pharmacy and a Masters in Public Health are jointly conducted with other universities of The University of Texas System.

In addition, more than 200 individuals are pursuing post-doctoral education and several hundred medical interns and residents are training at the institution. Approximately $200 million is sponsored annually in research-related grants, contracts, and awards. The interdisciplinary aspect of research and patient care is regarded as one of the university’s great strengths. The university’s locations on the northwest side of San Antonio are accessible to those who study and work in the Medical Center complex as well as to patients. Interstate 10 and the city’s major thoroughfare, Loop 410, converge about one mile from the Long and Greehey campuses.

The Health Science Center enjoys a suburban setting, away from congested traffic areas. Built on areas covered with native oak trees, the campuses are designed to preserve large spaces of grass and trees, with the San Antonio campuses overlooking views of the famous Texas Hill Country. The Health Science Center has more than 2 million square feet of education, research, treatment, and administrative facilities. The university employs approximately 6,000 faculty and staff, with a budget of approximately $668 million.

The Greehey Children’s Cancer Research Institute (GCCRI) concentrates on the epidemiology of children’s cancer in the South Texas border region, identifying new targets of therapy in childhood cancer, new drug development, and research in cancer prevention. The GCCRI is located on our Greehey (North) Campus (8403 Floyd Curl Drive), between the CTRC Grossman Campus and the Allied Health/Research Building.

Many institutions in San Antonio serve as excellent resources for programs of the Health Science Center. These include facilities of Bexar County’s University Health System, South Texas Veterans Health Care System/Audie Murphy Division, CHRISTUS Santa Rosa Health Care, San Antonio Military Medical Center (SAMMC), the U.S. Air Force School of Aerospace Medicine, San Antonio Metropolitan Health District, Southwest Research Institute, and Southwest Foundation for Biomedical Research.

The Health Science Center’s Regional Academic Health Center (RAHC) is located in the Lower Rio Grande Valley. Clinical training for third- and fourth-year medical students at the Regional Academic Health Center began in July 2002. Up to 24 medical students may choose to complete their third- and fourth-year medical training at the RAHC and its affiliated clinical sites. Beginning with the entering class of 2008, preference for completing third and fourth years in Harlingen will be made during the process of application to medical school. The clinical sites include Valley Baptist Medical Center and Su Clinica Familiar, both located in Harlingen. Other clinical sites to be included or under development are community clinics and the offices of private-practice physicians from throughout the Lower Rio Grande Valley. Assignments to the RAHC will, to the extent possible, be based on student preference. Through the RAHC, the Dental School also rotates senior dental students to Su Clinica Familiar (Harlingen, Raymondville, and Santa Rosa) each year as part of a required South Texas rotation as well as to the Brownsville Community Health Center in Brownsville during the summer months.

The Regional Campus Extension is located in Laredo, Texas, and serves as a regional campus for the Mid-Rio Grande Border Area. The School of Health Professions offers the Bachelor of Science in Respiratory Care and the Master of Physician Assistant Studies in Laredo as part of the Regional Campus. Coursework is provided through distance learning.
Web-supported courses, and local faculty. Educational partnerships with Laredo Community College and Texas A&M International University allow students to complete core curriculum and prerequisite courses in preparation for admission to the professional curriculum. Laredo-area hospitals and health agencies provide excellent sites for clinical education.

The Dental School offers Postgraduate Prosthodontic and Periodontics residency rotations to the Gateway Community Health Center in Laredo. Dental Public Health residents rotate to the Laredo Health Department and will implement a school-based program in the United Independent School District as part of their training. Through the Regional Campus, the Dental School also rotates senior dental students to the Gateway Community Health Center (two sites) and to the Laredo Health Department each year as part of a required South Texas rotation. During the summer months, students also rotate to United Medical Centers, Inc. in Eagle Pass.

In July 2008, the Dental School, through the Regional Campus, initiated two full-time satellite residency programs: Pediatric Dentistry and Advanced Education in General Dentistry. The didactic training is provided at the Regional Campus and the clinical training is provided at the Laredo Health Department.

Teaching Affiliates - San Antonio

Some members of the staffs of our teaching affiliates hold joint appointments in the Dental School, Graduate School of Biomedical Sciences, School of Medicine, or School of Nursing and participate in educational research programs. These institutions constitute an important resource for training students and provide needed laboratory space for conducting research.

University Hospital, operated by Bexar County’s University Health System, adjoins the Health Science Center and is connected to the School of Medicine building at several levels. Planned to integrate with the School of Medicine, it is a 12-story facility providing all general hospital and most tertiary care services. The hospital has approved post-graduate training programs in anesthesiology, surgery, internal medicine, obstetrics/gynecology, ophthalmology, orthopaedic surgery, otolaryngology/head and neck surgery, neurosurgery, thoracic surgery, pathology, pediatrics, rehabilitation medicine, psychiatry, radiology, urology, and family practice, as well as more than 20 additional subspecialty residencies and fellowships.

The University Health Center Downtown is an outpatient health center featuring more than 103 specialty clinics as well as adult and pediatric walk-in clinics. Thousands of outpatient visits are conducted there each year. The University Family Health Center Southwest and the University Family Health Center Southeast are community-based outpatient health care centers offering preventive screenings and family health care.

The South Texas Veterans Health Care System, Audie Murphy Division, with a bed capacity of 462 for medical, surgical, and psychiatric patients, serves 59 counties of Southwest Texas. The facility provides 40,000 square feet of space for research. It is linked to University Hospital by a crosswalk.

The CHRISTUS Santa Rosa Health Care system includes the general hospital, Children’s Hospital, Otto Koehler Radiation Therapy and Research Unit, the Outpatient Clinic in downtown San Antonio, the CHRISTUS Santa Rosa Rehabilitation Hospital, and CHRISTUS Santa Rosa Medical Center Hospital, located in the South Texas Medical Center. CHRISTUS has an extensive medical staff, several primary care and specialty health clinics, and an array of community outreach services.

The hospitals offer diagnostic and treatment facilities that support good health for the mind, body, and spirit. They offer patients a range of services, including comprehensive pediatric care, cardiac care, a transplant institute, rehabilitation services, a comprehensive cancer program, complete obstetrical and newborn services, a surgical unit, diabetes care program, wound care management, and some of the latest diagnostic services.

The San Antonio Military Medical Center is the consolidation of Wilford Hall Medical Center (WHMC) and Brooke Army Medical Center (BAMC) in San Antonio into one medical region with two integrated campuses. Brooke Army Medical Center, a major military treatment facility, has a bed capacity of 450 and offers definitive medical and surgical care for Army and other authorized personnel. It also provides outpatient care. Internships and residency training programs also are available. The United States Army Institute of Surgical Research at BAMC has gained international recognition for its outstanding research and excellence in the treatment of serious burn cases. Wilford Hall USAF Medical Center operates a 288-bed general hospital that admits more than 15,000 patients annually, and its clinics register nearly 1 million visits from outpatients each year.

The Baptist Health System, comprising five hospitals totaling more than 1,500 licensed beds, provides a wide range of hospital services, emergency care, and a variety of educational programs throughout San Antonio. The University Health System collaborates with the Baptist Health System in providing aeromedical helicopter services for San Antonio and the surrounding region.

The San Antonio Metropolitan Health District/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 University Center for Community Health, another component of the University Health System, is located in west San Antonio. Components include the Village of Hope, an ambulatory care center for children with developmental disabilities, and an outpatient hemodialysis unit. The Texas Diabetes Institute, also on San Antonio’s west side, provides a state-of-the-art patient care and education unit, and a clinical research center.
The University of Texas at San Antonio (UTSA), a major general academic university offering both undergraduate and graduate programs, is located on a 600-acre campus five miles north of the Health Science Center as well as on an urban campus in downtown San Antonio. Cooperative teaching and research between the two institutions is in progress. The San Antonio Life Sciences Institute (SALSI), a collaboration between UTSA and the Health Science Center, promotes education, research, and economic development in biomedicine and biotechnology.

The U.S. Air Force School of Aerospace Medicine, located at Brooks City-Base, is active in research and development in medical aspects of aerospace flight, in clinical practices of special interest to aerospace, and in post-graduate education in aerospace medicine and allied subjects.

The Child Guidance Center at San Antonio, a nonprofit tax-exempt organization, treats young people through age 17 who are suffering from mental and emotional ills. Methods of treatment include individual therapy, family therapy, parent counseling, medication, and group therapy sessions. The Guidance Center treats approximately 1,500 patients a year in addition to those served under consultation contracts. Through an affiliation agreement with the Health Science Center, the Center provides training for students in the mental health field.

An affiliation agreement is maintained between the UT Health Science Center San Antonio and the Southwest Foundation for Biomedical Research. This agreement allows the two institutions to share facilities and faculties. The Foundation’s staff works primarily in the fields of cancer and heart, endocrine, and infectious disease with emphasis upon virology and parasitology. The Foundation has 155,000 square feet of offices and laboratories. A large indoor and outdoor animal facility houses a primate colony and other animals to support the biomedical research effort.

An agreement between the Health Science Center and the Southwest Research Institute 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. Business development offices are located in Houston and Washington, D.C.

The Southwest Mental Health Center is a private nonprofit 60-bed psychiatric hospital offering treatment to severely disturbed children and adolescents. In continuous service to the San Antonio community since 1886, the Center serves adolescent and preadolescent children. Multidisciplinary treatment teams consisting of clinical psychologists, psychiatric social workers, special educators, nursing and child care personnel, and recreational/occupational therapists implement the patients’ treatment plan under the direction of the child psychiatry staff. The hospital contains six inpatient units, each housing eight to 12 patients for stays of approximately 90 days. A major component of the Child Psychiatry Training Program, the Center 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 institution as well.

The Dental School is affiliated with a number of federally qualified community health centers, local health departments, hospitals, school districts, mental health facilities, military facilities, and nursing homes in San Antonio, Bexar County, and South Texas, as well as Indian Health Service facilities located throughout the United States that serve as clinical training sites in: (a) primary care; (b) preventive dentistry; (c) pediatric dentistry; (d) emergency care and hospital dentistry; (e) alternative dental care delivery, using mobile and portable dental equipment at outreach sites; and (f) 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 Health Professions maintains clinical affiliation agreements with more than 250 clinical sites throughout Texas and the nation where students receive substantial portions of their professional education.

The School of Nursing is affiliated with more than 300 community facilities that serve as practice sites for graduate and undergraduate students.

Other Affiliated Institutions and Programs

The South Texas Area Health Education Center (AHEC) is a federally funded program of the School of Medicine and targets a 38-county region of South Texas. Its primary mission is to improve the quantity, quality, and maldistribution of health professionals in this geographic region. It operates through five regional administrative centers located in Corpus Christi, Harlingen, Laredo, Del Rio, and San Antonio. These administrative centers determine local community health professional manpower needs, establish priorities by working with community advisory committees, and negotiate with institutions of higher education and health care facilities to acquire educational and clinical training activities addressing identified needs. The network has enhanced the availability of remote clinical experiences for medical, dental, nursing, public health, pharmacy and other health professions students. An extensive community-academic partnership has been established with community-based institutions of higher education, health care facilities, health professional providers, and secondary educational systems throughout the region.

The South Texas Environmental Education and Research Center (STEER) offers an elective course in environmental and border health in Laredo, for medical students and residents, and students in other health care fields. STEER also is involved in research and community activities such as a study of asthma among schoolchildren, and a project to help residents in border colonias chlorinate their drinking water. The Center began in 1996 with funding from the South Texas/Border Region Health Education Initiative.
University Support Services
Office of Student Services

The Office of Student Services represents students’ needs and provides support for student development. The chief student affairs officer oversees the areas of admissions and registration, counseling, health care, student life/wellness & recreation, and financial aid. Official student publications, including this Catalog, the Student Guide, Applicant Viewbooks, Certificate & Degree Programs brochure, Commencement programs, and the Student Services Web site are also published by this office.

Scheduling of student activities is coordinated with the Office of Student Life (see Student Life below).

More detailed information about services offered by this office is contained in the Student Guide.

Counseling Services

The following services for academic, personal adjustment, and career problems are provided.

- Individual counseling which includes brief consultation or therapy for issues such as personal or family crisis, adjustment to school, relationship problems, depression, anxiety, interpersonal conflicts, or any aspect of behavior which interferes with effective performance
- Couples counseling for students and their partners who are experiencing relationship problems
- Psychological assessment and career consultation, test-based consultation on career or specialty choice, as well as evaluation of learning abilities and style. Counseling Services does not provide evaluations for educational or testing accommodations.
- Off-campus referral sources are provided to students requesting accommodation in an educational program.
- Psychiatric consultation, which includes diagnostic and medication evaluations
- Workshops for test taking, study skills, stress management, and other topics
- Consultation for alcohol or other drug misuse
- Consultation for issues related to sexual harassment

All services are confidential. There are no fees. Appointments can be made by phone (567-2648) or in person. Crisis appointments are provided on request. Counseling Services is located in Room 101F, School of Medicine building.

Registrar (Admissions & Records)

The custodian of student academic records, the Registrar is also responsible for the processes of admissions, enrollment, withdrawals, and graduation. The decisions of various academic committees are implemented by this office. The staff handles students’ questions about their records, provides transcripts, diplomas, veterans documents, and enrollment certification documents.

Veteran Services and Financial Aid

Students seeking financial assistance in the form of scholarships, grants, and/or loans may seek the help of the Office of Veteran Services and Financial Aid. Counselors specializing in our five individual schools are available. The office offers all forms of assistance, including need-based and non-need-based forms of aid. Students must be accepted for admission, into a degree-seeking program, prior to receiving an offer of assistance.

Student Health Center

In accordance with both fair business practice regulations in Texas, and insurance requirements, a co-pay is required for Student Health Center visits (effective December 1, 2006). Payment can be made by credit card, debit card, or cash at the time of visit. The co-pay is the amount shown on the student’s insurance card. If there is no co-pay amount shown on the card, the student will be expected to pay the full fee for service.

All other health care costs incurred that are covered by insurance will then be billed directly to students’ insurance carriers. The students will not be charged for any balance of these bills after insurance companies’ remittances.

However, not all health care costs are covered by insurance carriers, depending on the individual plan. Under those circumstances, the cost for services rendered will be the students’ responsibilities with the cost payable at the time of the visit by credit or debit card or cash. Services billable to your insurance policy are:

- Screening for, and provision of, required annual TB skin testing.
- Primary care visits including physicals, well-woman exams, and family planning.
- Evaluation and treatment of minor illnesses and injury.
- Assessment for referrals to specialty clinics/labs (co-pay may be required by these external services).
- Travel medications and immunizations for an at-cost charge (available upon request with prior arrangement).

Additional Information:

- Effective as of December 1, 2006, this information supersedes any other information communicated verbally, in printed form, on CDs, or on the Web.
- Students are required to have continuous health insurance coverage while enrolled at the Health Science Center.
- Prior to enrollment, students must submit to the Student Health Center completed immunization records to show full compliance.
- For an appointment: 567-WELL (9355) (after hours: 562-0240)
- Clinic Location: Joe R. and Teresa Lozano Long (Central) Campus, First Floor/School of Nursing building/Room 1.422/Mail Code 7934
- Clinic Hours: 8 a.m.–5 p.m. Tuesday through Friday (until 7 p.m. on Mondays), except holidays

Student Life

In support of the mission of the university as a whole, the Office of Student Life serves to ease the transition of students
into and from the Health Science Center, and to support their holistic development at all points in between.

In collaboration with other university community members, this office “connects” students to the university through programs and activities such as new student orientation, the peer advisor program, student organizations and activities, wellness and recreational sports, and commencement.

For detailed information about the Office of Student Life, consult the Student Guide or our Web site at http://studentservices.uthscsa.edu/studentLife.aspx.

Scheduling and Facilities Data Management

The Office of Scheduling and Facilities Data Management is responsible for the scheduling of all spaces in the university’s reservable space inventory. Included in this responsibility is the assignment of rooms for classes; publishing of academic class schedules; reservation of space for student, faculty, staff and university events; and the reporting of room and building information to the Texas Higher Education Coordinating Board of all space owned or leased by the Health Science Center.

Registered student, faculty, and staff organizations may reserve facilities for authorized meetings, study-group sessions, and other events through this office. Available facilities include a wide range of large and small classrooms, lecture halls, the auditorium, and several breezeways and courtyards in outdoor areas.

To reserve a room for your next event, complete the Room Reservation Request form online and e-mail to this office. Additional information on fees and policies may be found in Section 9.1.3 of the Handbook of Operating Procedures. For information call 567-2655.

Information Management and Services (IMS)

Phone: 210-567-7050 / Fax: 210-567-7053
Location: 3.318 AAB (Academic & Administration Bldg. 3rd Floor)

Information Management and Services (IMS) provides leadership in technology and information-based resources and services for the Health Science Center. IMS incorporates appropriate customer input to establish information/technology policies and standards and provides oversight, advocacy and services to support the institution and its departments in pursuit of their missions. IMS will also serve as the primary institutional advocate and representative to The University of Texas System and state agencies with regards to information technology and information resources issues and policies.

Students

We provide services to help students succeed. The following links will provide information regarding acquisition of computers and computer equipment, how to log on to and use Blackboard, how to obtain computer warranty service, and how to reset passwords.

Helpful Links:

- Apple Warranty
- Blackboard
- Computer Store
- Dell Warranty
- E-mail
- Help Desk
- Password
- Student Computer Repair Support

IMS Client Support Services

IMS Client Support Services (IMCSS) provides e-mail accounts for all students and support for the computing services on campus. The IMCSS Triage Help Desk is available workdays, from 8:00 a.m. to 5:00 p.m., to answer questions, consult on computer and technology issues, and troubleshoot software, hardware, e-mail, network, configurations, and other problems concerning the university’s information resources. Assistance is also available for the Health Science Center’s free anti-virus software, laptop data encryption, and software available through the Microsoft Campus Agreement. The Help Desk may be reached by e-mail at IMS-SERVICEDESK@uthscsa.edu, by phone at 210-567-7777, or in person at our drop-in center in Room 4.436L of the School of Medicine building (http://ims.uthscsa.edu/index.aspx).

IMS Computer Store

The Computer Store is located in IMS Client Support Services, Room 421L MED, and is open Monday–Thursday 8 a.m.–5 p.m. and Fridays 8 a.m.–4 p.m. during scheduled university hours of operation. The Store provides informational support for ordering Apple (we are an Authorized Campus Store) and Dell (through SHI) products. Accessories and peripheral items are in stock for purchase; special items may be ordered. Call 567-2832 or -2833 for more information.

Office of International Services (OIS)

The UT Health Science Center at San Antonio’s Office of International Services (OIS) is the designated institutional unit authorized to provide advisement, direction, counsel and assistance regarding institutional visa and immigration issues to campus hiring units and to Health Science Center international faculty, postdoctoral fellows, clinical staff, employees, and students, including short-term international visitors. The OIS also serves as a key institutional partner in the development of official Health Science Center international relationships abroad, including reciprocal exchange agreements, and provides education abroad advisement and support for the Schools, faculty and students.

Immigration and visa services provided to campus units by the Office of International Services will comply and be in harmony with existing federal law and regulation and will be representative of “best practices” within NAFSA, the field of international
education, and select peer institutions. Because immigration rules and regulations change often, the Office of International Services should be consulted well in advance in each case involving an international individual, irrespective of their proposed, future role at the Health Science Center. Reliance should not be made on past experiences; every immigration-related case is unique.

It is essential that each school, department, center, institute, and all those who recruit and hire international individuals for employment, offer training and educational opportunities to persons from abroad, or host short-term international visitors at the Health Science Center understand the procedures, time frames, and restrictions involved in the hosting of foreign nationals and plan accordingly. For more information on approximate processing times please contact the OIS.

International Personnel, Students, and Professional Guests

The official appointment, employment, and hosting of international visitors who will be sponsored by and/or affiliated with the Health Science Center in any way will be facilitated directly by the OIS. International visitors should make an appointment to check-in with the OIS immediately upon arrival at the Health Science Center. During the check-in process, an OIS Advisor will provide international visitors with an overview of the federal rules and regulations that must be followed in order to maintain lawful visa status while in the United States. The OIS must also report the arrival of all F-1 students and J-1 Exchange Visitors to the U.S. Department of Homeland Security, as per federal directive. Failure to report an international visitor’s arrival in a timely manner to the OIS could jeopardize lawful visa status and hamper the ability to carry out the planned, professional goals and objectives.

It is the responsibility of both the hosting department and the international visitor to be knowledgeable of and comply with all applicable federal rules and regulations governing the employment, training, education, and payment of international visitors by the Health Science Center.

International visitors are personally responsible for maintaining lawful visa status and for being aware of particular visa category requirements and prohibitions, which includes, but is not limited to, the following: restrictions on employment (both in role and location), employment eligibility ending dates, adherence to a single, primary objective while at the Health Science Center, and all governmental or fiduciary rules that may require an international visitor to return to the home country at the end of their program.

International visitors and their sponsoring departments are encouraged to contact the OIS if they have any questions about the maintenance of lawful visa status, if they need clarification about what is/is not allowable as per their visa type/category, or if they require general information. For more information about OIS Visa Services Policies and Procedures, please go to http://www.uthscsa.edu/ois. Or, contact an International Advisor directly via E-mail at international@uthscsa.edu or via Tel. 210-567-6241.

Education Abroad

The University of Texas System requires System campuses to approve, monitor, facilitate, and support bona fide education abroad activities, which may include but is not limited to faculty-led courses abroad, service learning opportunities, medical student clerkship, elective rotation (all clinical programs), research elective, exchange participation, or other academic endeavor.

In some cases, approved student organization activities abroad also fall under University supervision, so students who will engage in any activity outside the United States that is in any way connected to their particular program of study are asked to communicate their plans to the OIS at least one (1) semester prior to the planned education abroad activity.

The following links should be referenced by students and faculty when education abroad issues are raised (links tba):

- UT System International Linkages Memo
- UTHSCSA Exchange Agreement and International Affiliates List
- UT System Travel to Restricted Areas Memo
- UTHSCSA Travel to Restricted Areas Waiver Policy & Form
- UTHSCSA Education Abroad Policy
- UTHSCSA Education Abroad Participation Waiver
- UTHSCSA Education Abroad Emergency Contact Form

Laboratory Animal Resources

The Department of Laboratory Animal Resources operates a contemporary program of Laboratory Animal Medicine and Care designed to promote the humane care and well-being of all animals used in research, testing, and teaching at the Health Science Center. The department is responsible for all aspects of research animal management including acquisition, husbandry, health care, and research support. The veterinary staff is available to all animal users for assistance with research technology, animal model development, and diagnostic or clinical support. Facilities are available for aseptic surgery, radiographic diagnostics, necropsy and histopathology support, clinical pathology services, and the conventional and specialized housing for the most common laboratory animals, including immunocompromised rodents. The program is registered with the United States Department of Agriculture, is accredited by the Association for Assessment and Accreditation of Laboratory Animal Care, and has a Letter of Assurance on file with the Office of Protection from Research Risks, National Institutes of Health.

Campus Facilities

The responsibility of the U.T. System Board of Regents to operate and maintain an effective and efficient system of institutions of higher education requires that the time, place, and manner of assembly, speech, and other activities on the grounds and in the buildings and facilities of the U.T. 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.

More detailed information on the campus facilities described below, as well as information about student lounges, group study rooms, self-service photocopying areas, etc., is contained in the Student Guide.

Access to Campus Facilities

Events Jointly Sponsored by a Health Science Center Department and an Outside Organization Policy. 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).

Visiting the Campus

The Health Science Center welcomes visitors from the community when arranged with prior notice. To schedule a group visit, the request form found at http://www.uthscsa.edu/outreach should be completed. Individuals may join ongoing prearranged campus visits and can obtain information about dates available by calling (210) 567-3941. Others interested in a campus visit to a specific school or area within the Health Science Center should contact the office of the respective dean. Access to certain areas within the institution may be restricted to ensure public safety and patient privacy. Restricted areas have their own visitation policy or criterion.

Speech and Assembly Area

Peaceful assembly and speech activities conducted in accordance with applicable state law and Regents’ Rules and Regulations and other university policies as contained in the Health Science Center Handbook of Operating Procedures may be conducted in a designated “free speech” area without prior administrative approval. The Health Science Center has designated a speech and assembly area on the southeast side of the campus approximately 150 yards northwest of the intersection of Floyd Curl Drive and Louis Pasteur Drive. The location is identified by a 2-foot-square marker (from Handbook of Operating Procedures 9.1.9).

Library Services

The Libraries of the UT Health Science Center San Antonio are the Dolph Briscoe, Jr. Library on the Joe R. and Teresa Lozano Long (Central) Campus, the Brady Green Library at the UT Health Science Center Library-Downtown, the Mario E. Ramirez, M.D. Medical Library in Harlingen (RAHC), the Jesse H. Jones Comprehensive Research Library at the South Texas Research Park, the Regional Campus Library, and the Circuit Librarian Health Information Network (CLHIN), which provides information services to participating hospitals in South Texas. The Briscoe Library, housed in a 93,000-square-foot multilevel building in the center of the campus, serves as the primary source and repository of information for the educational, research, and health care functions of the UT Health Science Center San Antonio.

The combined collections of the UT Health Science Center Libraries include approximately 223,000 print volumes consisting of books and bound periodicals. The Library provides access to 11,000 books in electronic format. Faculty and students have access to more than 3,500 journal titles in the health sciences plus more than 18,000 electronic journals in a variety of disciplines through statewide and regional library consortia. The collection covers the broad range of health-related sciences—medicine, dentistry, nursing, allied health sciences, and basic biomedical sciences. MEDLINE®, CINAHL, and other computer databases are available in the library and via the Internet, and most contain links to the full text of articles. Most of the library’s electronic resources are available off-campus to faculty, staff, and students.

Library services include reference; instruction on research methods and use of databases, and emerging technologies; electronic document delivery; interlibrary loan; knowledge management, support for PDAs and other mobile devices, and other initiatives. The combined libraries provide 106 computers with Internet access and software for student use. The Mario E. Ramirez, M.D. Medical Library and the Regional Campus Library have a core print collection of books and journals, and provide services to students who are on rotation in South Texas. These students have full Internet access to the library’s online databases and electronic journals.

Bookstore

The Bookstore is located on the Joe R. and Teresa Lozano Long (Central) Campus, first floor of Parking Garage B, next to the School of Nursing. The hours of operation are:

- 8 a.m.–6 p.m. Mondays through Thursdays
Textbooks, medical equipment and scrubs, multimedia and software, oral hygiene and dental laboratory supplies, university logo gift items, sundries, and greeting cards are for sale. A fax machine for student use is available. Special orders are welcome. Visit the Bookstore Web site at http://luthscsa.bncollege.com.

A student is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may be available from an independent retailer, including an online retailer, at a lower price than the price charged for that textbook by a university-affiliated bookstore.

Auditorium

The 634-seat auditorium on the Health Science Center campus is used for examinations, lectures, convocations, continuing education courses, professional meetings, and community functions sponsored by the university. Exhibits and gatherings are held in the glass-enclosed foyer.

Cafeterias (Dining Services)

Dining Services on and adjacent to the Long and North Campuses

Students, faculty, and staff may purchase meals in the Health Science Center’s locations listed below.

Long Central Campus:

The Texas Star Café in the Dental School-Long Campus is open Monday–Friday from 7:00 a.m. until 2:00 p.m. A fresh salad bar, fresh made-to-order sandwich options, grab-n-go cooler for quick meal options, gourmet burger toppings, and more are available.

The Italian Bistro Café on the 3rd floor Lecture Hall Commons Long Campus, in the previous location of Java City Freshens, is open Monday–Friday from 7:30 until 2:00 p.m. It serves specialty coffee and pastries in the morning and pizza, calzones, and a variety of salads, soups, and desserts in the afternoon.

SUBWAY is available on the 3rd floor Lecture Hall Commons on the Long Campus, for breakfast and lunch Monday–Friday from 8 a.m. until 3:00 p.m.

C-3 Express is a quick, convenient kiosk for your snack-time needs, also on the 3rd floor Lecture Hall Commons on the Long Campus, Monday–Friday from 7:30 a.m. until 5:00 p.m.

North Campus:

The French Corner Starbucks on the North Campus in the Health Professions Building, Room 1.210, offers specialty coffee, pastries, a variety of salads, sandwiches, soups and more.

The Fresh Taste Café on the first floor of the Medical Arts Research Center (MARC) on the North Campus, offers breakfast sandwiches, tacos, cereal, pastries, fruit and snacks, lunch grab and go sandwiches, hot toaster/Panini sandwiches, wraps and pita sandwiches, personal pan pizzas, build your own sandwiches or salads and more.

If you have any questions, please contact the director of General Services.

Off-Campus Locations:

Food service is also available in the University Hospital cafeteria next door to the School of Medicine building, and the V.A. Hospital cafeteria, next to University Hospital. Eating establishments are also located across Floyd Curl Drive from the central campus at the Methodist Hospital, across Medical Drive, and other areas within walking distance from the Long Campus.

Area Housing

There are no housing accommodations on the campus of the Health Science Center. Numerous apartments, condos, and rental homes, however, are located in the area. Students may contact the Office of Student Life for a housing list (567-2654).

Parking

Students may park in the zone for which they purchase a permit. Vehicles parking or driving on campus must follow all Texas vehicle inspection laws. All Texas laws will be enforced on campus by university police officers and guards. Failure to register the vehicle in this state or to display a current and appropriate inspection certificate issued under Chapter 548, Texas Transportation Code, may violate state law if the owner of the vehicle resides in this state. State of Texas vehicle inspection laws for vehicles parking or driving on the campus of the institution will be enforced (see Texas Education Code, Section 51.207). Also see University Police in the General Regulations and Requirements section.

Transportation

Buses operated by the metropolitan transit system (VIA) service the Medical Center area from all parts of the city and within the Center. Student rates are provided. The University Police Department provides a scheduled shuttle that runs between the Joe R. and Teresa Lozano Long Central Campus area and the Greehey Campus (Allied Health, McDermott, and GCCRI buildings). The route includes University Plaza, Lot 17. Scheduled shuttle service to the Texas Research Park is also provided.

Accessibility for the Disabled

The UT Health Science Center at San Antonio does not discriminate against a qualified individual on the basis of disability.

The Health Science Center Police Department provides a map that indicates parking areas designated for the disabled. Adjustments to the Health Science Center facilities have been made in accordance with the American National Standards Institute specifications for physically disabled people, including adjustment to exterior and interior door sizes, to make facilities ADA compliant. In addition, the Health Science Center pro-
provides reasonable accommodations to qualified individuals with disabilities to participate in and benefit fully from the institution’s programs, services, and activities.

Students who may require reasonable accommodations based on a covered disability should consult with their associate dean and comply with university policy regarding requesting accommodations as early as possible in advance of when an accommodation will be needed.

Request for ADA Accommodations

A qualified individual with a disability requesting accommodation must submit the appropriate request for accommodation under the *Americans with Disabilities Act (ADA)* as amended. Students, fellows, and residents must submit a Student/Resident Request for Accommodation Under the Americans with Disabilities Act (ADA), form ADA-100, to the ADA Coordinator and a copy to the appropriate Associate Dean.

The ADA Coordinator will determine if additional medical information is needed and will furnish the individual with any forms/questionnaires necessary for the health care provider to complete. The ADA Coordinator will evaluate information to determine eligibility within the guidelines of ADA. The ADA Coordinator 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 ADA Coordinator will follow-up on the individual’s status/progress on annual basis, or earlier as need arises.

Reasonable accommodations under the ADA is an ongoing process. At any point in time, the individual receiving the reasonable accommodation may request a reevaluation of their request from the ADA Coordinator. 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 ADA Coordinator 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 evacuations. Government officials investigating compliance with the ADA may also be provided relevant information as requested.

Form ADA-100, and attached documentation submitted to the ADA Coordinator, will be maintained in a confidential manner in accordance with applicable federal and state mandated retention schedules.

Refer to the *Handbook of Operating Procedures (HOP)*, Chapter 4, Section 4.2, Policy 4.2.3, for complete details and procedures for ADA accommodations.

**Additional Information**

Statistics such as enrollment totals and faculty directories are kept updated on the Health Science Center’s Web site at [http://www.uthscsa.edu](http://www.uthscsa.edu).
Click on an item in the list below to be taken to its location.

- Background Checks
- Conduct and Discipline
- Holds
- Student Grievance Procedures
- Use of Student Social Security Number
- Student Records
- Privacy Rights of Students
- Student Directory Information
- Equal Opportunity
- Insurance
- Student Health Insurance
  - HIPAA (Health Insurance Portability and Accountability Act)
  - Health Insurance Requirements for Certain International Students

Students enrolled in the Health Science Center are subject to all established requirements and regulations of this institution as well as those of any support institution in which they may be enrolled. The Catalog and the Student Guide, given to matriculating students and available online and in the Office of Student Services, contain these requirements and regulations.

Background Checks

Recognizing a sound character is vital to health care professions, the Health Science Center is committed to admit and retain students* who meet the high professional standards expected of all health care providers and biomedical researchers. The university shall require applicants and/or continuing students to undergo criminal background checks (CBC).

1. All applicants, on the application forms, shall be informed of the CBC and required to sign and consent to allow a specific school to obtain the CBC as a part of the admission process.
2. The continuing students, when applicable, shall be required to sign a consent form to allow the respective school to obtain the CBC.
3. The applicants/continuing students shall be responsible for the cost associated with the CBC.
4. The applicants/continuing students shall have the opportunity to review a copy of their own reports. And when inconsistent information is obtained through the CBC, the applicant/student shall be provided the opportunity to clarify the matter.
5. The school will follow its own established admission/academic disciplinary procedure following the CBC verification.
6. The CBC results will be kept, confidentially, in separate files, by the respective school as a part of the students’ academic records; for one year from the first day of the school year when the CBC was conducted for applicants and for the duration of a continuing student’s academic career at the Health Science Center.
7. The School will share CBC information with clinical sites consistent with university policy and FERPA.

In addition, applicants and continuing students shall conform to the policy adopted by each specific school for which the students apply or are admitted. Policies include information about the issues listed below:

1. The scope of the CBC. How far back will the check go and what it will include, (i.e., convictions, deferred adjudications, etc.).
2. When the CBC will be conducted and how often.
3. Who (either the school/program or other state agencies) will review the CBC and determine the student’s status.
4. What criteria the school will use to assess relevancy of the applicant’s or continuing student’s criminal history.
5. Indicate whether any affiliation agreements will include the reference of continuing students’ criminal background checks.

*Residents, if not employees, are designated as students.

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. Copies of the regulations are printed in this Catalog in the Student Conduct and Discipline section. In addition to these regulations, standards of professional conduct may be set by each school of the Health Science Center.

In summary, the Regulations provide that:

Violations of university regulations concerning standards of conduct which compromise professional integrity and/or competence shall be dealt with under Student Conduct and Discipline. The chief student affairs officer shall have responsibility
for the administration of discipline in areas not directly related to the academic or professional training of the student. Procedures described in the Student Conduct and Discipline of the Health Science Center will be followed.

The dean of each school shall have the responsibility for the administration of discipline in cases concerning scholastic dishonesty and professional misconduct.

The full text of the Rules and Regulations of the Board of Regents and the university’s Student Conduct and Discipline should be consulted in reference to any questions concerning student conduct and discipline.

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.

Professional Conduct Guidelines

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 previously 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. See individual school sections in the Student Guide for details.

Holds

University privileges including registration, advance registration, receipt of a diploma at commencement, and receipt of transcripts are barred to students having outstanding obligations to the university.

Obligations may take the form of unpaid monies, unreturned or damaged equipment, parking fines, or other charges for which a student may become legally indebted to the university; failure to comply with immunization requirements; failure to provide final official transcripts from previous colleges/universities; or administrative actions.

University departments and offices may place “holds” on registration, diplomas, and transcripts for any students having an outstanding obligation.

Registration is barred for students with unresolved obligations. Grades and transcripts may also be withheld due to outstanding obligations to the university.

Student Grievance Procedures

I. Student Academic Grievance Procedure

Academic-related grievances must be submitted in writing to the department chair or other designated administrator of the academic program to which the grievance relates. The written grievance must be received no later than four calendar weeks after the alleged incident.

The dean of the school in which the student is enrolled has jurisdiction over the student’s program of study, degree requirements, and all other academic matters, including grievances. Depending upon the specific school, there may be some differences in codes of professional conduct and related issues. Appeals may be made to the Dean, then to the President. The President’s decision is final.

II. Student Nonacademic Grievance Procedure

Any student who has a nonacademic grievance concerning the interpretation, application, or claimed violation of her/his rights as a Health Science Center student or who feels he/she has been discriminated against or harassed on the basis of age, color, disability, family status, gender, national origin, race, religion, veteran status, sexual orientation, or sexual harassment has the opportunity to seek resolution of such grievance.

This policy also may include any official publication of the Health Science Center that may be perceived to be misleading or a misrepresentation of the facts. In cases where the complaint is related to official publications, the complaints may be submitted, in writing, at any time to the chief student affairs officer. If the complaint cannot be resolved at this level, appeals may be made to the President of the Health Science Center.

The student nonacademic grievance procedure may be handled through the mediation of designated officers of the schools or through other grievance procedures specific to various acts or issues.

A. Student program and student activity-related grievances should be submitted in writing to the director or coordinator of the specific Office of Student Services’ division. Appeals must be in writing and may be directed to the chief student affairs officer and then to the Vice President for Academic Administration for final disposition.

B. In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (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 UT Health Science Center San Antonio.

C. Complaints alleging sexual assault and/or sexual harassment should be addressed in accordance with the policies and procedures set forth in this Catalog (see General Regulations and Requirements, Sexual Assault Policy).

III. Procedure for Informal Resolution

A student who feels that he/she is a victim of harassment or discrimination or who feels that her/his rights as a student have been violated, may attempt to resolve the matter informally; the student may schedule a discussion or conference with the individual accused of the act, omission, or issue over which the student grieves. The informal discussion(s) or conference(s) should be conducted less than 30 calendar days from the date the
student knew or should have known of the offensive act or issue—if an informal resolution is not forthcoming, the student has a time limit of 30 calendar days from the date he/she knew or should have known of the offensive act or issue to file a formal written grievance.

IV. Procedure for Formal Resolution

This procedure is intended to provide students with an opportunity to formally grieve any perceived act, omission, or issue of a nonacademic nature which adversely affects the grieving student and for which no other grievance or appeals procedure is provided in The University of Texas System or in the policies or procedures of The UT Health Science Center San Antonio.

Students considering filing a grievance may contact the chief student affairs officer or the appropriate associate dean of student affairs to receive instructions. (See Student Conduct and Disciplineline.)

A. The formal written grievance should be initiated as soon as possible.

If the student chooses not to attempt informal resolution of a grievance, he/she must file a formal written grievance not more than 30 calendar days from the date he/she knew or should have known of the offensive act or issue.

If the student attempts informal resolution and then chooses to file a formal written grievance, he/she should file the written grievance within five working days from the last informal attempt at resolution. Also, the formal written grievance must be filed not more than 30 calendar days from the date the student knew or should have known of the offensive act or issue.

B. The student may file the written grievance, setting out a complete description of the grievance (and the proposed remedy). If the accused individual is a Health Science Center employee, the employee’s immediate supervisor receives the written grievance. The deans and/or the chief student affairs officer can assist students in identifying the accused individual’s supervisor, so that the written grievance may be filed with the appropriate person.

If the accused individual is a student, the written grievance is given to the associate dean of student affairs of the accused student’s school. Where the grievance does not involve an individual, the grievance may be filed with the administrator responsible for the program issue or issues involved. Copies of the grievance will be made available to the grieving student, the associate dean of her/his school, the individual accused of the act or omission grieved, the accused individual’s supervisor, and the administrator to whom the grievance is presented.

C. The administrator hearing the grievance may, at her/his discretion, hold discussions with or without the accused to hear and resolve the grievance, schedule a meeting between the student and the party accused, and/or involve other parties in facilitating a resolution of the grievance. The administrator has 10 working days from receipt of the written grievance to resolve the grievance, after which time the student, if not satisfied, may appeal to the dean of her/his school. If the student wishes an alternate hearing officer, her/his request must be submitted, in writing, to the dean of the appropriate school or to the President not more than five calendar days from notification of the hearing.

D. If the decision of the grievance officer is to affirm the grievance, any resulting directive to the accused must be in writing and must be pursuant to a meeting between the accused and the accused’s associate dean or supervisor. Denial of the grievance also must be in writing.

E. Within five working days of the student’s receipt of the decision of the Dean, the student may appeal the Dean’s decision to the President. If no decision is rendered by the Dean within 14 working days from the delivery of the written grievance to the Dean, the written grievance and grievance record may be sent by the student to the President. The President may take whatever action he deems appropriate.

F. The decision of the President of the Health Science Center is final.

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Use of Student Social Security Number

Disclosure of your Social Security Number (SSN) is requested for the student records system of the Health Science Center and for compliance with federal and state reporting requirements. Federal law requires that you provide your SSN if you are applying for financial aid. Although an SSN is not required for admission to the university, failure to provide your SSN may result in delays in processing your application or in the university’s inability to match your application with transcripts, test scores, and other materials.

Student SSNs are maintained and used by the university for financial aid, internal verification, and administrative purposes, and for reports to federal and state agencies as required by law. The privacy and confidentiality of student records are protected by law and the university will not disclose your SSN without your consent for any other purposes except as allowed by law. In accordance with Section 559.003(a) of the Texas Government Code, with few exceptions, the individual is entitled on request to be informed about the information that the institution collects about the individual; under Sections 552.021 and 552.023 to receive and review the information; and under Section 559.004 to have the institution correct information about the individual that is incorrect.

Student Records

The UT Health Science Center San Antonio is in compliance with the Family Educational Rights and Privacy Act of 1974 and the Texas Public Information Act (Government Code 552) concerning the privacy of educational records and the rights of students to inspect and review those records. (See Family Educational Rights and Privacy Act in the Privacy Rights section of this Catalog.) The chief student affairs officer coordinates the inspection and review procedures of student education records that include admissions, personal, academic, financial, and disciplinary records. The institutional policies are available in the Registrar’s Office.
Internet Access

Students can access their personal and academic information through the Health Science Center Internet portal at http://inside.uthscsa.edu.

This secured site provides a variety of information for students including enrollment, financial aid, student account, address and telephone numbers, and grades.

Privacy Rights of Students

The Family Educational Rights and Privacy Act of 1974 is a federal law which provides that the institution will maintain the confidentiality of student education records. For details, see the Privacy Rights section in this Catalog.

The Student Records policy includes the following procedures.

No one shall have access to a student's education records without the written consent of the student except for:

- persons within the institution acting in the student's educational interest and within the limitations of their need to know;
- officials of other institutions in which students seek to enroll;
- accrediting agencies carrying out their accreditation function;
- in compliance with a judicial order;
- persons acting in an emergency in order to protect the health or safety of students or other persons;
- persons or organizations providing students financial aid;
- federal, state, or local officials or agencies authorized by law;
- parents of a dependent student, as defined in Section 152 of Internal Revenue Code of 1986, 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; and
- organizations conducting studies for specific educational purposes. (Organizations must submit a “Request to Review Student Records” form that is available from the Registrar's Office.)

Admission Records. The American Association of Collegiate Registrars and Admission Officers (AACRAO) recommends that student files for any admitted student be reviewed in order to remove any items which have fulfilled their admissions-related purpose but will no longer be required in the student's academic career. Due to this recommendation by AACRAO, the student file will be reviewed after the student is enrolled and admissions records will be purged using these guidelines.

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.

Student Directory Information

Student directory information is available on the Health Science Center's public Web site http://adminweb.uthscsa.edu/StudDirect/. This general directory contains a student's name, school, field of study, telephone number, and e-mail address, among other data, unless restricted by the student.

Restricting Student Directory Information

Current students may elect to withhold certain directory information EXCEPT for last name, first name, middle initial, school, class, and photograph. Restrictions can be self-selected in the Student Center on inside.uthscsa.edu (instructions for Student Center.) The change will take 24 hours to reflect in the system. Alumni, former students, and current students can also request restriction assistance in a dated writing to the Office of the Registrar. PLEASE BE AWARE that any requested withholding of information, whether accomplished online by the student or via the Registrar's Office, will be in effect from that date forward until and unless the student again changes the restriction selection. PLEASE ALSO BE AWARE that withholding of certain information may impact individual student data to educational resources such as the National Student Clearinghouse that services a variety of educational activities. To ensure continuity, all self-selected restrictions or written requests should be made to be effective by the 12th day of each term.

Student Right to Access, Copy, and Challenge Educational Records

Students have the right to inspect and review information contained in their education records. The records will be made available within 45 days after a written request is made to the chief student affairs officer. Students may have copies of their records. These copies will be made at the student’s expense at rates authorized in the Texas Public Information Act (Texas Government Code 552). Official copies of academic records or transcripts will not be released for students who have a delinquent financial obligation or financial “hold” at the university.

Students have the right to challenge the contents of their education records if they believe the records contain information which is inaccurate, misleading, or otherwise in violation of their privacy or other rights. The full procedure to challenge records is published in the Family Educational Rights and Privacy Act of 1974 (FERPA), a copy of which appears in this Catalog.

Limitations of Student Right to Access, Copy, and Challenge Educational Records

Students cannot inspect or review the following confidential records:

- financial information submitted by their parents;
confidential letters and recommendations associated with admissions, employment, job placement, or honors to which they have waived their right to inspect; or

confidential letters and recommendations placed in the files prior to January 1, 1975.

Student right to access does not extend to records of instructional, administrative, and educational personnel, nor to records of the law enforcement unit, student counseling records, or student health records. Health records may be reviewed by a physician of the student’s choice.

Equal Opportunity

To the extent provided by the law, no person shall be excluded from participation in, be 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 component institutions on the basis of race, color, national origin, religion, veteran status, disability, sex, age, or sexual orientation. The component institutions of The U.T. 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. The procedure for discrimination complaints can be found in the Health Science Center’s Handbook of Operating Procedures, Chapter 4, Section 4.2, Policy 4.2.1.

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 UT Health Science Center is committed to assisting the HSC 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 UTHSCSA police department Web site at http://utpolice.uthscsa.edu/documents/CampusSecurityReport.pdf.

If you would like a paper copy of this information, you may contact the crime prevention office at 210-562-9092.

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.

Insurance

Professional Liability Insurance

Students enrolled in a health component institution of The University of Texas System in a program that involves direct patient care activities are required to purchase professional liability insurance as a prerequisite to enrollment. The policy extends coverage to the insured only while he/she is enrolled in classes.

Student Health Insurance

The Texas Education Code Section 51.952 and the UT System Board of Regents require all Health Science Center students to maintain a valid major health insurance policy/coverage upon enrollment, and continuing while registered at the Health Science Center. The requirement may be satisfied by either the student’s enrollment in the U.T. System student health insurance plan (United Healthcare), or by the student presenting proof of comparable health insurance from another source, following policy guidelines issued by the U.T. System Chancellor.

Each student must submit proof of coverage to the Student Health Center each school (academic) year. Unless proof of proper insurance coverage is received by the Student Health Center before the first day of classes, you will be charged for a policy with United Healthcare insurance. The United Healthcare fee is non-removable once the payment due date passes, and non-refundable once paid.

You may wish to find a policy more suited to you and your family’s needs, perhaps through your parents’ or spouse’s insurance plan. It all depends on how much coverage you would like. As a student at the Health Science Center, you may have more health insurance needs than the group plan offers. The United Healthcare group plan is negotiated by the U.T. System with input from student representatives from all UT campuses, but sometimes may be more suitable to an undergraduate student’s needs. You will need to make that decision on your own.

Some items you should review and compare in an insurance plan include deductibles, co-pays, complexity of reimbursement process, coverage and exclusions, prescription coverage, emergency costs, hospitalization costs, general medical care costs, physician network, services available online, wellness management programs, disease management plans, etc. The Health Science Center does not endorse nor recommend any insurance plans.

Beginning in the fall of 2008, the HSC’s Student Health Center will provide more services at no cost. However, services such as labs, X-rays, specialists, etc. will be charged to the student through their particular health plan.

If you have your own health insurance plan, complete the Health Insurance Verification Form and return it to the Student Health Center, with a copy of your health insurance card, before the first day of classes. If you have not provided coverage prior to the first day of classes, you will be billed for a United Healthcare insurance policy.

The current annual premium for a student health insurance policy may be included in the calculation of financial need for purposes of determining financial aid awards. The premium amount is subject to review and negotiation with the insurance company.

Health Insurance Portability and Accountability Act (HIPAA)
One of the main reasons the Health Insurance Portability and Accountability Act (HIPAA) was established was to protect the privacy and security of patients’ health information. All students at the Health Science Center must adhere to all of the regulations under this act. Refer to the HIPAA Web site (http://www.uthscsa.edu/hipaa/) for details about this Act and how it impacts you as a student. Your school may also provide further details and forms required for students under this Act. Additional information about patient privacy policies and procedures is included in the HSC’s Handbook of Operating Procedures (HOP), Chapters 5 (security policies) and 11 (privacy policies).

Health Insurance Requirements for Certain International Students

Students holding nonimmigrant visas are required to maintain approved comprehensive health insurance or coverage while enrolled at institutions of The University of Texas System. Each institution of the U.T. System is authorized to assess each such student a health insurance fee (as an incidental fee authorized by Texas Education Code Section 54.504) in the amount of the premium charged by the U.T. System sponsored student health insurance plan for the student’s participation in the plan and, in the case of a student who holds a J-1 visa, for participation by each of the student’s dependents as required by applicable federal regulations.

The institution shall waive the fee where the student provides evidence acceptable to the institution that demonstrates continuing coverage under the U.T. System Employee Group Insurance Plan or a comparable mandatory employee plan; continuing mandatory coverage through a government sponsored health plan (which covers health care in the United States and complies with the federal Civil Rights Restoration Act of 1987); or, continuing coverage that satisfies the requirements of the Department of State (DOS) regulations with regard to J-1 and J-2 visa holders.

The institution shall require any student who is granted a waiver to immediately notify the institution should there be a lapse in the coverage for which the waiver was granted.

This requirement does not apply to students who do not hold a nonimmigrant visa, including students from a bordering nation who are attending an institution in a county adjacent to that nation.

Important Information about Bacterial Meningitis

This information is being provided to all new college students in the state of Texas. Bacterial Meningitis is a serious, 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. 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.
Hazing includes but is not limited to:

- students at an educational institution.
- membership in an organization whose members are or include
- initiated into, affiliating with, holding office in, or maintaining
- or safety of a student for the purpose of pledging, being in-
- against a student, that endangers the mental or physical health

The law defines hazing as any intentional, knowing, or reckless

- of members, pledges, or alumni of the organization commits or
- done or encourages hazing or if an officer or any combination
- An organization commits an offense if the organization con-
- consented to or acquiesced in a hazing activity is not a de-

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.cdc.gov/ncidod/dbmd/diseaseinfo
  and
  http://www.acha.org (Click on "Information and Re-
  

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Hazing Offenses

Hazing in state educational institutions is prohibited by both state law (Sections 51.936 and 37.151, Texas Education Co-

d, 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 sub-
ject 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 de-
fense to prosecution for hazing under this law.

An organization commits an offense if the organization con-
dones 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 institu-
tion, 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 in-
itiated 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:

- any type of physical brutality, such as whipping, beat-
ing, striking, branding, electronic shocking, placing of
harmful substance on the body, or similar activity;
- any type of physical activity, such as sleep depriva-
tion, 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 ad-
versely affects the mental or physical health or safety of
the student;
- any activity involving consumption of food, liquid, al-
coholic 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;
- 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 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
- any activity that induces, causes, or requires the stu-
dent to perform a duty or task which involves a viola-
tion 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 pro-
hibited by the System, and a violation of that prohibi-
tion renders both the person inflicting the hazing and
the person submitting to the hazing subject to discip-
line;
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 rend-
ers both the organization and participating individuals
subject to discipline.

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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 bur-
densome article;
- paddle swats, including the trading of swats;
- pushing, shoving, tackling, or any other physical contact;
- forcing 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, kidnaps, walks, rides, drops);
• confining individuals in an area that is uncomfortable or dangerous (hot box effect, high temperature, too small);
• any type of personal servitude that is demeaning or of personal 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.

Information Security and Assurance

The Health Science Center’s information resources are strategic and vital assets belonging to the people of Texas and support the institution’s teaching, education, patient care, research, and public service missions. The Department of Information Security and Assurance (IMS-ISA) is responsible for providing leadership to ensure security measures are implemented to protect information resources from accidental or unauthorized access, disclosure, modification, or destruction, as well as ensure the availability, integrity, and confidentiality of information. While the IMS-ISA provides leadership, information security is the responsibility of all information systems users and therefore students are expected to comply with the following Information Security policies:

Handbook of Operating Procedures, Section 5.8
Information Security

Handbook of Operating Procedures

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5.8.12 Portable Computing Policy
5.8.13 Security Monitoring
5.8.17 Information Security Training and Awareness Policy
5.8.20 Information Resources Privacy Policy
5.8.21 Data Classification
5.8.27 Physical Security for Electronic Information Resources

Sexual Assault Policy

The policy of The UT Health Science Center San Antonio is to strive to maintain an environment that is free from intimidation and one in which students may be educated to their fullest potential. The Health Science Center fosters an understanding of difference and cultivates the ethical and moral issues that are the basis of a humane social order. The Health Science Center does not tolerate physical abuse, threats of violence, physical assault, or any form of sexual assault, including, but not limited to, acquaintance or date rape.

A student who individually, or in concert with others, participates or attempts to participate in a sexual offense, including, but not limited to, sexual assault or abuse of, threats against, or the unwanted touching of any other person, can be subject to disciplinary action by the Health Science Center, notwithstanding any action that may or may not be taken by the civil authorities. In addition to incidents that occur on the Health Science Center campus, the Health Science Center may take disciplinary action in response to incidents that take place during official functions of the university or those sponsored by registered student organizations or incidents that have “an affiliation” to the interests of the Health Science Center, regardless of the location in which they occur.

Anyone who is a victim of any form of sexual assault should immediately call the police (911). The police will provide transportation to the University Hospital Emergency Center for medical treatment and evidence collection. Reporting an assault does not mean that the victim must press charges or take the case to criminal trial or a Health Science Center disciplinary hearing. Even if a victim has not decided whether to press charges, informing the police and going to the hospital will allow for her/his emotional and medical needs to be attended to and will preserve the victim’s option to press charges.

A student may file a written complaint against another student by directly contacting the chief student affairs officer or the appropriate associate dean for student affairs. The written complaint must be submitted within 30 working days of the alleged violation. The student may choose to file a complaint with the chief student affairs officer or with her/his associate dean for student affairs whether or not he/she chooses to press criminal charges. The chief student affairs officer shall immediately refer the complaint to the appropriate associate dean for student affairs. The student who files a complaint against a faculty or staff member may contact her/his associate dean for student affairs or the chief student affairs officer.

The written complaint and subsequent record of any administrative adjudication is confidential. This record is maintained in the office of the appropriate dean or the chief student affairs officer, whoever conducted the administrative action.
The Health Science Center Student Counseling Service (567-2648) and the Sexual Assault Crisis and Resource Center Hotline (349-7273) are available to provide support services for anyone affected by any form of sexual assault. Students who may have been assaulted by someone who is not affiliated with the Health Science Center may contact any of the available Health Science Center support services.

When a student reports that the campus regulations prohibiting sexual assault have been violated, certain provisions that provide for the protection of the emotional health and physical safety of the complainant can be made available. Such provisions may include modification of a student’s educational environment. (e.g., change in laboratory assignment or alteration of clinical schedule). Such modification will be facilitated through the associate dean for student affairs in the student’s respective school. If the complainant provides evidence that the accused student presents a continuing danger to person or property or poses an ongoing threat of disrupting the academic process, the associate dean for student affairs may take interim disciplinary action against the accused student as appropriate. Disciplinary action may include, but not be limited to, the following: verbal warning, written warning, counseling, suspension, or dismissal.

Sexual Harassment & Sexual Misconduct

from the Health Science Center’s Handbook of Operating Procedures (HOP), Chapter 4, Section 4.2, Policy 4.2.2.

POLICY

The UT Health Science Center San Antonio is committed to the principle that the university’s working and learning environment be free from inappropriate conduct of a sexual nature. Sexual misconduct and sexual harassment in any form will not be tolerated and individuals who engage in such conduct will be subject to disciplinary action.

POLICY

This policy applies to all university administrators, faculty, staff, residents, fellows, students, visitors and applicants for employment or admission. It applies not only to unwelcome conduct that violates state and federal laws concerning sexual harassment but also to inappropriate conduct of a sexual nature. It is also applicable regardless of the gender of the complainant or the alleged harasser.

STATUTORY REFERENCE

Sexual harassment is a form of sex discrimination under Title VII of the Civil Rights Act of 1964, Title IX of the Civil Rights Act of 1972, and the Texas Labor Code, Chapter 21, and it is illegal, and actionable under civil and criminal law.

DEFINITIONS

A. Sexual Misconduct. Sexual misconduct includes unwelcome sexual advances, requests for sexual favors, or verbal or physical conduct of a sexual nature directed towards another individual that does not rise to the level of sexual harassment but is unprofessional and inappropriate for the workplace or classroom.

B. Sexual Harassment. Sexual harassment, includes unwelcome sexual advances, requests for sexual favors, verbal or physical conduct of sexual nature when:

1. submission to such conduct is made either explicitly or implicitly a term or condition of employment or student status;
2. submission to or rejection of such conduct is used as a basis for evaluation in making personnel or academic decisions affecting that individual; or
3. such conduct has the purpose or effect of unreasonably interfering with an individual’s performance as an administrator, faculty member, staff, resident, fellow or student, or creating an intimidating, hostile or offensive environment.

C. Examples. Examples of behavior that could be considered sexual misconduct or sexual harassment includes but are not limited to:

1. physical contact of a sexual nature including touching, patting, hugging, or brushing against a person’s body;
2. explicit or implicit propositions or offers to engage in sexual activity;
3. comments of a sexual nature including sexually explicit statements, questions, jokes or anecdotes; remarks of a sexual nature about a person’s clothing or body; remarks about sexual activity; speculation about sexual experience;
4. exposure to sexually oriented graffiti, pictures, posters, or materials; and/or
5. physical interference with or restriction of an individual’s movements.

CONSENSUAL RELATIONSHIPS

It is the policy of The UT Health Science Center San Antonio that the following romantic or sexual relationships are strongly discouraged.

- Between a faculty member and a student, resident or fellow who is enrolled in the faculty member’s course or who is otherwise under the supervision of the faculty member, or
- Between a supervisor and a person under her or his supervision

This policy is not intended to discourage the interaction of faculty and students, residents or fellows and supervisors and employees where it is appropriate and ethical; however, it is intended to clarify that romantic or sexual relationships often create situations that lead to sexual harassment, conflicts of interest, favoritism, and low morale. Therefore, such relationships are strongly discouraged.

Every consenting romantic and sexual relationship between a faculty member and a student, resident or fellow or between supervisor and employee may potentially evolve into a sexual harassment case with serious implications, either from a subsequent change of attitude by the parties involved or from a contemporary complaint from a disadvantaged third party. Fa-
Faculty members exercise power over students, residents or fellows, as do supervisors over employees, whether in evaluating them, making recommendations for their promotion or future employment, or conferring other benefits. Others may be adversely affected by the relationship in that it places the faculty member or supervisor in a position to favor or advance one individual's interest at the expense of others.

As provided in the American Association of University Professors policy on consensual relationships, faculty are expected to be aware of their professional responsibilities in their relationships with students and "avoid apparent or actual conflict or interest, favoritism, or bias." These relationships are viewed as damaging to the university environment and therefore are strongly discouraged.

Complaints concerning consensual relationships by non-participating individuals whose work or school environment is adversely affected by the behavior will be treated as third-party sexual harassment or sexual misconduct complaints.

**RESOLUTION OPTIONS**

A person who believes that he or she has been subjected to discrimination or harassment in violation of this policy and seeks to take action may use either the informal resolution process or the formal complaint process or both. The informal resolution and formal complaint resolution process described in this policy are not mutually exclusive and neither is required as a pre-condition for choosing the other; however, they cannot both be used at the same time.

**INFORMAL RESOLUTION**

This process may be used as a prelude to filing a formal complaint or as an alternative. It is not necessary that this option be used. Anyone who believes that he or she has been subject to sexual harassment or sexual misconduct may immediately file a formal complaint as described in Section VI of this policy. An individual wishing to utilize the informal resolution process should contact the EEO/AA Office or the appropriate Associate Dean for Student Affairs or the Associate Dean for Graduate Medical Education of the School of Medicine as appropriate.

1. **Informal Assistance.** The individual is provided assistance in attempting to resolve possible sexual harassment or sexual misconduct if the individual does not wish to file a formal complaint. Such assistance includes strategies for the individual to effectively inform the offending party that his or her behavior is unwelcome and should cease, action by an appropriate university official to stop the unwelcome conduct, or mediation. However, the university may take more formal action to ensure an environment free of sexual harassment or sexual misconduct.

2. **Timeframe.** Informal resolutions will be completed in a timely manner from receipt of a request for informal resolution.

3. **Confidentiality and Documentation.** The university shall document informal resolutions. The EEO/AA Office shall retain the official documentation. The Associate Deans will forward documentation of informal resolutions to the EEO/AA Office at the conclusion of the process for which they are responsible to conduct.

The university will endeavor to maintain confidentiality to the extent permitted by law.

The university will attempt to find the right balance between the individual’s desire for privacy and confidentiality with the responsibility of the university to provide an environment free of sexual harassment.

**COMPLAINT PROCEDURES**

(This complaint procedure also constitutes the grievance procedures for complaints alleging unlawful sex discrimination required under Title IX of the Education Amendments of 1972. As used herein, “complaint” is synonymous with “grievance.”)

**A. Reporting**

1. The UT Health Science Center San Antonio encourages any person who believes that he or she has been subjected to sexual misconduct or sexual harassment to immediately report the incident to the appropriate supervisor of the accused faculty member or employee, to the EEO/AA Office or when a student, resident or fellow is the complainant or the accused individual, to the appropriate Associate Dean for Student Affairs or Associate Dean for Graduate Medical Education of the School of Medicine. In no case will a complainant be required to report such conduct to the person accused of the misconduct. The complainant will be advised of the procedures for filing a formal complaint of sexual harassment or sexual misconduct. When a supervisor or Associate Dean for Student Affairs or Associate Dean for Graduate Medical Education of the School of Medicine receives a complaint, he or she will immediately notify the EEO/AA Office.

2. Complaints should be filed as soon as possible after the conduct giving rise to the complaint, but no later than 180 days after the event occurred.

3. In order to initiate the investigation process, the complainant should submit a signed, written statement setting out the details of the conduct that is the subject of the complaint, including the complainant’s name, signature, and contact information; the name of the person directly responsible for the alleged violation; a detailed description of the conduct or event that is the basis of the alleged violation; the date(s) and location(s) of the occurrence(s); the names of any witnesses to the occurrence(s); the resolution sought; and any documents or information that is relevant to the complaint. While an investigation may begin on the basis of an oral complaint, the complainant is strongly encouraged to file a written complaint. When a supervisor or the Associate Dean of Students or Associate Dean for Graduate Medical Education of the School of Medicine receives a complaint with a written statement he/she shall immediately notify the EEO/AA Office.

**B. Complaint Investigation**
1. The Associate Dean for Student Affairs or Associate Dean for Graduate Medical Education of the School of Medicine and/or the Executive Director of the EEO/AA Office as appropriate, is responsible for investigating formal complaints. If the complaint is not in writing, the investigator should prepare a statement of what he or she understands the complaint to be and seek to obtain verification of the complaint from the complainant.

2. Within ten working days of receipt of a complaint the Associate Dean for Student Affairs or the Associate Dean for Graduate Medical Education of the School of Medicine and/or the Executive Director of the EEO/AA Office as appropriate will authorize an investigation of the complaint.

3. As part of the investigation process, the accused individual shall be provided with a copy of the allegations and allowed the opportunity to respond verbally and/or in writing within a reasonable time frame.

4. The complainant and the accused individual may present any document or information that is believed to be relevant to the complaint.

5. Any persons thought to have information relevant to the complaint shall be interviewed and such interviews shall be appropriately documented. Other acceptable methods for gathering information include but are not limited to visual inspection of materials alleged to be offensive and follow-up interviews as necessary.

6. The investigation of a complaint will be concluded as soon as possible after receipt of the written complaint. In investigations exceeding 60 days, a justification for the delay shall be presented to and reviewed by the Executive Director of the EEO/AA Office. The complainant, accused individual and supervisor will be provided an update on the progress of the investigation after the review.

7. Upon completion of the investigation, a written report will be issued. The report shall include: a recommendation of whether a violation of the policy occurred, an analysis of the facts discovered during the investigation, and recommended disciplinary action if a violation of the policy occurred. The written report will be sent to the appropriate administrative official.

8. Written notifications of the findings of the investigation and outcome will be sent to the complainant and the respondent by the appropriate administrative official. The complainant and the respondent have seven (7) working days from the date of the notification letter to submit comments regarding the investigation to the administrative official. However, if a complaint is filed against a student then the complainant and respondent may not receive or comment on the notification letter in accordance with the Family Education Rights and Privacy Act’s restrictions on disclosure of educational records.

9. Within thirty (30) working days of receiving any comments submitted by the complainant or respondent, the appropriate administrative official will take one of the following actions: a) request further investigation into the complaint; b) dismiss the complaint if the results of the completed investigation are inconclusive or there is insufficient reasonable, credible evidence to support the allegation(s); or c) find that this policy was violated. A decision that this policy was violated shall be made upon the record provided by the investigator and any comments submitted by the complainant or respondent; and shall be based on the totality of circumstances surrounding the conduct, its severity, frequency, whether it was physically threatening, humiliating, or was simply offensive in nature. Facts will be considered on the basis of what is reasonable to persons of ordinary sensitivity and not on the particular sensitivity or reaction of an individual.

10. If the appropriate administrative official determines that this policy was violated, he or she will take disciplinary action that is appropriate for the severity of the conduct. Disciplinary actions can include, but are not limited to, verbal reprimands, written reprimands, the imposition of conditions, reassignment, suspension, and dismissal.

11. The complainant and the respondent shall be informed in writing of the administrative official’s decision. However, if a complaint is filed against a student, then the determination letter sent to the complainant will be written in compliance with the Family Education Rights and Privacy Act.

12. Implementation of disciplinary action against faculty and employees will be handled in accordance with the university’s policy and procedures for discipline and dismissal of faculty and employees. The Associate Dean for Students or the Associate Dean for Graduate Medical Education of the School of Medicine will impose disciplinary action, if any, against a student, resident or fellow in accordance with the university’s appropriate disciplinary procedures.

13. The Executive Director of the EEO/AA Office will monitor the circumstances surrounding the complaint through complaint resolution.

**PROVISIONS APPLICABLE TO ALL COMPLAINTS**

A. Assistance. During the complaint process, a complainant or respondent may be assisted by a person of her or his choice; however, the assistant may not examine witnesses or otherwise actively participate in a meeting or interview.

B. Retaliation. An administrator, faculty member, student, resident, fellow or employee who retaliates in any way against an individual who has brought a complaint pursuant to this policy or an individual who has participated in an investigation of such a complaint is subject to disciplinary action, including dismissal.

C. False Complaints. Any person who knowingly and intentionally files a false complaint under this policy or any person who knowingly and inten-
tionally makes false statements within the course of the investigation is subject to disciplinary action up to and including dismissal from the university.

D. Confidentiality and Documentation. The university shall document complaints and their resolution. The Office of Equal Employment Opportunity/Affirmative Action shall retain the official documentation. The Associate Deans will forward documentation of resolutions to the EEO/AA Office at the conclusion of the process for which they are responsible to conduct. To the extent permitted by law, complaints and information received during the investigation will remain confidential. Relevant information will be provided only to those persons who need to know in order to achieve a timely resolution of the complaint.

DISSEMINATION OF POLICY

A. The policy will be made available to all faculty, employees, students, residents and fellows. Periodic notices sent to students, residents, fellow employees and faculty about the university’s Sexual Harassment and Sexual Misconduct Policy will include information about the complaint procedure and will refer individuals to designated offices for additional information.

B. The university periodically will educate and train employees and supervisors regarding the policy and conduct that could constitute a violation of the policy.

All civil rights discrimination issues are covered under Chapter 4, Section 4.2, Section 4.2.1, “Nondiscrimination Policy and Complaint Procedure,” of the Handbook of Operating Procedures (HOP).

Confidentiality

The Health Science Center will, to the extent possible, maintain the confidentiality of information received as a result of the charge and investigation.

Resources for Persons Affected by Sexual Assault

The university’s Sexual Assault Policy is listed above. Several educational and prevention programs and support services address the issue of sexual assault. Phone numbers are provided for additional information.

Student Counseling Service: 567-2648

- Individual counseling for all students affected by sexual assault
- Consultation on sexual harassment
- Referral to other resources
- Workshops on any related topic as requested
- Workshops on date rape, assault

Student Health Center: 567-WELL (9355)

University Police Department: 567-2800

Emergency Numbers: 911 from campus telephone (not cell phone) I call 210-567-8911 from a cell phone on campus to get UT Police (911 from a cell on campus will get San Antonio Police.)

- Crime prevention presentations which include issues related to assault
- RAD (Rape Aggression Defense) courses offered. For more information call 562-9095.
- Safety escort service — on request at any time (567-2800)
- Crime statistics information
- Referral to campus and off-campus services

Methodist Specialty & Transplant Hospital: 575-8110

- Examination and treatment of sexual assault victims
- Referral to other services

Rape Crisis and Resource Center: 521-7273

- Rape crisis support group
- Adults molested as children group
- Teenage survivors of sexual assault or abuse group
- Sexual harassment support group
- Male survivors of sexual abuse/assault group
- Referral services

Brochures, pamphlets, and other printed material are available from the various campus resources.

Solicitation

Solicitation is defined as the sale, lease, rental or offer of 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 product that is designed to encourage the purchase, use, or rental of any property, product, or 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 the campus of the Health Science Center with the following exceptions (as outlined in the Regents’ Rules and Regulations, Series 80103):

- Official activities of the Health Science Center itself or its contractors such as bookstores, cafeterias, and vending machines.
- Registered 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 Administration and the required accounting for such activities is made to the Vice President for Academic Administration.
- 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. (See the Handbook of Operating Procedures, Sections 9.1 and 9.1.7.)

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Student Safety on Campus

The University Police Department is the agency responsible for law enforcement, security, and emergency response on the campus. A system of card-reader-controlled doors, emergency telephones and intercoms, exterior lighting, a closed-circuit television monitoring system, gated entry, late-entry doors for access to campus buildings, and police patrols are all part of the campus security program. Security awareness and crime prevention programs are provided to inform students and staff of security measures and devices in place, as well as services available through the University Police Department. Detailed information about all of these systems and programs is included in the University Police section below.

HSC Alert and Emergency Information

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<tr>
<td><strong>Emergencies</strong></td>
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<td>911</td>
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<tr>
<td>Cell: 210-567-8911 to get UT Police</td>
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<td>(911 from a cell on campus will get San Antonio Police.)</td>
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<td><strong>24-hour Message</strong></td>
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<td>210-567-7669 (567-SNOW)</td>
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<td>956-565-UTEL</td>
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<td><strong>After Hours:</strong></td>
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<td>210-567-2061</td>
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<td>Edinburg: 956-316-7151</td>
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<td>Harlingen: 956-365-8900</td>
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<tr>
<td>Laredo: 956-523-7414</td>
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<tr>
<td>San Antonio: 210-567-2800</td>
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</tbody>
</table>

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 UT Health Science Center is committed to assisting the HSC 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 UTHSCSA police department Web site at http://utpolice.uthscsa.edu/documents/CampusSecurityReport.pdf.

If you would like a paper copy of this information, you may contact the crime prevention office at 210-562-9092.

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.

HSC Alert

The UT Health Science Center has an emergency notification service called HSC Alert on the university portal (see below).

This service allows faculty, staff, students and residents on all campuses of the Health Science Center to sign up to be notified—via text messaging—in the event of an emergency or imminent campus closure. The text message can be received on your designated mobile phone, PDA, Blackberry/Treo, alphanumeric pager, or e-mail address. The cost of this service is being underwritten by the Health Science Center and is free to those who sign up.

This service adds another immediate mechanism to the several existing communication methods that we have in place to alert the university community to an emergency situation, such as global e-mails, notices on our Web site and the “snow” information lines—210-567-SNOW and 956-365-UTEL.

The system is used only for emergency contact purposes and last-minute campus closures. For example, it will send notifications regarding a life-threatening situation, major facility emergency or evacuation, and/or severe weather. HSC Alert will not be used to distribute general informational notices, advertising, or other unsolicited content. Please note that subscribers to HSC Alert will pay no fees for the service other than any regular fees charged by their wireless carriers to receive text messages.

Subscribing is on a voluntary opt-in basis. Subscribers may register two mobile devices and two e-mail addresses (i.e., work and/or personal e-mail addresses).

To Register

First, sign in on the portal http://inside.uthscsa.edu with your username and password. Once inside the portal click on the “Services” tab. Then, to opt-in to the service, go to the “Emergency Text Messaging” blue box on the left of the screen. Then click on the “Sign Up” link under “HSC Alert.” You will need to have with you the mobile phone(s), PDA(s) and/or pager(s) from which you want to receive HSC Alert messages. The reason for this is that sign up requires that a validation number be sent to the mobile device(s) you choose. You must receive this validation number—and enter it into the registration system—prior to completing the sign-up process.

After your initial registration, you must maintain your account by updating it with your most current information. For example, you are responsible for entering into the HSC Alert system da-
tabase any changes you make to your mobile phone number, carrier, e-mail address, etc.

**Emergency Information Outlets**

**Emergency Response and Evacuation Plan** ([http://research.uthscsa.edu/safety/evacplans.shtml](http://research.uthscsa.edu/safety/evacplans.shtml))

The Office of Environmental Health and Safety shows emergency exits in campus buildings, and lists procedures for emergency response.


The National Hurricane Center describes how to prepare for the hazards of a hurricane.


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 region is received. It combines threat information with vulnerability assessments and provides communications to public safety officials and the public.

**Texas Department of Transportation** ([http://www.dot.state.tx.us/](http://www.dot.state.tx.us/))

TxDOT provides roadway and travel information around-the-clock, and reports on road closures in times of emergency.


The state of Texas publishes information about homeland security threat levels in Texas and what Texans can do to be prepared and involved.

**University Police (parking, security, crime reporting, etc.)**

Ron Davidson, Acting Chief

567-2800 University Police Building
[http://www.uthscsa.edu/utpolice](http://www.uthscsa.edu/utpolice)

- Call 911 for any Campus Emergency from a university phone (from a cell phone dial 567-8911 for UT Police; if you dial 911 from a cell phone on campus, you will get the San Antonio Police Department.)

**Mission of the University Police Department**

To mission of the University Police Department is to support the Health Science Center in its training of health care specialists by:

1. ensuring that faculty, staff, and students enjoy a safe place to teach, work, and study;
2. protecting state and personal property within our jurisdiction;
3. assisting and directing the many visitors and patients at the campus;
4. presenting structured programs to faculty, staff, and students that identifies their role in Crime Prevention;
5. ensuring cost-effective use of available resources in pursuit of its mission.

Overall, this department exists for the:

1. prevention of criminal activity;
2. detection of criminal activity;
3. apprehension of criminal offenders;
4. protection of Constitutional guarantees;
5. control of traffic; and
6. creation and maintenance of a feeling of security on the campus.

All criminal offenses and traffic violations that occur on university property are to be reported to the University Police Department. Students and employees should report these offenses to the University Police by calling ext. 7-2800 (567-2800) or by using an emergency intercom.

The University Police Department is a service department operating 24 hours a day, seven days a week. The department is charged with the responsibility of providing law enforcement and security service to those persons directly or indirectly associated with the Health Science Center; of protecting lives as well as the property of the individual and the university against negligence or malicious destruction; of preserving order; and of upholding and enforcing the general laws of the state of Texas, the Regents’ Rules and Regulations, and applicable Health Science Center policies and procedures. The department includes duly commissioned peace officers (as authorized by Article 51.203 of the Texas Education Code) and noncommissioned personnel.

**Parking & Traffic**

Students may park in any parking lot, within any Zone, for which they have been issued a permit.

A parking permit must hang from the car’s interior rearview mirror and can be transferred from car to car by the owner. Parking permits may be purchased in the Parking Service Office, next to the Bookstore, in Parking Garage B (adjacent to the School of Nursing). Call 562-PARK for information.

Special parking areas are provided for the disabled, car pools, two-wheeled vehicles, and bicycles. Self-adhering decals are affixed to two-wheeled vehicles.

All of the parking on the campuses of the Health Science Center is established in zones. Spaces are available for both reserved and non-reserved parking. Reserved spaces are marked as such, and are reserved for a specific permit holder. A set number of each zone category and the number of reserved spaces within each zone have been established. All staff and students are eligible for any parking zone that is
available at the time of registering. A Waiting List for more desirable parking spaces or assignments is available to everyone. The wait list is maintained by the Parking Service Office.

Zone I parking spaces are located within the parking garages, with Reserved spaces being specifically assigned to the permit holder and Non-Reserved spaces designating the roof spaces.

All Zone I parking, including roof spaces, are reserved 24 hours a day, seven days a week. Zone II parking areas are denoted by silver signs, and are located nearest to the buildings. Zone III parking areas are located just beyond the Zone II areas, and are denoted by red signs. Zone IV parking areas are located farther from the buildings, and are denoted by blue signs. Zone V parking areas are located only at the Lot #17 area, near the Allied Health Building, and denoted by black signs. Shuttle-bus service connects that parking area with all areas of the campus. Motorcycles and bicycles must be parked in specifically designated areas.

Parking permits expire on August 31st of each year. Permit fees are paid in one payment for the full permit year. Incoming students pay for the full permit year, plus a prorated amount for the months remaining from their enrollment registration to the current expiration date. Beginning September 1, 2008 annual fees for the various permits are: $698.88 for Garage Zone I Reserved, $436.80 for Zone I Garage Roof, $524.16 for all other reserved spaces in each zone, $349.44 for Zone II non-reserved, $172.64 for Zone III non-reserved, $87.36 for Zone IV non-reserved, $74.88 for Zone V non-reserved, $99.84 for Zone VI non-reserved (can be used in Edinburg, Harlingen, and Laredo only), $49.92 for Motorcycles, and $12.48 for Bicycles. Permit fees will increase 4% per annum through 2013 to provide increased service and capital improvements. Car Pool permits are available for each zone of parking at varying amounts. Car Pools must consist of at least three persons with separate domiciles if residing inside Loop 1604, and at least two members with separate domiciles if residing outside Loop 1604. Permits may be purchased at the Parking Service Office next to the University Bookstore Monday–Friday from 7:45 a.m.–5:15 p.m. Additional information and forms are available on our Web site, http://www.uthscsa.edu/utpolice/. We can also be reached by phone at 210-562-PARK (7275) or e-mail parking@uthscsa.edu.

Students are required to be familiar with and follow parking and traffic regulations published by University Police and issued to each permit holder.

University Police Department is responsible for enforcing Parking and Traffic Regulations that have been established by the President pursuant to the Board of Regents Rules and Regulations, Rule 80109, as well as enforcement of Texas vehicle inspection laws for vehicles parking or driving on campus.

Parking citations can be paid at the Parking Service Office during all hours of operation. Citations may be appealed to the Chief of Police by submitting a completed appeal form, within 10 calendar days of the citation’s date of issue, to the Parking Service Office. Any person appealing a citation who is not satisfied with the decision of the Chief of Police may have the appeal further reviewed by the University Parking and Traffic Committee. The complete guidance for submitting appeals is contained in the Parking and Traffic Regulations.

Services provided for students include:

- escorting persons to cars at any time when safety is a concern within campus boundaries;
- unlocking vehicles when keys are locked inside;
- managing the campus “Lost and Found”;
- providing a boost for dead vehicle batteries;
- teaching defensive driving classes for insurance purposes only (no ticket abatement program is available)
- fingerprinting services provided for a fee for licensure and as part of “Operation Identification” (free for children);
- publishing monthly crime statistics; and
- publishing law enforcement and security information.

In addition to entry control stations at each entrance to the campus, intercoms can be used for direct communication with University Police. The intercom locations are:

- in or adjacent to campus parking lots,
- late entry doors, and
- all elevators.

Campus Security Policies and Crime Statistics

This information is being provided as part of the Health Science Center’s commitment to security and personal safety on campus. This document serves as the University Police statement required for compliance with the Student Right-To-Know Act and Crime Awareness and Campus Security Act of 1990.

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 UT Health Science Center is committed to assisting the HSC 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 UTHSCSA police department Web site at http://utpolice.uthscsa.edu/documents/CampusSecurityReport.pdf.

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The Health Science Center, a state-supported member institution of The University of Texas System, is located within the San Antonio Metropolitan area. (For information on The Uni-
Access to Campus Facilities

Most campus buildings and facilities, including the RAHC and the Laredo Campus Extension, are accessible to members of the campus community and their guests, patients, and visitors during normal business hours (8 a.m.–5 p.m., Monday–Friday) and for limited designated hours on Saturdays (excluding most holidays). Students have access to the buildings during all scheduled class sessions including laboratory, library study, and research periods.

All campus buildings are locked after normal business hours, weekends, and holidays. Persons needing to enter a building must possess a card/key for entry at designated late-entry doors. Late-entry doors are equipped with a card reader and some have an intercom and closed-circuit television camera. The electronic access control system can both deny or allow access through a building’s exterior door and maintains a central record of which access cards have been used (and when) to gain access.

All exterior building doors on the campus are equipped with electronic alarms that annunciate at the University Police Department when opened during prohibited hours. Each alarm is responded to by a police officer or security officer (guard) or both.

Maintenance of Campus Security Devices

The University is committed to campus security and safety. Exterior lighting is an important part of this commitment. Parking lots, pedestrian walkways, and building interiors are well lighted. Formal surveys of exterior lighting on campus are conducted by representatives of the Physical Plant Department. Officers of the University Police Department conduct campus lighting surveys on a daily basis. Additionally, formal surveys are conducted biweekly of all electronic security devices, emergency telephones, and intercoms. Members of the campus community are encouraged to report any exterior lighting, emergency telephone, or intercom deficiencies to the University Police Department at 567-2800.

Exterior doors on campus buildings are locked and secured daily by University Police officers or security officers. Doors and security hardware operating deficiencies are reported daily by these officers. Deficiencies are reported to the Communications Center where they are recorded. The Communications Center Supervisor ensures that appropriate work/job orders are opened and repairs made.

Crime prevention specialists of the University Police Department regularly survey the grounds of the campus and report shrubbery, trees, and other vegetation that should be trimmed for safety purposes.

Most parking lots and public areas of the campus are surveyed by closed-circuit television cameras monitored by the University Police Department. Parking lots are actively patrolled by police officers and security officers (guards) of the University Police Department.

Reporting of Criminal Actions, Suspicious Activities, or Emergencies

The University Police Department is the agency responsible for law enforcement, security, and emergency response at the Health Science Center. The office, located on the Joe R. and Teresa Lozano Long (Central) Campus (7703 Floyd Curl Dr.) in the University Police Building, is open 24 hours a day, seven days a week. The department is staffed by professional personnel, including certified licensed police officers, certified communications operators, security officers (guards), and civilian administrative support personnel. All police officers are armed.

To report a crime or emergency, members of the campus community can contact the University Police Department by calling 567-2800 or 911. Both numbers are answered by a trained communications officer. For this purpose, free on-campus public telephones are located in hallways and other public areas of all campus buildings.

A number of marked interior and exterior emergency telephones and intercoms are located throughout the campus. These telephones and emergency intercoms can be used to report a criminal incident, suspicious activity, a fire, or any other type of emergency. They also may be used to request a personal escort anywhere on campus.

Assistance and support from other agencies or departments in the area can be obtained immediately either by computer, telephone, or radio. These agencies include other campus police departments, the San Antonio Police Department, Bexar County Sheriff’s Department, the Texas Department of Public Safety, federal law enforcement agencies, the San Antonio Fire Department, and the University’s Physical Plant Department.

All campus telephones have been affixed with a distinctly colored label containing the applicable telephone numbers for both non-emergency and emergency assistance. The campus police telephone numbers of 567-2800 and 911 are listed in the campus telephone directories and in other University Police Department and campus publications.

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Law Enforcement Authority and Interagency Relationships

The law enforcement officers (police officers) of the University Police Department receive their police authority from article 51.203 of the Texas Education Code. This statute was passed in 1969 and amended in 1987 by the Texas Legislature. Officers commissioned under this act by the University of Texas Board of Regents have full law enforcement authority and their jurisdiction includes the entire county where property owned, leased, rented, or otherwise controlled by the university is located. The university police officers are licensed, as are all other police officers of this state, by the Texas Commission on Law Enforcement Officers Standards and Education upon meeting the required minimum standards and completing the basic police officers training course consisting of at least 820 hours of required basic training. Additional proficiency training is provided each officer annually. Officers patrol the campuses on foot, on bicycle, and by vehicle 24 hours a day, seven days a week, enforcing university rules and regulations and State laws.

The University Police Department maintains a close working relationship with the San Antonio Police Department, state and federal law enforcement agencies, and all appropriate elements of the criminal justice system. Regular meetings are held both on a formal and an informal basis. Crime-related reports and statistics are routinely exchanged.

Security Awareness and Crime Prevention/Community Policing Programs

Preventing crimes from occurring, rather than reacting after the fact, is the philosophy of The UT Health Science Center San Antonio. 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. New Student Orientation
   A crime prevention presentation accompanied by brochures and other printed material is made available to all new students throughout the year.

2. New Employee Orientation
   A crime prevention presentation accompanied by brochures and other printed material is made available to all new employees throughout the year as requested by the Department of Human Resources.

3. 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, security officer, or communications officer.

4. 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.

5. 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.

6. Crime Prevention Presentations
   Numerous crime prevention presentations are made annually to campus faculty, staff, and students.

7. 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.

8. Crime Prevention Publicity
   Crime prevention articles and crime statistics are distributed monthly to the campus community through the University Police Newsletter.

9. 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.

10. Sexual Assault Awareness, Education, and Prevention
    Programs are presented throughout the year to the campus community. This includes RAD (Rape Aggression Defense) courses.

11. Security Surveys
    Comprehensive security surveys or audits are made for a number of campus departments and facilities each year.

12. Facilities Surveys
    Comprehensive annual surveys of exterior lighting, doors, and grounds are conducted by the University Police Department’s crime prevention specialists.

13. 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.

14. 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.

15. 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.

16. Shuttle Service
    The Shuttle Bus Service operates an inbound and outbound route between 7703 and 8403 Floyd Curl Drive campuses. The shuttles are traveling in opposite directions to allow passengers a shorter travel time depending on their location and destination. The shuttle operates
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. University Police Newsletter
   A monthly newsletter is published containing crime prevention information and a synopsis of crimes occurring on campus the previous month. It can be expanded as needed.

3. Special Crime Alerts
   If circumstances warrant, special crime bulletins can be printed and distributed throughout the campus.

4. Electronic Mail
   In extreme situations, crime bulletins can be prepared and disseminated, utilizing the campus electronic mail system.

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 Crime Awareness and Campus Security Act of 1990. Persons with questions about the information may contact the Chief of Police at (210) 567-2790. Information is available upon request.

Definitions

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 UT Health Science Center San Antonio 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.

Student: While not defined in the law, all persons who are registered during the current semester or take at least one course for credit may be considered “students.”

Employees: Full-time and part-time employees of the component with regularly scheduled hours of employment should be considered “employees.”

Law Enforcement and Security Information — IBT

The University of Texas Institute of Biotechnology (UTIBT) is part of the Health Science Center. Located within the Texas Research Park, the facility is 19 miles from the main campus in Medina and Bexar Counties.

Access to IBT Facilities

The UTIBT facilities are accessible to members of the campus community and their guests, patients, and visitors during normal business hours, 8 a.m.–5 p.m., Monday–Friday (excluding most holidays).

After normal business hours, weekends and holidays, the UTIBT buildings are locked. Persons needing entry must possess a card/key to enter. The electronic access control system can deny or allow access through a building's exterior doors and maintains a central record of which card/keys have been used (and when) to gain access.

All exterior building doors on the campus are equipped with electronic alarms that annunciate at the University Police Department when opened during prohibited hours. A police officer or security officer (guard) or both respond to each alarm.
Reporting of Criminal Actions, Suspicious Activities, or Emergencies

The University Police Department is the agency responsible for law enforcement, security, and emergency response at Texas Research Park.

To report a crime or emergency, members of the UTIBT campus community can easily contact the University Police Department by dialing ext. 7-2800. This number is answered by a trained police communications operator.

An outdoor telephone is located adjacent to the UTIBT’s front door. It allows a caller to communicate with the police communications operator on the main campus. The caller must dial ext. 7-2800.

Emergency Assistance regarding Fire/Smoke emergencies may be obtained immediately by dialing 911. The San Antonio Fire Department, Emergency Medical Service will respond.

Law Enforcement and Security Information — RAHC

The Harlingen Regional Academic Health Center (RAHC) is an extension campus of the Health Science Center, a state-supported member institution of The University of Texas System, which is located within the City of Harlingen, Cameron County, Texas. The 22-acre campus is located in the heart of the Valley Baptist Medical Center at 2102 Treasure Hills Blvd.

Access to RAHC Campus Facilities

The University Police Department operates 24 hours a day, seven days a week.

The Medical Education Division Building is accessible to members of the campus community and their guests and visitors during normal business hours (8 a.m.–5 p.m., Monday through Friday). Visitors and guests must register at the Security Desk if they are not accompanied by a university official.

The 1st Floor of the Medical Education Division Building is open to the general public during the Medical Library hours as follows:

- 7:30 a.m.–8:00 p.m. Monday through Thursday,
- 7:30 a.m.–5:00 p.m. Friday,
- Closed Saturday, and
- 1:00–6:00 p.m. Sunday.

Library guests are not required to register at the Security Desk; however, they are limited to access the 1st floor only. Students have access to classrooms in accordance with the class times and room scheduling. Students have access to the 1st Floor Student Lounge and Refreshment Center during Library hours. Students have access to the Library up to four hours after the Library closes. Students are encouraged to utilize the Medical Library for studying.

The campus building is locked after Medical Library hours and holidays. Persons needing to enter the building must possess a card/key for entry at designated late-entry doors. Late-entry doors are equipped with a card reader and have an intercom and closed-circuit television camera. The electronic access control system can both deny or allow access through a building’s exterior door and maintains a central record of which access cards have been used (and when) to gain access. All exterior building doors on the campus are equipped with electronic alarms which annunciate at the University Police Department when opened during prohibited hours. A police officer or security officer (guard) or both respond to each alarm. In case of emergency, call 956-365-8900.

Law Enforcement and Security Information — Laredo

The Regional Campus is an extension campus of the Health Science Center, a state-supported member institution of The University of Texas System, which is located within the City of Laredo, Webb County, Texas. The Laredo campus is located at 1937 Bustamante St., Laredo, Texas 78401.

Access to the Laredo Campus Extension Facilities

The University Police Department operates 7 a.m.–11 p.m., seven days a week.

The Regional Campus is accessible to members of the campus community and their guests and visitors during normal business hours (8 a.m.–5 p.m., Monday through Friday). Visitors and guests must register at the Security Desk if they are not accompanied by a university official.

The D. D. Hachar Building Library is open to students, faculty, staff, students, and Mercy Hospital employees.

Library hours are 7:00 a.m.–10 p.m., seven days a week.

Library guests are not required to register at the Security Desk; however, they are limited to access the 1st floor only as per Visitor Log Procedures.

Select faculty, staff, students, and residents have access to the building 7 a.m.–10 p.m., seven days a week. Students have free access to the 1st Floor Student Lounge and Refreshment Center at all times. Students are encouraged to utilize the Library for studying.

- 2nd Floor:
  - Room 2.400 Auditorium
  - Room 2.200 Classroom/lab
  - Room 2.700 Classroom

The campus building is locked after Medical Library hours and on holidays. Persons needing to enter the building must possess a card/key for entry at designated late-entry doors. Late-entry doors are equipped with a card reader. The electronic access control system can both deny or allow access through a building’s exterior door and maintains a central record of which access cards have been used (and when) to gain access. In case of emergency, call 956-237-5070.
Law Enforcement and Security Information — Edinburg

The Edinburg facility is an extension campus of the Health Science Center, a state-supported member institution of The University of Texas System that is located adjacent to The University of Texas-Pan American at 1214 W. Schunior Road, Edinburg, Texas 78539. All security and law enforcement services are provided via contract with the UT Pan American Police Department. All parking permits, keys, and IDs are issued through the Harlingen (RAHC) campus.

The Edinburg building is accessible to members of the campus community and their guests and visitors during normal business hours (8 a.m.–5 p.m., Monday through Friday). If they are not accompanied by a university official visitors and guests must register at the Security Desk. During non-duty hours, persons needing to enter the building must possess a card/key for entry at designated entry doors that are equipped with a card reader. The electronic access control system can both deny or allow access through a building’s exterior door and maintains a central record of which access cards have been used (and when) to gain access. In case of emergency, call (956) 316-7151.

Places where weapons are prohibited

A person commits an offense of the Texas Penal Code, 46.03, if, with a firearm, illegal knife, club, or prohibited weapon listed in Section 46.05(a), excluding small dispensers of mace or pepper spray, he/she intentionally, knowingly, or recklessly goes on the premises of a school or an educational institution, whether public or private, unless pursuant to written regulations or written authorization of the institution. “Premises” means a building or a portion of a building and also includes any vehicles used as transportation by the educational institution. The term does not include any public or private driveway, street, sidewalk or walkway, parking lot, parking garage, or other parking area. An offense under this section is a third-degree felony.

Things to do if you are a crime victim

- Contact the University Police as soon as possible.
- Inform the University Police communications operator of the description and direction of travel taken by the criminal. In the description of the criminal for the communications operator, include race, sex, clothing description, height/weight, color of hair/eyes, any unusual features or jewelry, and a description of the vehicle.
- Remember as much as possible about the criminal and relay that information to the communications operator.
- Remain on the telephone with the communications operator until he/she tells you to hang up.
- Do not confer with other individuals who may have been involved in the incident.
- Do not allow any person in or near the area where the incident took place.
- If a person is acting suspiciously in the area, call the University Police.
- Don’t be in harm’s way; avoid dangerous situations.
- Be aware of your surroundings.
- Jogging or bicycling should be done during daylight hours, if at all possible.
- Do not wear headsets when walking or bicycling as they prevent the wearers from hearing their surroundings.
- Always jog facing traffic to allow easy viewing of persons or vehicles as they approach.
- Avoid out-of-the-way places.
- Check the interior of a vehicle before entering.
- Lock all doors (office, lab, and car).
- Keep valuables out of sight (in the office, lab, and car). 
- Report all crimes and suspicious acts to the police.
- Use common sense—don’t become a victim. Be a good witness.
- Prevention is the best protection against crime!

Procedures to follow if sexual offense occurs

Immediately call the University Police if a sexual offense occurs on campus. If the offense occurs off campus, contact the local law enforcement agency.

Practice being observant – if assaulted or attacked, try to remember details about the assailant so that the assailant may be identified.

Don’t change clothes or take a bath or shower. All physical evidence, including seminal fluids, hair, blood types, and scrapings of flesh from the victim’s nails are used in court.

Be aware of the option to notify proper law enforcement authorities, including on-campus and local police and/or contact counselors, who will assist victims in notifying these authorities, if their assistance is requested. Individuals can avail themselves of the various professional referral programs located on campus. Other private organizations can be identified upon request.

The university will, if reasonably available, change the academic situation of a victim after an alleged sexual offense.

Procedures for campus disciplinary action in cases of an alleged sex offense

The procedures can be found for students in the section entitled Sexual Harassment and Sexual Misconduct in this Catalog. They include but are not limited to:

- The accuser and the accused are entitled to the same opportunities to have others present during a disciplinary proceeding; and,
- Both the accuser and the accused shall be informed of the outcome of any disciplinary proceeding.

Smoking Policy

One mission of the Health Science Center is to promote public health. For this reason, the entire campus is smoke free.
Student Consumer Information

In addition to the information in “Student Safety on Campus,” campus security and crime statistics information as outlined in the Student Right to Know and Campus Security Act is contained in this Catalog and is available from the Office of Student Services.

Information on the graduation rate is available from the Registrar.

As provided for in the Americans with Disabilities Act (ADA), The UT Health Science Center San Antonio will assist students with disabilities. (See Office of Student Life.)

Student Debts, E-mail Accounts, Papers

Student Debts

The university is not responsible for debts contracted by individual students or by student organizations and will not assume the role of a collection agency or arbitrate disputes between students and creditors. It does, however, expect students and organizations to discharge contractual obligations.

Student E-mail Accounts

Every student is issued a university e-mail address and account at the time when the student first enrolls. As a standing university policy, only the students’ university e-mail address shall be used for any electronic institutional communications of an official nature.

For help with your Health Science Center e-mail account, contact IMCSS Help Desk at Triage@uthscsa.edu or call 210-567-2069.

Student Guide

The Student Guide is an official publication of the Health Science Center and a companion piece to this Catalog. All students are responsible for knowing its contents as well. The Guide includes helpful information for students, as well as more school-specific information, such as clinic attire, helpful telephone numbers, student organizations, honors, etc.

Student Papers

Research papers and theses authored by students will be made available to interested members of the public.

Student Travel Policy

Texas Education Code Section 51.950 requires all state institutions adopt rules and regulations governing student travel as defined below by the U.T. Board of Regents:

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, sponsored, 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 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.

The Health Science Center does not plan, fund, or sponsor any school-related activity for students, using university-owned or leased vehicles, on sites more than 25 miles from its campuses. The university, however, encourages all students to observe the following guidelines when traveling away from campuses:

4. All occupants of 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.
5. All occupants of motor vehicles shall not consume, possess, or transport any alcoholic beverages or illegal substances.
6. 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 or state law or regulations, whichever is lower. In addition, when the luggage load is excessive, it is highly recommended the passenger load be reduced accordingly.
7. All operators of motor vehicles shall have valid operators’ licenses and be trained as required by law to drive the vehicles.
8. All 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.
9. 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.
10. When and if the Health Science Center rents cars for students to travel, all applicable requirements of the state contracts for rental cars and the Texas System Business Procedure Memoranda apply.
11. When traveling by common carriers, observe the carrier’s safety guidelines.
12. Each vehicle leased or owned by the institution must be subjected to scheduled periodic service and maintenance by qualified persons and comply with all applicable requirements of any U.T. System policy.

Handbook of Operating Procedures Policies

Information on the following topics may be found in the university’s Handbook of Operating Procedures (HOP).
*Communication with outside sources (media, officials, etc.)
*Use of copyrighted materials
*Information Security
*Political activities
*Request for Americans with Disabilities accommodations
*Employment of non-citizens
*International students with F visas
*Office of International Services
*Research Fraud/Misconduct
*Environmental policy—health and safety
*Environmental protection
*Chemical & biological safety
*Physical safety
*Violence in the workplace
*Select biological agents policy
*Confidentiality of patient health information
*Intellectual property policy
*Student information protection by Code of Ethics and Standards of Conduct
*Telephone number for bad weather information: 567-SNOW
*Disaster communication plan
*E-mail policy
*No Smoking policy on campus

^TOP
General Academic Policies

Click on an item in the list below to be taken to the location of its content.

- Admission Requirements & Application Procedures
- Common Application Form
- Guidelines for Student Admission Selection
- Texas Core Curriculum Requirements
- “Fresh Start” Admission
- Texas Success Initiative (TSI)
- Student Enrollment Policy
- Course Numbering
- Registration
- Classification of Students
- In Absentia

Admission Requirements & Application Procedures

Detailed information about admission requirements and application procedures is provided in the Viewbook of each school (http://studentservices.uthscsa.edu/prospects_apply.aspx). The Viewbooks are official publications of the Health Science Center and supplements to this Catalog.

Requests for admissions information are processed by the Office of the Registrar. The following Registrar’s offices are the sources of Applicant Viewbooks.

- Health Professions
- Dental
- Medicine
- Graduate
- Nursing
  UT Health Science Center Office of the Registrar Mail Code 7702 7703 Floyd Curl Dr. San Antonio TX 78229-3900

Common Application Form

The board shall make a common application form for undergraduate applicants available to the public electronically by the Internet or other commonly used telecommunications media and may contract with an institution of higher education or other provider to satisfy this requirement.

An undergraduate applicant may file, and each institution of higher education shall accept, an application for admission as an entering freshman or undergraduate transfer student that uses the appropriate form adopted under this section. 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.

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.

Guidelines for Student Admission Selection

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 possible, 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;
Admissions—Recommended High School Program, Standardized Test Scores

In addition to current university requirements for admission, applicants must also have either:

1. successfully completed the curriculum requirements for the recommended or advanced high school program or its equivalent; or
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.

Admissions—Children of Public Servants

Beginning with the 2008–2009 academic year, an applicant for admission as an undergraduate student is entitled to automatic admission if the applicant meets any minimum 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.

Texas Core Curriculum Requirements

Students who will be receiving their first baccalaureate degrees from The UT Health Science Center San Antonio must successfully complete the Texas Core Curriculum requirements. The core curriculum consists of 42 semester credit hours in specified component areas. Table 1 lists core curriculum requirements and courses that may be used to satisfy them.1

1Texas Common Course numbers are provided for guidance. Information is available online at http://www.tccns.org, click on ACGM (The Lower-Division Academic Course Guide Manual of Texas Higher Education Coordinating Board Community and Technical Colleges Division). Applicants are encouraged to contact the Office of the Registrar or the respective school/program office to inquire about other courses that may satisfy Core Curriculum requirements.

If a student’s transcript from another Texas public college or university indicates that the student has completed that institution’s core curriculum, no additional core curriculum requirements will be imposed. If a student has not completed the core requirement at another Texas institution prior to entering the
Health Science Center, the university will accept academic credits from another Texas public college or university core curriculum courses successfully completed, with grades of C or better only. The same requirements also apply to out-of-state students.

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.

“Fresh Start” Admission

Undergraduate Programs

An applicant for undergraduate admission who is a Texas resident may seek to enter this institution pursuant to the state’s “academic fresh start” statute, Texas Education Code 51.931. When the applicant informs the admissions office in writing of her or his election under the statute, the institution will not consider in the admissions decision any academic course credits or grades earned by the applicant 10 or more years prior to the starting date of the semester in which the applicant seeks to enroll. An applicant who makes the election to apply under this statute and is admitted as a student may not receive any course credit for courses taken 10 or more years prior to enrollment under academic fresh start.

Post-Graduate, Professional Programs

An applicant who has earned a baccalaureate degree under the “academic fresh start” statute, Section 51.931, and applies for admission to a post-graduate or professional program, will be evaluated only on the grade point average of the course of work completed for that baccalaureate degree and the other criteria stated herein for admission to the post-graduate or professional program.

Texas Success Initiative (TSI)

The UT Health Science Center San Antonio must assess the academic skills of each entering undergraduate student prior to enrollment (51.3062—Texas Success Initiative).

The following assessment instruments will be used to assess academic skills: ASSET and COMPASS (offered by ACT); ACCUPLACER (offered by The College Board); and THEA (formerly TASP test) offered by National Evaluation Systems, Inc.

Students admitted to undergraduate programs at the Health Science Center will be required to submit, prior to the end of their first semester, official documents verifying the student has met the minimum TSI standards. Official documents must be sent directly to the university Registrar from a previous college or university or from the testing agency (i.e., ACT, The College Board, or National Evaluation Systems).

The school or department in which a student is enrolled will advise students who have not met the minimum standards as outlined in the law. Working with the student, the school or department representative will determine a plan for academic success for the student.

Students enrolled in certificate programs of one year or less, are exempt from this requirement. The Emergency Medical Technology Basic and Paramedic certificate programs at the Health Science Center qualify for this exemption.

Individual students in other Health Science Center undergraduate programs may qualify for other exemptions. Exemptions for these students will be assessed on an individual basis.

State Approved Minimum Passing Standards for TSI Assessment Instruments

ASSET: Reading Skills – 41; Elementary Algebra – 38; Writing Skills (objective) – 40; and Written Essay – 6*

COMPASS: Reading Skills – 81; Algebra – 39; Writing Skills (objective) – 59; and Written Essay – 6*

ACCUPLACER: Reading Comprehension – 78; Elementary Algebra – 63; Sentence Skills – 80; and Written Essay – 6*

THEA: Reading – 230; Mathematics – 230; Writing – 220

*The minimum passing standard for the written essay portion of all tests is a score of 6. However, an essay with a score of 5 will meet this standard if the student meets the objective writing test standard.

Individual undergraduate programs at the Health Science Center may require higher passing standards. Students should consult with the appropriate program section of this Catalog for additional details about TSI passing standards specific to a program.

Student Enrollment Policy

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.

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 Registrar’s Office.

As proposed to amend by the Deans’ Council 10-20-09

Course Numbering

Each course consists of a prefix that represents the discipline (e.g., PHYL for Physiology, NURS for Nursing, SURG for Surgery) and a 4-digit number.

The Dental School uses the following numbering system:
First Digit is the level of course: 5=Freshman, 6=Sophomore, 7=Junior, 8=Senior. The Second, Third, and Fourth Digits distinguish one course from another within the discipline.

The Graduate School of Biomedical Sciences, the School of Health Professions, and Advanced Dental Education use the following numbering system:

The First Digit is the Level of course: 1=Freshman, 2=Sophomore, 3=Junior, 4=Senior, 5=Introductory Graduate,
Advanced Graduate, 7=Doctoral. The Second, Third, and Fourth Digits distinguish one course from another within the discipline.

The School of Medicine uses the following numbering system:
The First Digit is the Level of course: 1=Freshman, 2=Sophomore, 3=Junior, 4=Senior, 5=Enrichment Elective, 7=Senior Off-campus. The Second, Third, and Fourth Digits distinguish one course from another within the discipline.

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 credit for course in semester credit hours (0=variable semester credit hours). The Third and Fourth Digits distinguish one course from another within the discipline.

Registration

Official registration is conducted on dates specified in the academic calendar of each school.

No student may attend class, laboratory, or clinic until he or she is officially registered with tuition and fees (or an installment payment) paid.

If the curriculum of a program requires that a student take courses at both the Health Science Center and another institution concurrently, the student must register and pay tuition and fees at both institutions to be considered an enrolled student.

The Health Science Center requires that a student be registered for the semester or summer session in which he or she graduates.

Classification of Students

Undergraduate Students

Undergraduate students are classified according to the number of completed credit hours. The required number of hours of each classification is as follows:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Semester Credit Hours Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>Fewer than 30</td>
</tr>
<tr>
<td>Sophomore</td>
<td>30 or more, but less than 60</td>
</tr>
<tr>
<td>Junior</td>
<td>60 or more, but less than 90</td>
</tr>
<tr>
<td>Senior</td>
<td>90 or more</td>
</tr>
</tbody>
</table>

Full-Time/Part-Time

Undergraduate students officially enrolled at the Health Science Center for a minimum of 12 semester credit hours in the fall and spring semester, or in 6 semester credit hours in the summer semester, are considered full-time students. An undergraduate student enrolled in less than 12 semester hours in fall and spring, or less than 6 semester hours in the summer, will be classified as part-time.

Graduate Students

Students admitted to the Graduate School of Biomedical Sciences, and students admitted to a graduate program in the School of Nursing or School of Health Professions, are classified as graduate students.

Full-Time/Part-Time

Graduate students officially enrolled at the Health Science Center for a minimum of 9 semester credit hours in the fall and spring semester, or in 6 semester credit hours in the summer semester, are considered full-time students. A graduate student enrolled in less than 9 semester hours in fall and spring, or less than 6 semester hours in the summer, will be classified as part-time.

Final Credit Hours

A student in her/his final semester or summer session registering only for thesis or dissertation 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 hours for which he/she registers.

A student may register for final credit hours only once during her/his degree program. Forms are available in the Registrar’s Office or on the Internet.

Professional Students

Students admitted to the Dental School or the School of Medicine are classified as professional students. Students are identified by “curriculum year” within each school. A student completing the first-year curriculum is referred to as a “freshman” (DS1=dental student 1); a student completing the second-year curriculum is referred to as a “sophomore” (MS2=medical student 2); etc.

Students officially enrolled in professional school courses are considered full-time.

Post-Professional Students

Students admitted to the Advanced Dental Education certificate programs are classified as post-professional students.

Full-Time/Part-Time

Post-professional students officially enrolled at the Health Science Center for a minimum of 9 semester credit hours in the fall and spring semester or in 6 semester credit hours in the summer semester are considered full-time students. A post-professional student enrolled in less than 9 semester hours in fall and spring or less than 6 semester hours in the summer will be classified as part-time.
In Absentia

A student who expects to graduate in a semester when he or she will not be enrolled in courses at the Health Science Center must register in absentia for the purpose of having the degree conferred. A fee of $25.00 will be assessed.

Non-degree Student Status

Individuals who wish to enroll in courses presented in programs of the Graduate School of Biomedical Sciences, School of Nursing, or the School of Health Professions without entering a degree program may apply as a non-degree student under circumstances prescribed by those schools.

Residence Determination

The Registrar’s Office is responsible for determining residence status of students for purposes of tuition. The office is guided by the Texas Education Code (Section 54.052, et seq.) and the Rules and Regulations of the Texas Higher Education Coordinating Board (Chapter 21, Subchapter X), and university regulations. Under the state statutes and regulations a student or prospective student is classified as a resident of Texas, nonresident, or a foreign student.

A resident is an individual who is either a citizen, national or legal permanent resident of the U.S. or an alien who has been permitted by Congress to adopt the U.S. as her or his domicile while in this country and who has met the State’s requirement for establishing residency for tuition purposes; or an individual who has lived in the state for a specified period of time; resided with a parent or guardian while attending high school in this state; graduated from a high school in this state, resided in this state for at least 3 years as of that graduation; and provided an affidavit regarding establishment of permanent residency. A nonresident is a citizen, national or legal permanent resident of the U.S. or an alien who has been permitted by Congress to adopt the U.S. as her or his domicile while in this country and who has not met the State’s requirement for establishing residency for tuition purposes; or an individual who has not met the State’s requirement for establishing residency for tuition purposes; or an individual classified as a nonresident or foreign student.

A foreign student is an alien who is not a legal permanent resident of the U.S. or has not been permitted by Congress to adopt the U.S. as his/her domicile. An individual classified as a nonresident or foreign student may qualify, under certain exceptions specified in these rules, for resident tuition rates and other charges while continuing to be classified as a nonresident or a foreign student.

If residence status is not clearly established, students should seek information available in the Registrar’s Office before enrollment.

All students are required to complete a Core Residency Questionnaire and be required to provide documentation to affirm Texas residency. It is the student’s responsibility to register under the proper residency classification—resident or nonresident—and to notify the Registrar’s Office if the classification changes during enrollment.

A Residency Questionnaire must be completed and turned in to the Registrar’s Office prior to the census date of the term in order for a reclassification to be effective for that term.

Residence Classification

Residence status is determined by statutory provisions of the Texas Education Code (Section 54.052, et seq.) and the Rules and Regulations of the Texas Higher Education Coordinating Board, Chapter 21, Subchapter P (THECB Rules). Generally, students who have resided in Texas for 12 months immediately preceding the time of enrollment and have established domicile in the State are classified as residents.

TEC SECTION 54.052. DETERMINATION OF RESIDENT STATUS.

I. Subject to the other applicable provisions of this subchapter governing the determination of resident status, the following persons are considered residents of this state for purposes of this title:

A. A person who:
   1. established a domicile in this state not later than one year before the census date of the academic term in which the person is enrolled in an institution of higher education; and
   2. maintained that domicile continuously for the year preceding that census date;

B. A dependent whose parent:
   1. established a domicile in this state not later than one year before the census date of the academic term in which the dependent is enrolled in an institution of higher education; and
   2. maintained that domicile continuously for the year preceding that census date; and

C. A person who:
   1. graduated from a public or private high school in this state or received the equivalent of a high school diploma in this state; and
   2. maintained a residence continuously in this state for:
      a) the three years preceding the date of graduation or receipt of the diploma equivalent, as applicable; and
      b) the year preceding the census date of the academic term in which the person is enrolled in an institution of higher education.

II. For purposes of this section, the domicile of a dependent’s parent is presumed to be the domicile of the dependent unless the person establishes eligibility for resident status under Subsection (a)(3).

A person is required to complete and submit core residency questions and statements to establish residency. A person who applies for residency under Section 54.052 (a)(3) who is not a Permanent Resident or U. S. Citizen must complete an affidavit stating that he/she will file an application to become a per-
喃ient resident at the earliest opportunity he/she is eligible to do so.

**Waiver Programs for Certain Non-Resident Persons**

Some nonresidents may qualify to pay tuition at the resident rate, regardless of how long they have lived in Texas. (See “Financial Information.”)

**Oath of Residency**

Applicants sign an oath on the Application for Admission that attests to the truth and accuracy of information provided in that application which is used to determine residency. The submission of false information is grounds for rejection of the application, withdrawal of any offer of acceptance, cancellation of enrollment, or appropriate disciplinary action.

The student is responsible for registering under the proper residence classification and for providing documentation as required by the public institution of higher education. If there is any question as to right to classification as a resident of Texas it is the student’s obligation, prior to or at the time of enrollment, to raise the question with the administrative officials of the institution in which he or she is enrolling for official determination. Students classified as Texas residents must affirm the correctness of that classification as a part of the admission procedure. If the student’s classification as a resident becomes inappropriate for any reason, it is the responsibility of the student to notify the proper administrative officials at the institution. Failure to notify the institution constitutes a violation of the oath of residency and may result in disciplinary action and/or other penalties.

For additional information on these and other authorized non-resident tuition waivers, see THECB Rules, Chapter 21, Subchapter X, §21.735, [http://www.thecb.state.tx.us/Rules](http://www.thecb.state.tx.us/Rules).

**Concurrent Enrollment**

A student who is considered a Texas resident and is qualified to pay Texas resident tuition by one public institution, in which he is registered, will be considered a Texas resident for tuition purposes at each public institution at which he/she is simultaneously enrolled.

A student, whose residency status is in question and is concurrently enrolled at more than one public institution of higher education, must provide documentation of resident status from the originating institution to the Registrar’s Office prior to the census day of the term.

**Transfer of Credit**

Credit for semester hours of work completed at another institution toward prerequisites for admission or in lieu of the Health Science Center requirements must be approved by the faculty of the specific program to which the individual is applying. Official transcripts must accompany any request for transfer of credit.

The following procedures shall be followed by The UT Health Science Center San Antonio, in accordance with the policies of the Texas Higher Education Coordinating Board, in the resolution of credit transfer disputes involving lower-division courses:

1. 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;
2. the two institutions and the student shall attempt to resolve the transfer of the course credit in accordance with Board rules and/or guidelines;
3. 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 institution whose credit is denied for transfer shall notify the Commissioner of the denial.

The Commissioner of Higher Education or the commissioner’s designee shall make the final determination about the dispute concerning the transfer of course credit and give written notice of the determination to the involved student and institutions.

**Adding/Dropping Courses**

**Six-Course Drop Limit.** Legislation, applicable to all Texas public colleges and universities, passed by the Texas Senate (SB 1231) could seriously impact your college career. The following legislation applies to all students entering into any Texas public institution of higher education as a first-time freshman and thereafter.

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 (6) 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.

Notwithstanding the above, Health Science Center may permit drop(s) in excess of the six (6) 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:  
4. is considered to be a member of the student’s family; or  
5. is otherwise considered to have a sufficiently close relationship that demonstrates good cause;  
6. 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;
7. the change of a student’s work schedule or financial support situation that seriously affects the student’s ability to satisfactorily complete the course; or
8. 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 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.

Attendance

Attendance policies are the prerogative of the faculty of each school.

Clearance to Withdraw—Dismissal, Leave of Absence, Withdrawal

If a student leaves the Health Science Center through (1) withdrawal, (2) dismissal, or (3) leave of absence, the following procedure should be followed:

- The student must go to the Dean’s Office of her/his respective school to begin the process. If approved, the student will be directed to go to the Registrar’s Office in Student Services (319L MED) and request a Student Clearance Form.
- You MUST take the form to your associate dean and/or department chair (if applicable) to get approval (Section B) BEFORE getting the additional signatures in the “Holds” section (Section C).
- It is the student’s responsibility to obtain clearance in appropriate areas listed on the form such as the Library, laboratories, University Police, Student Financial Aid, Bursar’s Office, etc.
- If a student is receiving financial aid or has student financial aid debt, he/she must schedule an Exit Interview through the Student Financial Aid Office.
- See Financial Aid for specific information concerning effects of withdrawal on financial aid received.

It is not always possible to complete the clearance process in one day. Until a student is cleared in all areas, a “Hold” will be in force on her/his official transcript.

Leave of Absence

Generally, a leave of absence for a maximum of one year may be granted to a student in good standing by the school in which he or she is enrolled. In some cases, the school may extend the leave, depending upon extenuating circumstances. It is the responsibility of the student to initiate a request for a leave of absence, following the procedure established by the school. Policies for each school are contained in this Catalog.

Withdrawal

Withdrawal refers to the process whereby students remove themselves from all classes in which they are enrolled. To officially withdraw from the Health Science Center, a student follows procedures established by the school in which he or she is enrolled. Completion of a “Student Clearance Form” and an exit interview for students who are receiving financial aid are part of this process.

Administration Initiated Student Leave Policy

At The University of Texas Health Science Center San Antonio, students may request a temporary leave for cause. The extent and conditions for a leave are determined by an Assistant or Associate Dean of Student Affairs or other authorized reporting official of the respective school who completes Section B of the “Student Clearance Form.” However, on occasion, students do not officially request a leave. They simply “stop showing up” or “do not return after some program break.” These unexcused absent students risk program suspension or dismissal, or failing grades, which can result in program suspension or dismissal, if such students cannot be timely located or fail to timely contact the appropriate school official. Concurrent with these outcomes and dependent upon the date of the reported absence or known last class attendance date, such students also risk owing money to the federal government if they were recipients of federal financial aid.

Policy Initiation

An “Administration Initiated Student Leave Policy” shall be defined as an official leave initiated by an Assistant or Associate Dean of Student Affairs or other authorized reporting official in each school for student “no shows.”

Commencement of an Administration Initiated Student Leave

The “official date” for such unexcused absences, shall be either 1) the actual known date that the student was last seen in class; or 2) the date that the unexcused absent student was reported to the respective reporting official. In either case, the reporting official has no more than 14 days from the date of first personal knowledge to investigate, attempt contact, and to remedy the “no-show” status. Attempt to contact the student shall be accomplished via a means that can be documented such as e-mail notification with “read receipt” requested, U.S. Mail delivery to the last known address via certified mail, or via delivery service with a signed delivery acknowledgment. A notification method may be used in any order or frequency at the discretion of the reporting official. Failure to remedy the status, as provided above, mandates that the reporting official initiate and complete the “Student Clearance Form” indicating an Administration Initiated Student Leave.
Grading Process

The grades entered for a student, on an Administration Initiated Student Leave, will be determined by the individual schools due to differences in program requirements. However, the following process is recommended to provide consistency in grading applications regardless of the affected school or program.

1. If the investigation indicates leniency and no grading has been determined by the initiation date of the Administration Initiated Student Leave, such students may receive a grade of \( W \).
2. If the student was performing passing work at the time of placement on an Administration Initiated Student Leave and investigation supports leniency, such students may receive a grade of \( W \) or \( WP \).
3. If the student was not performing passing work at the time of placement on an Administration Initiated Student Leave and investigation shows no mitigation, such students may receive a grade of \( W \) or \( WF \).

Returning Student

An Administration Initiated Student Leave shall be viewed as a “forced leave of absence” initiated by a school for a student’s failure to provide notice to that school of her/his unexcused absence. Accordingly, upon the return or proposed return of the student, each school will follow its own established written policy for re-admission eligibility.

However, in the event that a student does not actually return until one year has elapsed, 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 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.

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.

Withdrawal for military service

Texas Education Code 54.006 (f)

A student who withdraws as a result of being called to active military service may choose: (1) to receive a refund of tuition and fees for the semester; (2) if eligible, to be assigned an incomplete (I) in each course; or (3) at the instructor’s discretion, to receive a final grade in courses where he or she has completed a substantial amount of coursework and has demonstrated sufficient mastery of the course material. Policies affecting students who are absent for military service but do not withdraw are given below.

Absence for military service

In accordance with Section 51.9111 of the Texas Education Code, a student is excused from attending classes or engaging in other required activities, including exams, if he or she is called to active military service of a reasonably brief duration.

The maximum time for which the student may be excused has been defined by the Texas Higher Education Coordinating Board as, “no more than 25 percent 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 currently enrolled at the beginning of the period of active military service.”

The student will be allowed a reasonable time after the absence to complete assignments and take exams. Policies affecting students who withdraw from the university for military service are given above.

Readmission Following Active Military Service

In accordance with Section 51.9242 of the Texas Education Code, 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 that begins within a year after the student’s release from active service. They are not required to take any final examinations, but they must complete courses by the last day of classes for the semester or summer session for which readmission is requested. The policy applies to students who withdraw for service with the United States armed forces or the Texas National Guard; however, it does not apply to students who withdraw solely to perform one or more training exercises as members of the Texas National Guard.

Satellite Campuses Procedures for Completing and Submitting Student Clearance Form

An administrator for the Health Science Center’s satellite locations will act as the Registrar designee. Students must contact this administrator to begin the procedure for withdrawal. The administrator will provide the student with a triplicate Student Clearance Form. The student must obtain all the signatures in Section C. If there is no comparable office at the satellite site

Approved by EC 11-03-09
for a signature, the student will contact the administrator for further instructions. After all sections are complete, the student must sign the form in the appropriate location (middle of form) and return to the administrator within 48 hours. The administrator will contact the appropriate offices (Registrar, Financial Aid, etc.) at the Health Science Center in San Antonio, give the student the yellow copy of the form, and mail the original white and pink copies, along with the short, original Financial Aid Copy form (from Step 2), to:

Registrar
UT Health Science Center San Antonio
Registrar’s Office-MSC 7702
7703 Floyd Curl Drive
San Antonio, TX 78229-3900

Upon receipt of the above mailed forms, the Registrar's Office will provide the appropriate San Antonio-based assistant/associate dean with the pink copy. The Dean's Office in San Antonio will notify affected course directors. The Registrar’s Office will provide official notice to the appropriate university offices.

NOTE: If approved to leave, the student should make sure to clear any holds he/she may have (e.g., police, library, health center, registrar, etc.).

Tuition for Repeated or Excess Credit Hours

Undergraduate Students: An undergraduate student who pays resident tuition rates shall be charged nonresident tuition rates 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. This policy is authorized by Section 54.014 of the Texas Education Code.

Graduate Students: 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. This policy is authorized by Section 54.012 of the Texas Education Code.

Grades, Promotion, 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 programs, as are issues of promotion and advancement.

Probation

Students are subject to being placed on either academic or administrative probation according to the policies of the school in which they are enrolled and/or the procedures and regulations governing Student Conduct and Discipline of the Health Science Center.

Dismissal

Students may be dismissed, suspended, dropped from the rolls, 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. (See General Regulations and Requirements.)

Readmission

In general, 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. Individuals who have completed the first year of a program may be readmitted, at the discretion of the faculty, on a space-available basis.

Graduation

The certificate or degree is awarded by the Board of Regents following the student’s completion of a prescribed course of study, the recommendation of the faculty, and the certification by the dean of the school and the president of the Health Science Center that the candidate has fulfilled all requirements for the certificate or degree.

Degrees are conferred and certificates awarded only on official dates publicly announced.

It is the responsibility of the candidate to apply for graduation the semester prior to anticipated graduation, and to file an Application for Degree/Certificate form (available in the Registrar’s Office). Apply by Dec. 1 for spring, March 1 for summer, and July 1 for fall.

As in any educational setting, the student has the primary responsibility for acquiring knowledge. In offering courses of study, the Health Science Center in no way guarantees that any student accepted for enrollment will achieve any given level of academic or professional accomplishment.

General and specific requirements for degrees may be altered in successive Catalogs. A student is bound by the requirements of the Catalog in force at the time of her/his admission; however, a student must complete all requirements within six years or be subject to degree requirements of subsequent Catalogs. The student who is required to or chooses to fulfill the requirements of a subsequent Catalog must have her/his amended degree plan approved by the appropriate dean.
Tuition and Fees*

Tuition and fees are due and payable prior to the published first class day for the term. Registration is not complete until tuition and fees are paid. Students should be prepared to make these payments or arrange for installments prior to the first class day of the enrollment period. Both tuition and fees are subject to change by legislative or regental action and become effective when enacted. Arrangements can be made to pay tuition and REQUIRED fees in as many as four installments, with the first installment due at Registration.**

*Tuition and Fees are subject to change by legislative or regental action and become effective on the date enacted. The Texas Legislature does not set the specific amount for any particular fee. The student fees assessed above are authorized by state statute; however, the specific fee amounts and the determination to increase fees are made by the university administration and The University of Texas System Board of Regents.

**HELP Loan recipients must use their disbursement check to pay the balance owed on total tuition, fees, or any other university debt.

Penalties for failing to make installments on time include:
(a) being barred from class until payment is made;
(b) 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;
(c) bar against readmission and withholding of grades, degree, and official transcript, and/or
(d) other remedies authorized by law.

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.

Students in the Professional Schools (Dental School and School of Medicine) pay tuition and fees based upon the curriculum for the academic year. 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.

Veterans and Service Members

Resident tuition and fee rates are available to certain veterans and service members, their spouses and children, if the veteran or service member is eligible for benefits under the federal Post-9/11 Veterans Educational Assistance Act of 2008 or any other federal law authorizing educational benefits for veterans. See Texas Education Code, Section 54.058.

The dependent child of a member of the Armed Forces, who is a resident of this state or entitled to pay resident tuition, is exempt from the payment of resident tuition for any semester or other academic term during which the member of the armed forces is deployed on active duty for the purpose of engaging in a combative military operation outside the United States. See Texas Education Code, Section 54.203 (b-2).

Disbursements

Financial Aid disbursements will be posted to a student’s tuition/fee account on or about 10 days prior to the first class day. Please contact the Bursar’s Office at (210) 567-2556 for information concerning residual balances.

Tuition 2009–2010

Tuition includes state-relegated Statutory Tuition, and Board of Regents-approved Designated and Differential Tuition established by the institution by school and program.

Dental School

<table>
<thead>
<tr>
<th></th>
<th>Residents</th>
<th>Nonresidents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$13,125 per academic year</td>
<td>$23,925 per academic year</td>
</tr>
</tbody>
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International Dentist Education Program (IDEP)

<table>
<thead>
<tr>
<th></th>
<th>Residents</th>
<th>Nonresidents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$42,125 per academic year</td>
<td>$52,925 per academic year</td>
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</table>

Advanced Dental Education

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Diagnostic Science</td>
<td></td>
</tr>
<tr>
<td>Department</td>
<td>Residents</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Endodontics-1st Year</td>
<td>$120.30</td>
</tr>
<tr>
<td>Endodontics-2nd Year</td>
<td>$148.00</td>
</tr>
<tr>
<td>All other</td>
<td>$160.00</td>
</tr>
<tr>
<td>School of Medicine</td>
<td>$12,970</td>
</tr>
<tr>
<td>Graduate School of Biomedical Sciences</td>
<td>$118</td>
</tr>
<tr>
<td>School of Health Professions</td>
<td></td>
</tr>
<tr>
<td>Clinical Laboratory Sciences</td>
<td>$131</td>
</tr>
<tr>
<td>Deaf Education and Hearing Science</td>
<td>$159</td>
</tr>
<tr>
<td>Dental Hygiene</td>
<td>$151</td>
</tr>
<tr>
<td>Dental Laboratory Science</td>
<td>$146</td>
</tr>
<tr>
<td>Dietetics &amp; Nutrition</td>
<td>$121</td>
</tr>
<tr>
<td>Emergency Health Sciences</td>
<td>$111</td>
</tr>
<tr>
<td>Occupational Therapy</td>
<td>$156</td>
</tr>
<tr>
<td>Physical Therapy</td>
<td>$176</td>
</tr>
<tr>
<td>Physician Assistant Studies</td>
<td>$170</td>
</tr>
<tr>
<td>Respiratory Care</td>
<td>$146</td>
</tr>
<tr>
<td>School of Nursing</td>
<td></td>
</tr>
<tr>
<td>Undergraduate</td>
<td>$177.46</td>
</tr>
<tr>
<td>Graduate</td>
<td>$200.46</td>
</tr>
</tbody>
</table>

Tuition for Joint Programs

Students in Clinical Laboratory Sciences or Biomedical Engineering joint program with The University of Texas at San Antonio may pay tuition and fees at both the Health Science Center and UTSA during some portions of the program.

Installment Payments

Payment of tuition and fees in installments may be an option for students. A fee of $15 is assessed to cover the costs related to providing installment payments. The following alternatives are available:

Medical and Dental Students

Option I
- 25% at Registration
- 25% 8 weeks later
- 25% 1 week after the midpoint of the academic year
- 25% 30 days after the 3rd installment

Option 2
- 50% at Registration
- 50% 1 week after the midpoint of the academic year

Graduate and Undergraduate Students
- one-half payment of tuition and fees in advance of the beginning of the semester (registration) and
- one-fourth payments prior to the sixth and eleventh class weeks

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

¹Per credit hour
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 same semester of the preceding year.

A non-resident student who believes he/she is qualified for one of the tuition waivers must provide documentation to the Registrar no later than the census date for the term in order for the application of the waiver to be considered for that term.

**Required Fees**

The following required fees, with the exception of the Identification Fee, Professional Liability Insurance premiums, Human Materials Fee, and the Late Registration Fee, are refundable according to the schedule of refunds outlined later in this section.

**All Students:**

- **Audit Fee** $5 per course - Health Science Center students and employees who are not registered for credit in other courses in that semester or session. Students who are enrolled less than full-time in nursing courses may audit additional nursing courses for an audit fee of $5 per course. Individuals who are not enrolled in nursing courses may audit nursing courses for a fee of $25 per course. Students must have permission of the instructor to audit a course.

- **Each student will be personally responsible for the costs of a required Criminal Background Check.**

- **Dissertation/Thesis Fee** $55/$45 - The student who expects to defend the dissertation or thesis in this interval should preregister for one credit hour for the next semester. Following the successful defense of the dissertation, the student may submit an add/drop card and register in absentia for the coming semester. Registration in absentia should be designated as zero credit hours on the course card. The fee for In Absentia Registration is $25 (fee not assessed EMT-SAFD contract students).

- **Excess Hours.** Students who have reached or exceeded the maximum number of credit hours will be required to pay non-resident tuition, beginning fall 2008, regardless of residency status. See Tuition for Repeated or Excess Credit Hours in the General Academic Policies section.

- **Fitness Center Fee** $180 for fall, $180 for spring, and $120 for summer - all students.

- **Graduation Fee** $60 - paid at the time of registration for the semester or summer session in which the student plans to graduate. The fee covers the cost of the diploma and its related expenses.

- **Human Materials Fee** of $500 per course - any student enrolling in a Gross Anatomy course. This fee is non-refundable.

- **Identification Card Fee** $10 - payable upon registration. This fee is not refundable and is required of all students. A fee of $10 will be charged for a replacement card.

- **Insurance.** Students enrolled in a health component institution of The University of Texas System in a program that involves direct patient care activities are required to purchase Professional Liability Insurance through the university as a prerequisite to enrollment. The policy extends coverage to the insured only in her or his student role.

- **Current premiums for students in the various programs are:**

<table>
<thead>
<tr>
<th>Program</th>
<th>Fee Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicine students</td>
<td>$25 per year</td>
</tr>
<tr>
<td>Dental students</td>
<td>$30 per year</td>
</tr>
<tr>
<td>Nursing students</td>
<td>$14.50 per semester</td>
</tr>
<tr>
<td>All Health Professions &amp; Nursing high risk programs students</td>
<td>$61 per year¹</td>
</tr>
<tr>
<td>Health Professions students²</td>
<td>$14.50 per semester</td>
</tr>
<tr>
<td>Physician Assistant students</td>
<td>$61 per year</td>
</tr>
<tr>
<td>All EMT except bachelor’s students</td>
<td>$61 per year</td>
</tr>
</tbody>
</table>

¹$41 fall and spring; $21 summer  
²Dental Laboratory Science students are not required to purchase liability insurance.

All³ students are required to have health insurance. Student Health Insurance is available through a group plan designed for students by the U.T. System. A student may enroll her or his spouse and/or children at an additional cost. The premiums vary accordingly. The annual premium in 2008-09, provided by United Healthcare, for a single student was $1,119 ($469 fall, $451 spring, $199 summer). Rates are also available for a spouse and/or children. If a student does not wish to purchase the United Healthcare policy, he/she must provide proof of major medical health insurance by the published payment due date for the term in which they are enrolled. Once paid, the United Healthcare insurance is nonrefundable.

³Students enrolled in a distance education course who do not attend courses on any U.T. System campus and who do not participate in clinical activities are exempt from the requirement to have health insurance.

**Laboratory Fees** are assessed to defray the cost of materials and supplies provided in the teaching programs. These fees are based primarily upon the amount of laboratory use each year of a program. The maximum fee is $32 per laboratory course per semester. This fee does not include breakage. Fees are noted in the course descriptions.

- **Late Registration Fee** $100 - any student paying tuition and fees on the first class day through the census day of the term. The fee is not refundable.

- **Library Fee** $90 per semester fall/spring, $60 summer - Graduate School of Biomedical Sciences, School of Health Professions, and School of Nursing students

- **Library Fee** $240 per year - Dental and Medicine students

- **Medical Service Fee** - all students. The semester rate is $55, summer rate $25, and annual rate $135.

- **A Microscope Fee** not to exceed $48 per year is assessed students in courses requiring a microscope. Maintenance is provided by the university. All MS1, MS2, DS1, and DS2 students pay $48 per year.
• The **Student Services Fee** - all students. $220 per academic year - Medicine and Dental students. Health Professions, Graduate, and Nursing students are assessed $7.50 per semester credit hour, not to exceed $90 per semester or $40 per summer session; $220 maximum per academic year.

• **Transcript Fee** $10 per transcript - all students

**Dental School:**

• **Application Fee** $45; International Dentist Education Program $150

• Annual **Clinical Usage Fee** $500 - all Dental students

• **Criminal Background Check Fee** $5 - Dental Year 1

• **Electronic Media Bundle** $1,750 including tax (2007 cost approx.) - DSI students purchase from the university Computer Store.

• Annual **Instrument Kit Rental Fee** $2,000 - DS1 & DS2; $1,800 - DS3 & DS4

• **Implantation Materials Fee** $500 - assessed to defray costs of implantation materials to sophomore Dental students.

• **Laptop Fee** $5600 - DS1 (includes hardware/software/technical support); $1800 - DS2, DS3, & DS4

• Annual **Technology Support Fee** $350 - all Dental students (fee is included in the DS1 laptop fee)

• **Testing Fee** $250 (non-refundable) - all Dental students

• **Pre-matriculation Training Fee** $2,500 - International Dentist Education Program

**School of Health Professions:**

• **Application Fee** $45

• **Clinical Laboratory Sciences Fee** $30 per semester credit hour - part-time Clinical Laboratory Sciences students, or a maximum of $350 per semester - full-time Clinical Laboratory Sciences students

• For the first two years of the program, an **Equipment Leasing Fee** $300 per fall and spring semesters - Physician Assistant Studies 1 & 2 students. Dental Laboratory Technology students will be charged $1650 for freshmen and $1000 for sophomores. Dental Hygiene students are charged $320 per semester.

• **Equipment/Supplies Rental Fee** $320 each semester - Dental Hygiene Certificate students

• **Instructional Technology Fee** $6 per semester credit hour - all Health Professions students

• **Leasing Fee** $650 - Dental Laboratory Technology students

• **Equipment Lease Fee** $300 max. semester - PA1 & PA2 students; $320 max. sem. - Dental Hygiene; $1,650 annual - DLS freshmen; $1,000 annual - DLS sophomores

• **Practicum Fee** $10 per credit hour - each practicum course

• **Student Assistance Fee** $50 per semester - full-time students and $25 per semester - part-time students, except CLS students - $350 full time and $30 part time.

**Graduate School of Biomedical Sciences:**

• **Application Fee** $10

• A **Microfilming Fee** of $55, covering the cost of microfilming the Ph.D. dissertation and publication of the abstract in *Dissertation Abstracts International*, is paid when the dissertation is completed. Master’s theses may also be microfilmed for a $45 fee, with the same provisions. The student will be responsible for all costs related to mailing their dissertations/theses and accompanying paperwork to Bell and Howell to be microfilmed. Consult with the Graduate Dean’s Office for detailed information.

**School of Medicine:**

• **Visiting Medicine students Application Fee** $25

• **Computer Access/Use Fee** $110 per year

• To defray the cost of consumable laboratory supplies, equipment, and other expenses associated with the Technical Clinical Skills Laboratory, a **Technical Clinical Skills Fee** of $400 per semester is assessed all Medical students.

**School of Nursing:**

• **Application Fee** $45

• **Counseling Fee** $65 - graduate nursing students

• **Computer Access/Use Fee** $5.00 per semester credit hour up to $50 per semester - All Nursing students

• To defray the cost of consumable laboratory supplies, equipment, and other expenses associated with the Technical Clinical Skills Laboratory, a **Technical Clinical Skills Fee** is assessed all Undergraduate Nursing students. Fees are $60 for Semesters 1, 2, and 4, and $30 for Semester 3. Graduate Nursing student fees are $60 for Semester 1 and $90 for all other semesters.

**Advanced Dental Education:**

• **Application Fee** $60

• **Instrumentation Usage Fee** of $2,000 per year - residents in Advanced Education Program in Endodontics to defray costs of advanced specialized instruments.

• A non-refundable **Pre-Matriculation Training Fee** of $2,500 is assessed each accepted student six weeks prior to registration to defray cost associated with preclinical training in the **International Dentists Education Program (IDEP)**. IDEP students are also assessed a **Testing Fee** of $250 to cover the acquisition, maintenance, and replacement of equipment associated with the Clinical Skills Assessment Test given to IDEP applicants.

**Other Expenses**

Nonrefundable **Application Fees** ranging from $10 to $45 are required by each school at the time the application is submitted to the **Office of the Registrar**. Fees vary and are listed for applicants in the Health Science Center ** Applicant Viewbooks** and printed on the application forms. Medical and Dental application fees (payable to **Texas Medical and Dental Schools Application Service**) are $55 for residents and $90 for nonresidents.

**Other application fees:**

| Visiting Medical Students | $25/course |

70
AADSAS Supplemental Application (Dental) | $45
International Dentist Education Program (IDEP) | $150

- **Challenge Examination Fees** are $25 for each lecture examination ($10 for CLS students) and $50 for each laboratory course exam ($15 for CLS students).
- **Computer Adaptive Test** fee is $38/semester for Nursing students.
- **Living expenses** (housing, meals, transportation, etc.) vary according to the individual choices of the student.
- An **Out-of-State Instructional Fee** of $200.00 per semester credit hour is charged to all non-resident students who live outside of Texas while they are taking a distance education course. Regular tuition will not be charged for these courses.
- A yearly **Parking Fee** varying from approximately $50 (motorcycles) to $698 (reserved) is assessed students who park vehicles on campus. The amount of the fee varies depending on the location of the space chosen by the student. Commuter permits are $25; bicycles are $12.48.
- **Program-specific expenses** include costs of textbooks, equipment, uniforms, manuals, instruments, specialty and licensing examination fees, and costs associated with clinical experiences and fieldwork. *For details consult your school’s associate dean for students.*
- A **Transcript Fee** of $10 is assessed to defray the cost of retrieving, duplicating, and mailing transcripts.

**Tuition and Fee Exemptions**

**Academic Common Market**

A. The Texas Higher Education Coordinating Board is hereby authorized to participate on behalf of the state of Texas in the interstate agreement known as the “Academic Common Market,” which provides reciprocal higher educational opportunities to the citizens of states declared as parties to the Southern Regional Education Compact.

B. The governing board of any public institution of higher education may propose programs and curricula for approval by the Texas Higher Education Coordinating Board that are to be offered to citizens of participating states on a resident tuition or registration fee basis.

C. Notwithstanding any other provisions of this code, the governing board of any public institution of higher education shall charge nonresident students from participating states normal tuition. Eligible students must:

1. be a resident of Texas as defined by Coordinating Board rules;
2. be a high school graduate or its equivalent (GED);
3. present a certificate, indicating that he/she is blind or a deaf person, issued by the Texas Commission for the Blind, or the Texas Commission for the Deaf and Hearing Impaired, as appropriate. The certificate is required for initial enrollment only and remains valid for subsequent enrollments at the institution in the student’s designated course of study;
4. provide proof that he/she meets the institution’s entrance requirements. An institution may establish special entrance requirements to fit the circumstances of deaf and/or blind persons.

**Accredited School Scholarship**

(Texas Education Code, Section 54.201)

The governing board of each institution of higher education may issue scholarships each year to the highest ranking graduate of each accredited Texas high school, exempting the graduates from the payment of tuition during first two semesters (long session) immediately following their graduation.

* Must have Regental and Texas Higher Education Coordinating Board approval

**Blind and deaf students**

The Texas Education Code, Section 54.205, provides that a blind disabled person or a person whose sense of hearing is nonfunctional shall be exempt from the payment of tuition, general property deposit, and required fees at public institutions of higher education in Texas. Such persons are not exempt from charges for books or supplies for which other students normally pay. Eligible students must:

1. be a resident of Texas as defined by Coordinating Board rules;
2. be a high school graduate or its equivalent (GED);
3. present a certificate, indicating that he/she is blind or a deaf person, issued by the Texas Rehabilitation Commission, the Texas Commission for the Blind, or the Texas Commission for the Deaf and Hearing Impaired, as appropriate. The certificate is required for initial enrollment only and remains valid for subsequent enrollments at the institution in the student’s designated course of study;
4. provide proof that he/she meets the institution’s entrance requirements. An institution may establish special entrance requirements to fit the circumstances of deaf and/or blind persons.

**Children of disabled/deceased Texas firefighters and law enforcement officers**

(Texas Education Code, Section 54.204)

For children under 21 years of age (or 22 if the student was eligible to participate in a special education under 29.003) of disabled full-paid or volunteer firefighters; full-paid municipal, county, or state peace officer; custodians of the Department of Criminal Justice; or game wardens whose disability or death occurred in the line of duty, are exempt from payment of tuition and required fees not to exceed 120 undergraduate credit hours or any semester begun after age 26.

**Children of prisoners of war or persons missing in action**

(Texas Education Code, Section 54.209)

Tuition and required fees may be exempted for a student who is a dependent person, under 25 years of age who receives a majority of support from a parent, and whose parent is a resident of Texas on active duty military and classified by the De-
part of Defense as a Prisoner of War or Missing in Action at the time of the student’s registration. Application packets for the Hazlewood Act exemption may be obtained from http://www.collegefortexans.com/cfbin/tofa2.cfm?id=31.

Children of Professional Nursing Program faculty

(Texas Education Code, Section 54.221)

The purpose of this program is to provide exemptions from the payment of tuition to eligible students to encourage their parents to continue employment as professional nurse faculty or teaching assistant in the state of Texas.

Eligible Students. To receive an award through the Exemption Program for Children of Professional Nursing Faculty, a student shall:

- be a resident of Texas age 25 or younger
- not have been granted a baccalaureate degree
- be enrolled at an institution that offers an undergraduate or graduate program of professional nursing
- be the child of a faculty member or teaching assistant in a nursing program in Texas
- be enrolled at the same institution that employs the parent/faculty member
- has not previously received an exemption under this section for 10 semesters or summer sessions

Proration of Exemption. If the parent is employed on less than a full-time basis, the value of the exemption is to be prorated in accordance with the parent’s employment load. Under no circumstances, however, is the exemption to be for an amount less than 25 percent of the student’s tuition.

Application Process. To apply for an exemption through this subchapter, a student shall submit to the institution a completed Professional Nursing Faculty and Staff Exemption Application.

Children of Texas veterans

(Texas Education Code, Section 54.203)

Exemptions for tuition, laboratory fees, and the general fee, not to exceed 150 credit hours, apply to a Texas resident who resided in the state at least 12 months immediately preceding the date of registration and meet the following eligibility requirements.

1. Children of members of the U.S. Armed Forces who 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 related to service in the U.S. Armed Forces, or who become totally disabled for purpose of employability according to the Dept. of Veterans Affairs disability rating as a result of a service-related injury.
2. Orphans or children of members of the Texas National Guard who, after January 1, 1946, were killed while on active duty or became totally disabled for purpose of employability according to the Dept. of Veterans Affairs disability rating as a result of a service-related injury.

Disabled Peace Officers

The governing board of an institution of higher education may exempt a student from the payment of tuition and required fees authorized by this chapter for a course for which space is available if the student:

1. is a resident of this state and has resided in this state for the 12 months immediately preceding the beginning of the semester or session for which an exemption is sought;
2. is permanently disabled 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
3. is unable to continue employment as a peace officer because of the disability.

Fees exclude class and laboratory fees. Exemption is not to exceed 12 semesters in the undergraduate program.

Distance/Off-Campus Learning

(Texas Education Code, Section 54.218)

This applies to students who are enrolled only in distance learning courses or other off-campus courses. Fees exempted are for activities, services, or facilities that the student cannot reasonably be expected to use.

Economic Hardship*

(Texas Education Code, Section 54.503[e])

This exemption applies when the payment of the general fees causes undue economic hardship. The number of exemptions is limited to five percent of total enrollment.

*Must have Regental and Texas Higher Education Coordinating Board approval

Educational aides

(Texas Education Code, Section 54.214)

The governing board of an institution of higher education shall exempt an eligible educational aide from the payment of tuition and fees, other than class or laboratory fees.

To be eligible for an exemption under this section, a person must:

1. be a Texas resident;
2. pursuing teacher certification;
3. be a school employee who worked as an educational aide at least one year during the five years preceding the semester of exemption;
4. establish financial need; and
5. maintain an acceptable grade point average as determined by Coordinating Board rule.

6. The Coordinating Board must certify a person’s eligibility to receive an exemption under this section. As soon as practicable after receiving an application for certification, the Coordinating Board shall make the determination of eligibility and give notice of its determination to the applicant, the institution of higher education at which the appli-
cant is enrolled, and the school district employing the person as an educational aide. The Coordinating Board shall adopt rules consistent with this section as necessary to implement this section. The Coordinating Board shall distribute a copy of the rules adopted under this section to each school district and institution of higher education in this state.

**Firefighters enrolled in fire science courses** *(Texas Education Code, Section 54.208)*

Firefighters enrolled in a course offered as part of a fire science curriculum may receive exemptions from tuition and laboratory fees.

**Adopted Children formerly in foster or other residential care** *(Texas Education Code, Section 54.211)*

Tuition and required fees may be exempted for foster children who were in foster care or other residential care under the conservatorship of the Department of Protective and Regulatory Services on or after the day preceding the individual’s 18th birthday, the day of the student’s 14th birthday if the student was eligible for adoption on or after that day, or the day the student received a high school diploma or equivalent; if the student enrolls not later than the third anniversary of the date of discharge from that care or the 21st birthday.

**Foster care or other residential care students** *(Texas Education Code, Section 54.211)*

A student is exempt from the payment of tuition and fees authorized by this chapter if the student:

1. was adopted; and
2. was the subject of an adoption assistance agreement under Subchapter D, Chapter 162, Family Code, that:
   A. provided monthly payments and medical assistance benefits; and
   B. was not limited to providing only for the reimbursement of nonrecurring expenses, including reasonable and necessary adoption fees, court costs, attorney fees, and other expenses directly related to the legal adoption of the child.

**Good Neighbor Scholarship** *

A limited number (as described by the Coordinating Board) of native-born citizens and residents from nations of the Western Hemisphere other than the United States, as authorized in the Texas Education Code, Section 54.207, shall be exempt from tuition as provided in this section.

Every applicant shall furnish satisfactory evidence, certified by the proper authority of her/his native country, that he/she is a bona fide native-born citizen and resident of the country which certifies her/his application and that he/she is scholastically qualified for admission.

**Must have Regental and Texas Higher Education Coordinating Board approval**

**Hazlewood Act** *(Texas Education Code, Section 54.203)*

The Hazlewood Act of the Texas Education Code provides exemption from the payment of tuition and most fees to eligible Texas veterans or the children of certain deceased/MIA/disabled veterans (see below).

**Nursing preceptors and their children** *(Texas Education Code, Section 54.222)*

The purpose of this program is to provide partial exemptions from the payment of tuition to eligible persons employed as clinical preceptors and to their children in order to encourage the preceptors to continue their employment and induce others to seek such employment in the state of Texas.

To receive an exemption ($500 off tuition per semester) under this program, a preceptor must be:

1. a Texas resident
2. a registered nurse
3. serving under legal contract as a clinical preceptor, or
4. a child 25 years or younger whose parent meets the criteria above, has not previously received a baccalaureate degree, and has not previously received an exemption under this section for 10 semesters or summer sessions.

**Prisoners of war**

Section 54.219 of the Texas Education Code provides exemption from tuition and required fees, student housing and food, contract cost, and textbooks costs, not to exceed 120 hours, for former prisoners of war. To qualify for the exemptions, the following requirements must be met:

1. Is a resident of Texas and was a resident of Texas at the time of original entry into the armed forces,
2. Was first classified as a POW on or after January 1, 1999,
3. Is enrolled for at least 12 semester credit hours.

**Surviving spouse and minor children of certain police, security, or emergency personnel killed in the line of public duty** *(Texas Government Code 615.0225)*

Exemption from payment of tuition and fees, student housing and food contract costs, and textbook costs extends to the surviving spouse or children of certain public peace officers, probation officers, parole officers, jailers, police reservists, firefighters, and emergency medical personnel whose death occurred in the line of duty as a result of risk inherent in the duty (not to exceed bachelor’s degree or 200 hours maximum and enrolled full time).
Temporary Assistance for Needy Families (TANF) students

Section 54.212 of the Texas Education Code states that a student is exempt from the payment of tuition and fees authorized by this chapter for the first academic year in which the student enrolls at an institution of higher education if the student:

1. graduated from a public high school in this state;
2. successfully completed the attendance requirements under Section 25.085;
3. during the student’s last year of public high school in this state, was a dependent child receiving financial assistance under Chapter 31, Human Resources Code, for not less than six months;
4. is younger than 22 years of age on the date of enrollment;
5. enrolls at the institution as an undergraduate student not later than the first anniversary of the date of graduation from a public high school in this state;
6. has met the entrance examination requirements of the institution before the date of enrollment; and
7. is a Texas resident.

Texas ex-servicemen (Texas Education Code, Section 54.203)

To qualify for exemptions, not to exceed 150 hours, Texas ex-servicemen, at the time of entry into the U.S. Armed Forces, must have been:

1. A resident of Texas for 12 months prior to registration
2. A bona fide legal resident of Texas at the time entered service
3. Served in U.S. Armed Forces in World War II, Korean Conflict, the Cold War, Vietnam, Grenada era, Lebanon, Panama, Persian Gulf, and/or the national emergency related to 9-11-01
4. Received an honorable discharge
5. Not eligible for federal education benefits

The Coordinating Board must certify a person’s eligibility to receive an exemption under this section. As soon as practicable after receiving an application for certification, the Coordinating Board shall make the determination of eligibility and give notice of its determination to the applicant, the institution of higher education at which the applicant is enrolled, and the school district employing the person as an educational aide.

The Coordinating Board shall adopt rules consistent with this section as necessary to implement this section. The Coordinating Board shall distribute a copy of the rules adopted under this section to each school district and institution of higher education in this state.

Title IV Refund

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

As an institution participating in programs under Title IV of the Higher Education Act, the Health Science Center is required to return a portion of the Title IV refunds a student received, back to the Title IV program from where the funds were originally dispensed, as a result of the student’s withdrawal from school. The portion returned is referred to as the Title IV Refund 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 or parent loans from the Federal Family Education Loan program, Perkins loans, Pell grants, or Supplemental Educational Opportunity Grants (SEOG).

The refund is required if the student does not register for, withdraws from, or otherwise fails to complete the period of enrollment for which the financial assistance was intended. No refund is required if the student withdrawals after a point in time that is sixty percent of the period of enrollment for which the charges were assessed. A student who withdraws prior to that time is entitled to a refund of tuition, fees, room and board, and other charges that is the larger of the amount provided in Section 54.006, or a pro rata refund calculated pursuant to Section 484B of the Act, reduced by the amount of any unpaid charges and a reasonable administrative fee not to exceed the lesser of five percent of the tuition, fees, room and board, and other charges that were assessed for the enrollment period, or one hundred dollars.

Return of Federal Funds Due to Withdrawal or Leave of Absence

Students withdrawing from the Health Science Center prior to completing 60% of the semester, and who have received Federal Title IV are required to return the unearned portion of funds received. Funds used to pay tuition and fees are returned by the Health Science Center to the appropriate federal fund on a pro rata basis. Thus a student on financial aid who withdraws after completing only 30% of the semester will have 70% returned to federal programs. This is NOT a refund of tuition and fees. 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. Student who are granted a leave of absence over 180 days are considered withdrawn as it relates to financial aid.

Refunds are distributed in the following order:

1. Unsubsidized Federal Stafford Loan
2. Subsidized Federal Stafford Loan
3. Federal PLUS Loan
4. Federal Perkins Loan
5. Federal Pell
6. Federal SEOG

Any questions regarding the return of Title IV programs should be directed to the Associate Director of Student Financial Aid or e-mail Nystrom@uthscsa.edu. Examples are available on request.

Fee Refund Schedule (Complete Withdrawal)

Both graduate and undergraduate students who withdraw from this institution during a fall or spring semester will receive a re-
fund 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.

100 percent prior to the first class day
80 percent during the first five class days
70 percent during the second five class days
50 percent during the third five class days
25 percent during the fourth five class days

No refunds will be made in the case of withdrawal after the fourth five-day period.

Students who withdraw during a summer term may receive a refund of tuition and applicable fees based on the following schedule:

100 percent prior to the first class day
80 percent during the first two class days
60 percent during the third five class days
50 percent during the fourth five class days
30 percent during the sixth class day
25 percent on the seventh class day
10 percent prior to the first day of classes

Notice of intention to withdraw must be made in writing to the Registrar. The institution terminates student services and privileges at the time of the student’s withdrawal.

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. 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.

Federal Financial Assistance

All students applying for admission to the Health Science Center are eligible to apply for federal financial assistance. Students in joint programs become eligible once they enter the professional phase of the program. To apply for all forms of financial assistance funded by state revenue, students agreeing to practice in long-term care facilities (Texas Education Code, Section 61.660) may require additional information to complete your application. Please take seriously all correspondence requests for information from the office, as all documents are required by federal regulation to process your application. Only send documents requested by the financial aid office. Do NOT send any other documents. Once all documents are received, your 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) if the student indicates on the FAFSA that they plan to enroll all terms.

The Health Science Center has a “priority” deadline of April 1 for applications for financial aid for the subsequent fall semester. Students who are entering a program in what the Health Science Center considers a summer semester (applies only to nursing, health professions, and advanced dental programs) must apply using the current FAFSA and the FAFSA for the next academic year. Students applying for aid after the priority deadline risk not having funds available at registration. However, in most cases, aid will be processed in less than a week, once the student has completed all document requirements. Student loans typically take two to three weeks to process by the state guarantee agency and the chosen lender.

Disbursement of financial aid occurs for students no earlier than 10 days prior to the first class day.

Selective Service Requirement

Students subject to selective service registration will be required to file a statement that the student has registered or is exempt from selective service registration in order to be eligible to apply for federal financial aid. In addition, the selective service requirement is also applicable to students applying for financial assistance funded by state revenue.

Tuition Assistance

The Texas Higher Education Coordinating Board administers various tuition assistance programs including programs for teachers and vocational nursing students. Further information about these programs may be obtained online at http://www.collegefortexans.com.

Teach for Texas Financial Assistance

(Purpose of Program; Loan Repayment Authorized)

http://www.hhloans.com/borrowers/TFTLRAPFactSheet.cfm

The purpose of this subchapter is to attract to the teaching profession persons who have expressed interest in teaching and to support the employment of those persons as classroom teachers by providing student loan repayment assistance for service as a classroom teacher in the public schools of this state.

The coordinating board shall provide, in accordance with this subchapter and board rules, assistance in the repayment of eligible student loans for persons who apply and qualify for the assistance.

Tuition assistance for vocational nursing students agreeing to practice in long-term care facilities

http://www.collegefortexans.com/cfbin/tof a2.cfm?ID=104

In addition to any other financial aid program established under this subchapter, the board shall establish and administer a tu-
tion assistance program for vocational nursing students attending any school or program in this state who agree, following licensure as a licensed vocational nurse, to practice in a long-term care facility in this state.

Scholarship Awards Policy

Twice annually, or as appropriate, the director of financial aid will submit scholarship information to the respective associate dean for student affairs. The following data will be supplied to each associate dean:

1. Name of the scholarship fund
2. Current amount available to be awarded
3. Award criteria and whether or not financial need is a consideration

Each school determines the selection method for making scholarship awards. A school may consider any of the elements contained within the university’s Guidelines for Student Admission Selection in awarding scholarships. Each school will identify the specific elements that will be used in awarding scholarships. Continuation of scholarship(s) is dependent upon academic performance. Recommendations for awards from the dean will be forwarded to the director of financial aid and the chairperson of the Loan and Scholarship Committee for approval at the next committee meeting.

Awards will be presented to the recipients at the appropriate times as determined by the respective associate deans and the director of financial aid. No scholarship dollars will be awarded to recipients without approval of the Committee.

Health Science Center Competitive Scholarships

The UT Health Science Center San Antonio offers Competitive Scholarships on a school-by-school basis as funds allow. All matriculating students are eligible to apply for competitive scholarships. Each school will develop specific guidelines and information for applying for and criteria for awarding the scholarships. The Competitive Scholarship must be recommended by the Scholarship Committee of each school, with final approval from the Health Science Center Scholarship and Loan Committee. Applicants should contact the appropriate school within the Health Science Center for information about the availability of scholarship funds and application information.

Non-resident students who are awarded a Competitive Scholarship of at least $1000 for the academic year are entitled to pay the tuition and fees required of Texas residents for the duration of the scholarship. The total number of students at the Health Science Center paying resident tuition under the Competitive Scholarship criteria must not exceed five percent of the total number of students at the Health Science Center. Competitive scholarships may be renewed for subsequent years based on satisfactory performance (as defined by the school) in the educational program and other factors at the discretion of the school.

Air Force Reserve Officers Training Corps Program

By agreement with The University of Texas Health Science Center at San Antonio, a student may obtain a commission as an officer in the U.S. Air Force upon completion of a baccalaureate or masters degree at the Health Science Center and completion of the Air Force Reserve Officers Training Corps (ROTC) program at The University of Texas at San Antonio (UTSA). Scholarships are available on a competitive basis. Scholarships provide tuition and fee assistance, a book allotment, and monthly subsistence allowance.

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 456-4624.
Policies and Procedures

Click on an item in the list below to be taken to the location of its content.

- Nondiscrimination Policy and Complaint Procedure
- Absences on Religious Holy Days
- Alcohol Policy for Student Organizations
- Animal Use Policy
- Change of Address
- Graduation Procedures
- Inclement Weather Policy
- Invitations to Elected or Appointed Officials
- Official Notification Procedure
- Personal Emergency Notification
- Health Science Center Fraud Policy
- Software Copyrights
- Student Publications
- Student Role in University Decision Making

Some of the following policies and procedures may be referenced in the various schools’ sections in this Catalog.

Nondiscrimination Policy and Complaint Procedure

STATEMENT OF POLICY
It is the policy of UT Health Science Center San Antonio to provide an educational and working environment that provides equal opportunity to all members of the university community. In accordance with federal and state law, the university prohibits unlawful discrimination on the basis of race, color, religion, sex, national origin, age, disability, citizenship, and veteran status. Discrimination on the basis of sexual orientation is also prohibited pursuant to university policy.

SCOPE OF POLICY
Student Policy in Student Publications
This policy applies to all university administrators, faculty, staff, students/residents, fellows, visitors, and applicants for employment or admission. This policy is the principal prohibition of all forms of discrimination on campus, except as follows:

- The university’s controlling policy and procedures relating to sexual harassment and sexual misconduct can be found in the Health Science Center Handbook of Operating Procedures, Chapter 4, Section 4.2, Policy 4.2.2., “Sexual Harassment and Sexual Misconduct.”
- Complaints concerning wages, hours of work, working conditions, performance evaluations, merit raises, job assignments, reprimands, and the interpretation or application of a rule, regulation or policy are governed by Handbook of Operating Procedures, Chapter 4, Section 4.9, Policy 4.9.5, “Grievance Policy and Procedures.”

DEFINITIONS

Discrimination, including harassment, is defined as conduct directed at a specific individual or a group of identifiable individuals that subjects the individual or group to treatment that adversely affects their employment or education on account of race, color, religion, national origin, age, disability, citizenship, veteran status or sexual orientation.

Harassment, as a form of discrimination, is defined as verbal or physical conduct that is directed at an individual or group because of race, color, religion, sex, national origin, age, disability, citizenship, veteran status, or sexual orientation when such conduct is sufficiently severe, pervasive, or persistent so as to have the purpose or effect of interfering with an individual’s or group’s academic or work performance; or of creating a hostile academic or work environment. Constitutionally protected expression cannot be considered harassment under the policy.

RESOLUTION OPTIONS
A person who believes that he or she has been subjected to discrimination or harassment in violation of this policy and seeks to take action may use either the informal resolution process or the formal complaint process, or both. The informal resolution and formal complaint resolution process described in this policy are not mutually exclusive and neither is required as a pre-condition for choosing the other; however, they cannot both be used at the same time.

INFORMAL RESOLUTION PROCESS
This process may be used as a prelude to filing a formal complaint or as an alternative. It is not necessary that this option be used. Anyone who believes that he or she has been subject to discrimination may immediately file a formal complaint as described below under “Complaint Procedures” below. Informal resolution may be an appropriate choice when the conduct involved is not of a serious or repetitive nature and disciplinary action is not required to remedy the situation. No formal investigation is involved in the informal resolution process.

1. Reporting. Students, residents or fellows wishing to use the informal resolution process should contact the appropriate Associate Dean for Student Affairs or the Associate Dean for Graduate Medical Education. All other individuals wishing to utilize the informal resolution process should contact the Equal Employment Opportunity/Affirmative Action (EEO/AA) Office.

2. Informal Assistance. The individual is provided assistance in attempting to resolve possible discrimination if the individual does not wish to file a formal complaint. Such assistance includes strategies for the individual to effectively inform the offending party that his or her behavior is offensive and should cease. Action should be taken by an appropriate university official to stop the offensive conduct, modify the situation in which the offensive conduct occurred, or begin mediation between the parties. However, the university may take more formal action to ensure an environment free of discrimination.
3. Timeframe. Informal resolutions will be completed within a reasonable amount of time from receipt of a request for informal resolution.

4. Confidentiality and Documentation. The university will document informal resolutions. The EEO/AA Office will retain the official documentation. The Associate Deans will forward documentation of informal resolutions to the EEO/AA Office at the conclusion of the process for which they are responsible to conduct. The university will endeavor to maintain confidentiality to the extent permitted by law. The university will attempt to find the right balance between the individual’s desire for privacy and confidentiality with the responsibility of the University to provide an environment free of discrimination prohibited by law.

COMPLAINT PROCEDURES
This complaint procedure also constitutes the grievance procedures for complaints alleging unlawful sex discrimination required under Title IX of the Education Amendments of 1972. As used herein, “complaint” is synonymous with “grievance.”

Reporting
- The Health Science Center encourages any person who believes that he or she has been subjected to discrimination to immediately report the incident to his or her appropriate supervisor, to the appropriate supervisor of the of the accused faculty member or employee, to the EEO/AA Office or when a student, resident or fellow is the accused individual, to the appropriate Associate Dean for Student Affairs or the Associate Dean for Graduate Medical Education of the School of Medicine. The complainant will be advised of the procedures for filing a formal complaint of discrimination. When a supervisor or Associate Dean for Student Affairs or the Associate Dean for Graduate Medical Education of the School of Medicine receives a complaint, he or she will immediately notify the EEO/AA Office.
- Complaints should be filed as soon as possible after the conduct giving rise to the complaint, but no later than thirty (30) working days after the event occurred. In the case of a currently enrolled student, if the last day for filing a complaint falls prior to the end of the academic semester in which the alleged violation occurred, then the complaint may be filed within thirty (30) calendar days after the end of that semester.
- In order to initiate the investigation process, the complainant should submit a signed, written statement setting out the details of the conduct that is the subject of the complaint, including the complainant’s name, signature, and contact information; the name of the person directly responsible for the alleged violation; a detailed description of the conduct or event that is the basis of the alleged violation; the date(s) and location(s) of the occurrence(s); the names of any witnesses to the occurrence(s); the resolution sought; and any documents or information that is relevant to the complaint. While an investigation may begin on the basis of an oral complaint, the complainant is strongly encouraged to file a written complaint. When a supervisor or the Associate Dean for Student Affairs or the Associate Dean for Graduate Medical Education of the School of Medicine receives a complaint with a written statement he/she shall immediately notify the EEO/AA Office.

Complaint Investigation
1. The Associate Dean for Student Affairs or the Associate Dean for Graduate Medical Education of the School of Medicine and/or the Executive Director of the EEO/AA Office, as appropriate, is responsible for investigating formal complaints. If the complaint is not in writing, the investigator should prepare a statement of what he or she understands the complaint to be and seek to obtain verification of the complaint from the complainant.
2. Within ten (10) working days of receipt of a complaint the Associate Dean for Student Affairs or the Associate Dean for Graduate Medical Education of the School of Medicine and/or the Executive Director of the EEO/AA Office as appropriate will authorize an investigation of the complaint.
3. As part of the investigation process, the accused individual shall be provided with a copy of the allegations and be given the opportunity to respond verbally and/or in writing within a reasonable time frame.
4. The complainant and the accused individual may present any document or information that is believed to be relevant to the complaint.
5. Any persons thought to have information relevant to the complaint shall be interviewed and such interviews shall be appropriately documented.
6. The investigation of a complaint will be concluded as soon as possible after receipt of the written complaint. In investigations exceeding sixty (60) days, a justification for the delay shall be presented to and reviewed by the Executive Director of the EEO/AA Office. The complainant, accused individual and supervisor will be provided an update on the progress of the investigation after the review.
7. Upon completion of the investigation, a written report will be issued. The report shall include: a recommendation of whether a violation of the policy occurred, an analysis of the facts discovered during the investigation, any relevant evidence and recommended disciplinary action if a violation of the policy occurred.
8. A copy of the report will be sent to the appropriate administrative official. Written notification of the findings of the investigation and outcome will be sent to the complainant and the respondent by the appropriate administrative official. The complainant and the respondent have seven (7) working days from the date of the notification letter to submit comments regarding the investigation to the administrative official. However, if a complaint is filed against a student then the complainant and respondent may not receive or comment on the notification letter in accordance with the Family Education Rights and Privacy Act’s restrictions on disclosure of educational records.
9. Within thirty (30) working days of receiving any comments submitted by the complainant or respondent, the appropriate administrative official will take one of the following actions:
   a) request further investigation into the complaint;
   b) dismiss the complaint if the results of the completed in-
vestigation are inconclusive or there is insufficient reason-
able, credible evidence to support the allegation(s); or
c) find that this policy was violated. A decision that this
policy was violated shall be made upon the record pro-
vided by the investigator and any comments submitted by
the complainant or respondent; and shall be based on the
totality of circumstances surrounding the conduct of com-
plained of, including but not limited to; the context of that
conduct, its severity, frequency, whether it was physically
threatening, humiliating, or was simply offensive in nature.
Facts will be considered on the basis of what is reasona-
able to persons of ordinary sensitivity and not on the partic-
ular sensitivity or reaction of an individual.

10. If the appropriate administrative official determines that
this policy was violated, he or she, will take disciplinary ac-
tion that is appropriate for the severity of the conduct. Dis-
ciplinary actions can include, but are not limited to: verbal
reprimands, written reprimands, the imposition of condi-
tions, reassignment, suspension, and dismissal.

11. The complainant and the respondent shall be informed in
writing of the administrative official’s decision. However, if
a complaint is filed against a student, then the determina-
tion letter sent to the complainant will be written in com-
pliance with the Family Education Rights and Privacy Act.

12. Implementation of disciplinary action against faculty and
employees will be handled in accordance with the univer-
sity’s policy and procedures for discipline and dismissal of
faculty and employees. The Associate Dean for Student
Affairs or the Associate Dean for Graduate Medical Edu-
cation of the School of Medicine will impose disciplinary
action, if any, against a student, resident, or fellow in ac-
cordance with the university’s appropriate disciplinary pro-
cedures.

PROVISIONS APPLICABLE TO ALL COMPLAINTS

Assistance. During the complaint process, a complainant or
respondent may be assisted by a person of her or his choice;
however, the assistant may not examine witnesses or other-
wise actively participate in a meeting or interview.

Retaliation. An administrator, faculty member, student, resi-
dent, fellow or employee who retaliates in any way against an
individual who has brought a complaint pursuant to this policy
or an individual who has participated in an investigation of such
a complaint is subject to disciplinary action, including dismis-
sal.

False Complaints. Any person who knowingly and intentional-
ly files a false complaint under this policy or any person who
knowingly and intentionally makes false statements within the
course of the investigation is subject to disciplinary action up to
and including dismissal from the University.

Confidentiality and Documentation. The University shall
document complaints and their resolution. The EEO/AA Office
shall retain the official documentation. The Associate Deans
will forward documentation of resolutions to the EEO/AA Office
at the conclusion of the process for which they are responsible
to conduct. To the extent permitted by law, complaints and in-
formation received during the investigation will remain confi-
dential. Relevant information will be provided only to those
persons who need to know in order to achieve a timely resolu-
tion of the complaint.

DISSEMINATION OF POLICY

The policy will be made available to all faculty, employees,
students, residents, and fellows. Periodic notices sent to stu-
dents, residents, fellows, employees, and faculty about the
university’s Nondiscrimination Policy will include information
about the complaint procedure and will refer individuals to des-
ignated offices for additional information.

The university periodically will educate and train employees
and supervisors regarding the policy and conduct that could
constitute a violation of the policy.

Absences on Religious Holy Days

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) no
later than the fifteenth day after the first day of the semester.

A “religious holy day” is a day observed by a religion whose
place of worship is exempt from property taxation.

Notification to instructors must be accomplished by the use of
a standard form (Notification of Planned Absence To Observe
a Religious Holy Day) available from the Registrar’s Office that,
upon completion, will meet the policy requirements of the un-
iversity regarding absences for observance of a religious holy
day. The Notification of Planned Absence To Observe a Reli-
gious Holy Day form is initiated by the student and signed and
dated by the instructor.

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. 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.

This policy will be followed unless it interferes with patient care.

Alcohol Policy for Student Organizations

Approval to serve alcoholic beverages will only be given to offi-
cial student functions sponsored by the Office of Student Ser-
vices, such as the on-campus individual school picnics held at
the beginning of the academic year and selected on-campus
SGA events. The chief student affairs officer shall petition the
president’s office for the official designation of selected events.

In implementing a university policy on the service of alcohol, all
Health Science Center student events approved for alcohol
must complete the Request for Alcoholic Beverages on Cam-
pus for Student Organizations from the Office of Student Ser-
vices and comply with the following requirements:

1. Provide designated drivers.
2. Utilize designated servers who have been certified by the Texas Alcoholic Beverage Commission.
3. Provide nonalcoholic beverages.
4. Provide food.
5. Check current, valid picture driver’s licenses — must have birth date.
6. Have a University faculty advisor or her/his designee present at this event.
7. Have sufficient University Police officers based on number of attendees and type of event.

Failure to comply with these requirements will result in a loss of privileges regarding use of alcohol on campus.

See the HSC Policy on Alcohol, Drug, and Chemical Abuse in this Catalog.

Animal-Use Policy

All animals used for teaching, training, and research, or any other activities by faculty, staff, and students on this campus or elsewhere, shall be used and cared for in accordance with all applicable provisions of the Animal Welfare Act and other federal statutes and regulations relating to the humane care and use of laboratory animals. Misuse or abuse of laboratory animals will not be tolerated and should be reported to the Institutional Animal Care and Use Committee.

The Health Science Center offers courses in which laboratory animals are an integral part of the curriculum. Although students are encouraged to take advantage of every educational opportunity offered, they are not required to participate in manipulations involving laboratory animals. In some cases, alternative exercises may be substituted at the discretion of and in consultation with the course director.

Change of Address

A student’s current address, e-mail address, and telephone number should be on file with the Registrar at all times. If a student moves, even temporarily, he/she must inform the Registrar. Often, persons must contact students to relay emergency messages from relatives, the Student Financial Aid Office, Deans’ offices, etc. Students may change their address, etc. on the Web at http://inside.uthscsa.edu.

Students will be held responsible for official notices from the university e-mailed to her/his campus e-mail address of record or mailed to her/his local address the student has given the school. Students are reminded to check email and mailboxes regularly. (See “Official Notification Procedure” in this section.)

International Students Change of Address

According to the U.S. Immigration and Nationality Act, almost all non-U.S. citizens are required to report the change of their addresses within TEN (10) days of moving to a new address. All aliens who are Permanent Residents (Green Card holders) must also comply with this Law. The aliens exempt from this requirement are listed below:

1. Persons who hold U.S. visas A or G at the present time
2. Persons who do not possess a U.S. visa (for example, WB, WT, and some TN status holders)
3. Persons in the U.S. for less than 30 days with a U.S. visa

The penalties for failure to obey this U.S. law are as follows:

1. Fined up to $200;
2. Imprisoned up to 30 days; or
3. Both fine and imprisonment;
4. Being subject to deportation from the U.S.;
5. Jeopardizing the alien’s abilities to obtain a future U.S. visa and other immigration benefits.

If a U.S. Citizen has financially sponsored an alien for immigration, the Citizen is required by law to notify U.S. CIS of any change of address within 30 days of move by completing form I-865 (http://www.uscis.gov/files/form/I-865.pdf).

If a Permanent Resident (Green Card holder) has financially sponsored an Alien who has immigrated to the U.S., the Permanent Resident is required by law to notify U.S. CIS of any change of address within 30 days of move by completing the form I-865 in addition to the Form AR-11 (http://www.uscis.gov/files/form/ar-11.pdf) within 10 days.

If you have any questions regarding this matter, please consult the Office of International Services at 567-6241.

Graduation Procedures

Candidates for certificates/degrees are required to complete the following procedures:

- Apply for graduation by July 1 for fall; November 1 for spring; and March 1 for summer.
- Complete and return to the Registrar’s Office the university’s Application for Degree and Diploma Name form in the semester before anticipated graduation.
- Register in the semester the certificate or degree is to be conferred.
- Attend an Exit Interview session scheduled by the Student Financial Aid Office for students who have received financial assistance that must be repaid after graduation.

Invitations to commencement ceremonies can be ordered through the Bookstore that also makes arrangements for academic regalia for students and faculty.

The student’s “diploma name” as requested in the Application for Degree and Diploma Name form is printed on her/his diploma, and information provided by the student is used in commencement programs.

Class pictures (a composite of individual photos) of graduating classes in the School of Nursing may be ordered by degree candidates. Individual photographs are taken and order blanks supplied prior to commencement ceremonies. Pictures must be paid for at the Bursar’s Office. The finished product is mailed by the photographer to students who have ordered and paid for class pictures.

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Group pictures are taken at commencement rehearsals for students in Health Professions, Nursing, Medicine, and Dental schools. Individual photos of each graduate receiving her/his diploma or certificate may also be made at the ceremonies. Students may order copies and pay the photographer, who will mail prints to students when they are ready.

Inclement Weather Policy

During severe weather, students, faculty, and staff are expected to meet their responsibilities if they can safely travel. Those who are unable to do so are expected to notify (in the case of students) their faculty or program office and any clinical agency if they are involved in rotations or clinicals off campus and cannot travel safely.

The President may declare an "extreme weather closure" if conditions are such that the university will remain closed. The university’s Web site will announce any emergency preparedness/campus status information at http://www.uthscsa.edu/status.asp. The local news media usually announces the closure no earlier than 9 p.m. on the evening preceding the closure or no later than 7 a.m. on the day of closure. Local radio and television stations usually carry messages from the university regarding closures.

Invitations to Elected or Appointed Officials

So that appropriate protocol may be followed, all invitations to elected or appointed officials (city, county, state, or national) to visit the Health Science Center campus shall be coordinated through the President’s Office prior to the invitation being extended.

The Health Science Center always welcomes elected or appointed officials to the campus and any such visit always receives a high priority. Officials in the President’s Office will be able to assist other offices in matters pertaining to protocol, publicity guidelines (if applicable), and other details that will help ensure that the visit meets all expectations.

It is not the intention to restrict any such invitation from being extended; rather, it is to facilitate the details that often surround such an occasion and to insure that important protocol and procedural matters are considered.

Official Notification Procedure

Official notifications from faculty and administration are sent to the student’s campus e-mail address in most instances. Exceptions are official communications involving issues of promotion status, dismissal proceedings, or disciplinary matters. Such correspondence is sent to the local address the student has given the school and is mailed with a “Return Receipt Requested” notice to the U.S. Postal Service. (A copy also is sent to the student’s campus mailbox.)

Personal Emergency Notification

During business hours, persons wishing to contact students because of an emergency are directed to call the appropriate office of the Associate Dean for Students. Nursing students may be reached for emergency messages by calling Nursing’s student services office at 567-5807; graduate students by calling the student’s department office; and health professions students by calling the office of the program in which the student is enrolled. Office numbers can be found in the Health Science Center Faculty and Staff Directory.

After-hours calls should be made to University Police, at 210-567-2800, who will contact the appropriate administrator.

Health Science Center Fraud Policy

Management is responsible for establishing internal controls and other systems to prevent or detect fraud. Each manager should be familiar with the types of fraud that might occur within her/his area of responsibility and be alert for any indication of fraud.

Detected or suspected fraud must be reported immediately to the Assistant Vice President for Internal Audit & Consulting Services who is responsible for coordinating all investigations (both internal and external) and for the administration, interpretation, and application of this policy.

Scope

The conditions of this policy apply to any fraud, or suspected fraud, involving faculty, staff, students, vendors, or outside agencies doing business with the Health Science Center.

Actions Constituting Fraud

As used in this policy, the term “fraud” shall mean any defalcation, misappropriation, and/or other fiscal irregularities that would include but are not limited to:

- any dishonest or fraudulent act;
- forgery or alteration of any document or account belonging to the Health Science Center;
- forgery or alteration of any check, bank draft, or any other financial document;
- misappropriation of funds, supplies, or other assets;
- impropriety in the handling or reporting of money or financial transactions;
- accepting or seeking anything of material value from vendors or persons providing services/material to the Health Science Center;
- destruction or disappearance of records; AND/OR
- any similar or related irregularity.

Non-Fraud Irregularities

It is possible that certain allegations involving fraudulent activities covered by this policy may also involve violations of other university policies, criminal law, or the regulations of various state and federal agencies. When the Assistant Vice President for Internal Audit & Consulting Services determines that the allegations relate solely to the violation of other policies, the
Assistant Vice President for Internal Audit & Consulting will refer the matter to the appropriate official with responsibility for other such policies. In cases where the allegations appear to constitute fraud as defined in this policy and violate other regulations, the Assistant Vice President for Internal Audit & Consulting shall meet with the officials responsible for the other policies and together with management develop a plan for conducting the investigation.

Investigation Responsibilities

The Assistant Vice President for Internal Audit & Consulting Services has the primary responsibility for coordinating and performing specific financial and administrative investigations and will issue reports to the appropriate senior management personnel as deemed appropriate.

Decisions to prosecute or turn matters over to appropriate law enforcement and/or regulatory agencies for independent investigation will be made in conjunction with University Police and senior management.

Confidentiality

The Assistant Vice President for Internal Audit & Consulting Services is receptive to receiving relevant information on a confidential basis from a Health Science Center faculty member, staff, or student who suspects dishonest or fraudulent activity. That individual should contact the Assistant Vice President for Internal Audit & Consulting Services immediately, and should not attempt to personally conduct investigations or interviews/interrogations related to suspected fraud.

Authorization for Investigating Suspected Fraud

In those instances in which the Assistant Vice President for Internal Audit & Consulting Services believes it to be in the best interests, members of the Office of Internal Audit & Consulting Services have the authority and duty, after consulting with appropriate management, to:

- take control of, and/or gain full access to, all Health Science Center premises, whether owned or rented; and
- examine, copy, and/or remove all or any portion of the contents of files, records, desks, cabinets, and other storage facilities on the premises without prior knowledge or consent of any individual who may use or have custody of any such items or facilities.

Reporting Procedure

Care must be taken in the investigation of suspected fraud so as to avoid mistaken accusations or alerting suspected individuals that an investigation is under way. An employee who discovers or suspects fraudulent activity should contact the Assistant Vice President for Internal Audit & Consulting Services immediately.

The reporting employee must adhere to the following restrictions:

- Do not contact the suspected individual in an effort to determine facts or demand restitution.
- Do not perform any investigative procedures.
- Do not discuss the case, facts, suspicions, or allegations with anyone outside the Health Science Center.
- Do not discuss the case with anyone inside other than the Office of Internal Audit & Consulting Services or other authorized university officials who have a legitimate need to know.

Administration

The Assistant Vice President for Internal Audit & Consulting Services is responsible for the administration, interpretation, and application of this policy.

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.

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 immediately.

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.

Details of the U.T. System and university policies regarding copyrighted materials may be found in the Handbook of Operating Procedures. For additional information, check the U.T. System's Office of General Counsel home page at http://www.utsystem.edu/OGC/.

Student Publications

A student government association (including representatives from each school) has the right to prepare and distribute newsletters, bulletins, and other forms of publications provided that when taking a position on an issue, the publication shall make clear that it does not speak for the institution.

Anonymous publications are prohibited by the Rules and Regulations of the Board of Regents.

UPDATE is a newsletter for students produced by the Office of Student Life. UPDATE is generally published monthly, September–May.
This Catalog, the Student Guide, and Applicant Viewbooks for all five schools are official publications of the Health Science Center. They are published by the Office of Student Services.

**Student Role in University Decision Making**

University decision making is accomplished through the work and recommendations of Health Science Center committees made up of faculty, staff, and students.

Student representatives are appointed to university-wide committees that consider issues directly affecting students. Student representative nominees are to the Health Science Center committees are made by the assistant/associate dean of student affairs in each of the schools. Students interested in serving on these committees should contact the appropriate dean. Student representative nominees are presented to the president who makes all the committee appointments. Recommendations for appointment to these committees are made by the assistant/associate deans of student affairs in each of the schools. Students interested in serving on these committees should contact their respective dean. Student representatives may also be invited to sit on respective school committees. Such invitations are extended by the individual schools.

The committees’ charges and numbers of students appointed to the committees appear in the “Procedures, Responsibilities, and Requirements” section of the Student Guide.
Student Conduct and Discipline

Students are responsible for knowing and observing these university’s procedures and regulations governing Student Conduct and Discipline.

In summary, the procedures and regulations provide that the person acting as Associate Dean for Students of each school shall have direct responsibility for the administration of the disciplinary process in cases concerning scholastic dishonesty and professional misconduct.

The chief student affairs officer has direct responsibility for the administration of the disciplinary process in areas not directly related to the academic or professional training of the student.

If after investigation of an alleged violation of the procedures and regulations governing Student Conduct and Discipline, the Associate Dean for Students or the chief student affairs officer determines the allegations are not unfounded, he/she will prepare a written statement of charges and a summary statement of the evidence and present the statements to the accused student.

If the accused does not dispute the facts and waives a hearing, the chief student affairs officer or the person acting as Associate Dean for Students assesses a penalty consistent with those outlined in the regulations. If the student disputes the facts, a hearing officer will be selected to hear evidence, to adjudicate guilt or innocence, to render a written decision, and to impose a penalty if one is due. The decision may be appealed to the Health Science Center President.

Penalties which may be imposed include a warning; probation; a financial penalty when property damage is involved; suspension of rights and privileges deriving in whole or part from the university; suspension of eligibility for office or honor; loss of credit for scholastic work; reduction of the grade in an assigned course; a failing examination grade; a failing grade in the course; suspension from the university; expulsion; withholding of grades, official transcripts, or degrees; or other penalty imposed by the hearing officer/ committee, the chief student affairs officer, or the Associate Dean for Students.

The U.T. Board of Regents Rules and Regulations below should be consulted in reference to questions concerning conduct and discipline.

2. Rules and Regulations Sec. 1 Institutional Rules. The institutions shall adopt rules and regulations concerning student conduct and discipline. Such rules shall be in compliance with the Regents’ Rules and Regulations and shall become effective upon review and approval by the Executive Vice Chancellor for Health Affairs or the Executive Vice Chancellor for Academic Affairs. Each student is responsible for notice of and compliance with the provisions of the Regents’ Rules and Regulations and the rules of the institution.

Sec. 2 Standards of Conduct. All students are expected and required to obey federal, state, and local laws, to comply with the Regents’ Rules and Regulations, with The University of Texas System and institutional rules and regulations, with directives issued by an administrative official of the U. T. System or institution in the course of his or her authorized duties, and to observe standards of conduct appropriate for an academic institution.

2.1 Who is Subject to Discipline. Any student who engages in conduct that violates the Regents’ Rules and Regulations, the U.T. System or institutional rules and regulations, specific instructions issued by an administrative official of the institution or the U.T. System acting in the course of his or her authorized duties, or federal, state, or local laws is subject to discipline whether such conduct takes place on or off campus or whether civil or criminal penalties are also imposed for such conduct.

2.2 Scholastic Dishonesty. Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty 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 examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

2.3 Drugs. Any student who is found responsible for the illegal use, possession and/or sale of a drug or narcotic on the campus of an institution is subject to discipline. If a student is found responsible for the illegal use, possession, and/or sale of a drug or narcotic on campus, the sanction assessed shall be
2.4 Health or Safety. Any student who engages in conduct that endangers the health or safety of any person on the campus of an institution or on any property, or in any building or facility owned or controlled by the U.T. System or institution is subject to discipline.

2.5 Disruptions. Any student who, acting singly or in concert with others, obstructs, disrupts, or interferes with any teaching, educational, research, administrative, disciplinary, public service, or other activity or public performance authorized to be held or conducted on campus or on property or in a building or facility owned or controlled by the U.T. System or institution is subject to discipline. Obstruction or disruption includes but is not limited to any act that interrupts, modifies, or damages utility service or equipment, communication service or equipment, university computers, computer programs, computer records or computer networks accessible through the university’s computer resources.

2.6 Inciting Lawless Action. Any student who engages in speech, either orally or in writing, which is directed to inciting or producing imminent lawless action and is likely to incite or produce such action is subject to discipline.

2.7 Unauthorized Use of Property. Any student who engages in the unauthorized use of property, equipment, supplies, buildings, or facilities owned or controlled by the U.T. System or institution is subject to discipline.

2.8 Hazing. Any student who, acting singly or in concert with others, engages in hazing is subject to discipline. Hazing in state educational institutions is prohibited by state law (http://tlo2.tlc.state.tx.us/statutes/ed.toc.htm Texas Education Code Section 51.936). Hazing with or without the consent of a student whether on or off campus is prohibited, and a violation of that prohibition renders both the person inflicting the hazing and the person submitting to the hazing subject to discipline. Initiations or activities of organizations may include no feature that is dangerous, harmful, or degrading to the student, and a violation of this prohibition renders both the organization and participating individuals subject to discipline.

2.9 Altering of Official Documents. A student who alters or assists in the altering of any official record of the U.T. System or institution or who submits false information or omits requested information that is required for or related to an application for admission, the award of a degree, or any official record of the U.T. System or institution is subject to discipline. A former student who engages in such conduct is subject to bar against readmission, revocation of degree, and withdrawal of diploma.

2.10 Vandalism. Any student who defaces, mutilates, destroys, or takes unauthorized possession of any property, equipment, supplies, buildings, or facilities owned or controlled by an institution or the U.T. System is subject to discipline.

2.11 Prohibited Conduct. A student is subject to discipline for prohibited conduct that occurs while participating in off-campus activities sponsored by an institution or the U.T. System including field trips, internships, rotations, or clinical assignments.

2.12 Use of Explosives, Weapons or Hazardous Chemicals. Unless authorized by federal, state, or local laws, a student who possesses or uses any type of explosive, firearm, imitation firearm, ammunition, hazardous chemical, or weapon as defined by state or federal law, while on campus or on any property or in any building or facility owned or controlled by the U.T. System or institution, is subject to discipline.

2.13 Prohibited Conduct During Suspension. A student who receives a period of suspension as a disciplinary penalty is subject to further disciplinary action for prohibited conduct that takes place on campus during the period of suspension.
mailed to the address appearing in the records of the registrar, e-mailed to the student at the e-mail address on record with the U.T. institution, or may be hand delivered to the student. If a student fails to appear without good cause, as determined by the Dean, the Dean may bar or cancel the student’s enrollment or otherwise alter the status of the student until the student complies with the summons, or the Dean may proceed to implement the disciplinary procedures provided for in Section 5 of this Rule. The refusal of a student to accept delivery of the notice, the failure to maintain a current address with the registrar, or failure to read mail or e-mail shall not be good cause for the failure to respond to a summons.

4.1 Interim Disciplinary Action.Pending a hearing or other disposition of the allegations against a student, the Dean may take such immediate interim disciplinary action as is appropriate to the circumstances when such action is in the best interest of the institution. This includes but is not limited to a suspension and bar from the campus when it reasonably appears to the Dean from the circumstances that the continuing presence of the student poses a potential danger to persons or property or a potential threat for disrupting any activity authorized by the institution.

4.2 Timeliness of Hearing. When interim disciplinary action has been taken by the Dean under Section 4.1 immediately above, a hearing of the charges against the student will be held under the procedures specified in Section 5 immediately below. A hearing following interim disciplinary action will generally be held within 10 days after the interim disciplinary action was taken; however, at the discretion of the Dean of Students the 10 day period may be extended for a period not to exceed an additional 10 days.

4.3 Withholding Transcripts, Grades, Degrees. Notwithstanding the above, the Dean may withhold the issuance of an official transcript, grade, diploma, certificate, or degree to a student alleged to have violated a rule or regulation of the U.T. System or its institutions which would reasonably allow the imposition of such penalty. The Dean may take such action pending a hearing, resolution by administrative disposition, and/or exhaustion of appellate rights if the Dean has provided the student an opportunity to provide a preliminary response to the allegations and in the opinion of the Dean, the best interests of U.T. System or the institution would be served by this action.

4.4 Administrative Disposition.

(a) In any case where the accused student elects not to dispute the facts upon which the charges are based and agrees to the sanctions the Dean assesses, the student may execute a written waiver of the hearing procedures specified in Section 5 immediately below. This administrative disposition shall be final and there shall be no subsequent proceedings regarding the charges.

(b) In any case where the accused student elects not to dispute the facts upon which the charges are based, but does not agree with the sanctions assessed by the Dean, the student may execute a written waiver of the hearing procedures specified in Section 5 immediately below yet retain the right to appeal the decision of the Dean only on the issue of penalty. The appeal regarding the penalty will be to the president of an institution.

Sec. 5 Hearing Process. In those cases in which the accused student disputes the facts upon which the charges are based, such charges shall be heard and determined by a fair and impartial Hearing Officer.

5.1 Notice of Hearing. Except in those cases where immediate interim disciplinary action has been taken, the accused student shall be given at least 10 days written notice of the date, time, and place for such hearing and the name of the Hearing Officer. The notice shall include a statement of the charge(s) and a summary statement of the evidence supporting such charge(s). The notice shall be delivered in person to the student or mailed to the student at the address appearing in the registrar’s records. A notice sent by mail will be considered to have been received on the third day after the date of mailing, excluding any intervening Sunday. The date for a hearing may be postponed by the Hearing Officer for good cause or by agreement of the student and Dean.

5.2 Impartiality of the Hearing Officer. The accused student may challenge the impartiality of the Hearing Officer. The challenge must be in writing, state the reasons for the challenge, and be submitted to the Hearing Officer through the Office of the Dean at least three days prior to the hearing. The Hearing Officer shall be the sole judge of whether he or she can serve with fairness.
and objectivity. In the event the Hearing Officer disqualifies himself or herself, a substitute will be chosen in accordance with procedures of the institution.

5.3 Burden of Proof. Upon a hearing of the charges, the Dean or other institutional representative has the burden of going forward with the evidence and has the burden of proving the charges by the greater weight of the credible evidence.

5.4 Duties of Hearing Officer. The Hearing Officer is responsible for conducting the hearing in an orderly manner and controlling the conduct of the witnesses and participants in the hearing. The Hearing Officer shall rule on all procedural matters and on objections regarding exhibits and testimony of witnesses, may question witnesses, and is entitled to have the advice and assistance of legal counsel from the Office of General Counsel of the System. The Hearing Officer shall render and send to the Dean and the accused student a written decision that contains findings of fact and a conclusion as to whether the accused student is responsible for the violations as charged. Upon a finding of responsibility the Hearing Officer shall assess a penalty or penalties specified in Section 6 immediately below. When an accused student is found responsible for the illegal use, possession, or sale of a drug or narcotic on campus, the assessment of a minimum penalty provided in Section 2.3 immediately above is required.

5.5 Minimal Rights. The hearing shall be conducted in accordance with procedures adopted by the institution that assure the institutional representative and the accused student the following minimal rights:

Each party shall provide the other party a list of witnesses, a brief summary of the testimony to be given by each, and a copy of documents to be introduced at the hearing at least five days prior to the hearing.

Each party shall have the right to appear, present testimony of witnesses and documentary evidence, cross-examine witnesses, and be assisted by an advisor of choice. The advisor may be an attorney. If the accused student’s advisor is an attorney, the Dean’s advisor may be an attorney from the Office of General Counsel of the System. An advisor may confer with and advise the Dean or accused student, but shall not be permitted to question witnesses, introduce evidence, make objections, or present argument to the Hearing Officer.

The Dean may recommend a penalty to be assessed by the Hearing Officer. The recommendation may be based upon past practice of the institution for violations of a similar nature, the past disciplinary record of the student, or other factors deemed relevant by the Dean. The accused student shall be entitled to respond to the recommendation of the Dean.

The hearing will be recorded. If either party desires to appeal the decision of the Hearing Officer, the official record will consist of the recording of the hearing, the documents received in evidence, and the decision of the Hearing Officer. At the request of the president of an institution the recording of the hearing will be transcribed and both parties will be furnished a copy of the transcript.

Sec. 6 Penalties. The following penalties may be assessed by the Dean pursuant to Section 4.3 immediately above or by the Hearing Officer after a hearing in accordance with the procedures specified in Section 5.5 immediately above:

6.1 Disciplinary probation.
6.2 Withholding of grades, official transcript, and/or degree.
6.3 Bar against readmission.
6.4 Restitution or reimbursement for damage to or misappropriation of institutional or U.T. System property.
6.5 Suspension of rights and privileges, including participation in athletic or extracurricular activities.
6.6 Failing grade for an examination or assignment or for a course and/or cancellation of all or any portion of prior course credit.
6.7 Denial of degree.
6.8 Suspension from the institution for a specified period of time.
6.9 Expulsion (permanent separation from the institution).
6.10 Revocation of degree and withdrawal of diploma.
6.11 Other penalty as deemed appropriate under the circumstances.

Sec. 7 Appeal. A student may appeal a disciplinary penalty assessed by the Dean in accordance with Sec-
tion 4.3 immediately above. Either the Dean or the student may appeal the decision of the Hearing Officer. An appeal shall be in accordance with the following procedures:

7.1 Appeal Procedures. The appealing party must submit a written appeal stating the specific reasons for the appeal and any argument, to the president of the institution, with a copy to the other party. The appeal must be stamped as received by the President's Office no later than 14 days after the appealing party has been notified of the sanction assessed by the Dean or the decision of the Hearing Officer. If the notice of sanction assessed by the Dean or the decision of the Hearing Officer is sent by mail, the date the notice or decision is mailed initiates the 14-day period for the appeal. The non-appealing party may submit a response to the appeal which must be received by the President's Office no later than 5 days after receipt of the appeal with a copy to the other party. An appeal of the sanction assessed by the Dean in accordance with Section 4.4(b) immediately above will be reviewed solely on the basis of the written argument of the student and the Dean. The appeal of the decision of the Hearing Officer will be reviewed solely on the basis of the record from the hearing. The Dean will submit the record from the hearing to the president as soon as it is available to the Dean. At the discretion of the president, both parties may present oral argument in an appeal from the decision of the Hearing Officer.

7.2 President's Authority. The president may approve, reject, or modify the decision in question or may require that the original hearing be reopened for the presentation of additional evidence and reconsideration of the decision. It is provided, however, that upon a finding of responsibility in a case involving the illegal use, possession, and/or sale of a drug or narcotic on campus, the sanction may not be reduced below the sanction as prescribed by Section 2.3 immediately above.

7.3 Communication of Decision. The action of the president shall be communicated in writing to the student and the Dean within 30 days after the appeal and related documents have been received. The decision of the president is the final appellate review.

Sec. 8 Disciplinary Record. Each institution shall maintain a permanent written disciplinary record for every student assessed a sanction of suspension, expulsion, denial or revocation of degree, and/or withdrawal of diploma. A record of scholastic dishonesty shall be maintained for at least five years unless the record is permanent in conjunction with the above stated penalties. A disciplinary record shall reflect the nature of the charge, the disposition of the charge, the penalty assessed, and any other pertinent information. This disciplinary record shall be maintained by the Office of the Dean of Students. It shall be treated as confidential, and shall not be accessible to or used by anyone other than the Dean or university officials with legitimate educational interests, except upon written authorization of the student or in accordance with applicable state or federal laws or court order or subpoena.

3. Definition

Chief Student Affairs Officer – The *Assistant Vice President for Student Services* is the administrative officer primarily responsible for the development and administration of policies relating to students, for the development and implementation of services to students, and for the initial preparation of institutional regulations that will implement the policies and regulations set forth in this rule.

Associate/Assistant Dean of Student Affairs – Refers to the administrative officer or officers responsible for the administration of the disciplinary process at each institution.

Hearing Officer – An individual or individuals selected in accordance with procedures adopted by the institution pursuant to the recommendation of the Chief Student Affairs Officer to hear disciplinary charges, make findings of fact, and, upon a finding of guilt, impose an appropriate sanction(s).

Student – The following persons shall be considered students for purposes of these policies and regulations:

- A person currently enrolled at an institution of the U.T. System.
- A person accepted for admission or readmission to an institution of the U.T. System.
- A person who has been enrolled at an institution of the U.T. System in a prior semester or summer session and is eligible to continue enrollment in the semester or summer session that immediately follows.
- A person who engaged in prohibited conduct at a time when he or she met the criteria of 1, 2, or 3 immediately above.

Campus – consists of all real property, buildings, or facilities owned or controlled by the institution.

Weekday – Monday through Friday, excluding any day that is an official holiday of the institution or when regularly scheduled classes are suspended due to emergent situations.
Day – A calendar day except for days on which the university is officially closed or when regularly scheduled classes are suspended due to emergent situations.

4. Relevant Federal and State Statutes
   Texas Education Code Section 51.936 – Hazing

5. Relevant System Policies, Procedures, and Forms
   None

6. Who Should Know
   Administrators
   Dean of Students
   Hearing Officers
   Students
   Office of General Counsel

7. System Administration Office(s) Responsible for Rule
   Office of Academic Affairs
   Office of Health Affairs

8. Dates Approved or Amended
   December 10, 2004
   August 20, 2008

9. Contact Information
   Questions or comments regarding this rule should be directed to bor@utsystem.edu.

Due Process
   Students accused of violations of the procedures and regulations governing Student Conduct and Discipline shall have the rights of due process:
   - The right to know the charges and the evidence;
   - The right to confront and examine witnesses;
   - The right to be represented by a person of her/his choice;
   - The right to be heard by an impartial body or officer; and
   - The right to an appeal process.
Under federal law, students' academic records and personal information must be kept confidential by the university. (See Family Educational Rights and Privacy Act below.)

Only certain university personnel, officials of other institutions to which a student may be seeking admission, persons or organizations providing financial aid, accrediting agencies, persons with a judicial order, individuals attempting to protect the health or safety of others, or organizations conducting studies for specified educational purposes are permitted access to a student’s records without her/his consent.

Students at the UT Health Science Center San Antonio 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 consent.

Educational records may not be shared within the university except to members of departments acting in the student's educational interest and within the limitation of their need to know.

Individuals with access to student information may release "directory information." Directory information is limited to the following:

- Name
- Address
- Telephone number
- E-mail address
- Photograph
- Date of birth
- Place of birth
- Class level
- Enrollment status (part-time/full-time or undergraduate, graduate, or professional)
- Degrees
- Most recent previous educational institution attended
- Honors and awards received.

A student may withhold all or part of the directory information by making changes on the Student Portal (inside.uthscsa.edu) or by notifying the Registrar in writing with a signed and dated request (Registrars@uthscsa.edu) or call 567-2620 for information.

If you have questions regarding the release of student information, contact the Registrar at registrars@uthscsa.edu or call 567-2621.

A student has the right to inspect her/his educational records and to challenge the contents. To review records, a student must make a request in writing to the Registrar. Some documents in a student’s file such as (1) confidential letters/recommendations, (2) parents’ financial records, and (3) documents pertaining to more than one student will not be made available to the requestor. If a student wishes to challenge or amend information in her/his files, the student may appeal in writing to the chief student affairs officer. For full procedures, see the “Family Educational Rights and Privacy Act” below.
has received student records from the institution has released or failed to destroy such records in violation of this policy, it will prohibit access to educational records for five (5) years. Respective records no longer subject to audit nor presently under request for access may be purged according to regular schedules.

Within the Health Science Center community, only those members, individually or collectively, acting in the students’ educational interest are allowed access to student education records. These include personnel in the offices of the Registrar, Student Financial Aid, Deans and President, the student’s faculty advisor, and academic personnel within the limitations of their need.

At its discretion, the institution may provide Directory Information in accordance with the provisions of the Act to include: student name, school and class, address, e-mail address, telephone number, date and place of birth, dates of attendance, photograph, degrees and awards received, major field of study, classification, date of graduation, class schedules, and the most recent previous educational agency or institution attended by the student. Students may withhold Directory Information by notifying the Registrar in writing within 12 days after the first day of class for the fall semester. 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.

The law provides students with their right to inspect and review information contained in their education records, to challenge the contents of their education records, to have a hearing if the outcome of the challenge is unsatisfactory, and to submit explanatory statements for inclusion in their files if they feel the decisions of the hearing panels to be unacceptable. The chief student affairs officer has been designated by the institution to coordinate the inspection and review procedures for student education records, which include admissions, personal, academic, financial, and disciplinary records.

Students wishing to review their education records must make written requests to the custodian of records (see Directory of Records below) listing item or items of interest. Only records covered by the act will be made available within 45 days of the request. Students may have copies made of their records with certain exceptions (e.g., an official copy of the academic record for which a financial “hold” exists, or a transcript of an original or source document which exists elsewhere). These copies would be made at the students’ expense at prevailing rates for the purposes for which they were collected.

Education records do not include: records of instructional, administrative, and educational personnel which are the sole possession of the maker and are not accessible or revealed to any individual except a temporary substitute; records of the law enforcement unit; student thesis or research papers; student health records; student counseling records; employment records; or alumni records. Health records, however, may be reviewed by physicians of a student’s choosing.

Students may not inspect and review the following as outlined by the Act: financial information submitted by their parents; confidential letters and recommendations associated with admissions, employment, or job placement; honors to which they have waived their rights of inspection and review; or education records containing information about more than one student, in which case the institution will permit access only to that part of the record which pertains to the inquiring student. The institution is not required to permit students to inspect and review confidential letters and recommendations placed in their files prior to January 1, 1975, provided those letters were collected under established policies of confidentiality and were used only for the purposes for which they were collected.

Students who believe that their education records contain information that is inaccurate or misleading, or is otherwise in violation of their privacy or other rights, may discuss their problems informally with the chief student affairs officer. If the decisions are in agreement with the student’s requests, the appropriate records will be amended. If not, the student will be notified within a reasonable period of time that the records will not be amended; and they will be informed by the chief student affairs officer of their right to a formal hearing. Students requests for a formal hearing must be made in writing to the Vice President for Business Affairs who, within a reasonable period of time after receiving such requests, will inform students of the date, place, and the time of the hearing. Students may present evidence relevant to the issues raised and may be assisted or represented at the hearings by one or more persons of their choice, including attorneys, at the student’s expense. The hearing panel that will adjudicate such challenges will be the Vice President for Business Affairs and two faculty members appointed by the President.

Decisions of the hearing panels will be final, will be based solely on the evidence presented at the hearing, and will consist of written statements summarizing the evidence and stating the reasons for the decisions, and will be delivered to all parties concerned. The education records will be corrected or amended in accordance with the decisions of the hearing panels, if the decisions are in favor of the students. If the decisions are unsatisfactory to the students, the students may place with the education records statements commenting on the information in the records, or statements setting forth any reasons for disagreeing with the decisions of the hearing panels. The statements will be placed in the education records, maintained as part of the students’ records, and released whenever the records in question are disclosed.

Students who believe that the adjudications of their challenges were unfair, or not in keeping with the provisions of the Act, may request in writing assistance from the President of the institution. Further, students who believe that their rights have been abridged, may file complaints with The Family Educational Rights and Privacy Act Office (FERPA), Department of Education, Washington, D.C. 20201, concerning the alleged failures of The UT Health Science Center San Antonio to comply with the Act.

Students may have copies of their education records and this policy. These copies will be made at the student’s expense at
rates authorized in the *Texas Public Information Act* except that official transcripts will be $10.00. Official copies of academic records or transcripts will not be released for students who have a delinquent financial obligation or financial “hold” at the university.

Revisions and clarifications will be published as experience with the law and institution’s policy warrants.

**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 transcript.

**Directory of Records**

**Academic Records**
Office of the Registrar, Room 319L MED 
* tba, registrar

**Financial Aid Records**
Office of Student Financial Aid, Room 318.L MED 
Bob Lawson, director of Student Financial Aid

**Counseling Records**
Dr. Joseph Kobos, director of Student Counseling Service, 
Room 101F MED

*Institutional policy prohibits academic and administrative personnel from inspecting individual records.*

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**Posting of Grades**

Course grades of individual students may not be posted or made available in any public manner by name, initials, social security number, unique assigned student identification number, or other personal identifier except when the student has signed an authorization.

Before a student's grade can be posted, he/she will be asked to sign a consent form and be assigned a random number as a personal identifier. Generally, each individual faculty member who posts grades will go through the procedure to obtain consent and assign a number. (Some course instructors do not post grades.) In some schools, consent forms are processed by the Dean's Office.

It is a student's right to decline to sign a consent form, in which case the student's grades will not be posted.

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**Student Health Records**

*Student Health Center*, 1st floor, School of Nursing 
Becky Gutierrez, clinic manager

**Disciplinary Records**

Associate Dean for Student Affairs in each school

**Additional Records**

Associate Dean for Student Affairs in each school
AIDS/ HIV/ HBV/ HCV Infection Policies

Click on an item in the list below to be taken to the location of its content.

- Policy on the Acquired Immune Deficiency Syndrome
- The University of Texas System Policy and Guidelines on Acquired Immune Deficiency Syndrome, Human Immunodeficiency Virus Infection, and Hepatitis B Virus
- Needlestick Policy

The UT Health Science Center San Antonio recognizes its responsibility to protect the rights and privileges of students, employees, patients, and the general public against contact with the spread of infectious diseases. In recognition of human immunodeficiency virus (HIV) as a serious public health threat, the Health Science Center has adopted a policy and procedural steps to protect both the rights and well-being of those students who may be infected with HIV as well as to prevent the spread of HIV infection.

No individual with HIV infection will be discriminated against in employment, admission to academic programs, health benefits, or access to facilities. Students with HIV infection may attend all classes without restriction as long as they are physically and mentally able to participate and perform assigned work and pose no health risks to others. Any modification of the clinical training, working conditions, or privileges of HIV-infected students, faculty, staff, or employees will be determined on a case-by-case basis, taking into account the nature of the clinical activity, the technical expertise of the infected person and the risks posed by HIV-infection, attendant functional disabilities, and the transmissibility of simultaneously carried infectious agents. The confidentiality of all information regarding the medical status of Health Science Center faculty, staff, and students will be maintained in accordance with applicable statutes. A complete copy of the Health Science Center Policy and Guidelines on AIDS, HIV Infection, and Hepatitis B Virus follows. This policy is applicable to all students of the Health Science Center as they pursue their academic (and clinical) endeavors. Several informational brochures on AIDS are available in Student Services.

Policy on the Acquired Immune Deficiency Syndrome

Statement of Purpose

The acquired immune deficiency syndrome (AIDS) has reached epidemic proportions since the first reported cases in 1981. AIDS and human immunodeficiency virus (HIV)-related disorders have presented the health care professions with numerous issues of an ethical and moral nature related to the care and treatment of patients infected with HIV.

No cure for AIDS exists, nor has a vaccine been developed to prevent HIV infection. Because of these circumstances, fear, prejudice, and misinformation about the disease have not only developed among the population at large, but also within the health professions. It is well recognized that AIDS patients and HIV-infected individuals are entitled to competent medical care that reflects compassion and respect for human dignity as well as concern for safeguarding individual confidences within the constraints of the law.

One of the objectives of this Health Science Center is to prepare men and women for a career in the practice of a health profession. These future health care providers should be prepared for a lifetime of service to the ill which demands adherence to the highest standards of professional conduct and behavior. Furthermore, 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 Health Science Center at San Antonio on any basis prohibited by applicable law, including, but not limited to, race, color, national origin, religion, handicap, or sex. It is within this frame of reference that the following Health Science Center policies on AIDS were developed.

Admission of Health Professions Students with AIDS or HIV Infection; Hiring Employees with AIDS or HIV Infection (HOP 8.1.2)

The Health Science Center shall not inquire about the HIV status of any applicant for admission to or employment at 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 her or him from completing essential degree requirements or essential duties of employment and that no reasonable accom-
The Health Science Center adheres to the
persons.
cations to safeguard the personal health and safety of such
ing and implementing special precautions and program modifi-
physician, and other medical experts as appropriate in identify-
cooperate with the HIV-infected person, her or his personal
unwarranted risk to patients. The Health Science Center shall
monitor the clinical activities of stu-
will be determined on a case-by-case basis, taking into ac-
t the nature of the clinical activity, the technical expertise
of the infected person, and the risks posed by HIV infection,
antecedent functional disabilities, and the transmissibility of si-
multaneously carried infectious agents. The Health Science
may legitimately monitor the clinical activities of stu-
faculty, staff, or employees who are believed to pose an
unwarranted risk to patients. The Health Science Center shall
cooperate with the HIV-infected person, her or his personal
physician, and other medical experts as appropriate in identify-
and implementing special precautions and program modifi-
cations to safeguard the personal health and safety of such
persons.

The Health Science Center adheres to the  Universal Precau-
tions for Prevention of Transmission of Human Immunodefi-
ciency Virus, Hepatitis B Virus, and Other Bloodborne
Pathogens in Health Care Settings (MMWR 38:377-388, 1988)
established by the Centers for Disease Control. HIV-infected
students, faculty, staff, and employees shall be provided coun-
seling about access to expert medical care and about prevention
of further spread of infection. The Health Science Center does not pay for the provision of health care to HIV-infected
individuals. Students, faculty, staff, and employees are strongly
encouraged to obtain adequate hospital and outpatient insur-
cance coverage during their entire association with the Health
Science Center.

Confidentiality. It is expected that all students, faculty, staff,
and employees will be bound to the principle of strict confiden-
tiality in all patient and health care related activities.

As stated in Sections 8.1.3 and 8.1.4, the Health Science Cen-
ter encourages students, faculty, staff, and employees who be-
lieve they are at risk of HIV infection to seek testing and
counseling. The Health Science Center shall provide counsel-
ing 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 in-
fec tion. Individuals seeking care within the health care facilities
of the Health Science Center (i.e., the School of Medicine and Dental School, and not including its affiliated health care insti-
tutions University Hospital, the Audie L. Murphy Memorial Vet-
erans Hospital (“V.A.”), and University Health Center-Downtown) shall be made aware that all HIV-related
data become part of the individual’s medical record.

Interactions with Patients with Bloodborne Pathogens

Responsibilities. Entry into the health care professions is a
privilege offered to those who are prepared for a lifetime of service to the ill. Students, faculty, and health care staff have a
fundamental responsibility to provide care to all patients as-
signed 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 HIV-infected patients, working conditions present-
ing a risk of exposure to HIV organisms, or the presence of
HIV infection in the individual herself or himself, should seek
the assistance of their immediate supervisor.

Infection Policy and Education Committee. The Health
Science Center has established a committee that exists as a
resource to address issues related to bloodborne pathogen
infection on a case-by-case basis in the Health Science Cen-
ter. The Committee serves as an advisory body to the Execu-
tive 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, and Employees of the
Health Science Center about AIDS and its Prevention (HOP
8.1.6)

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 published by
the Centers for Disease Control. Consistent with the early edu-
cation of students, staff, and employees in these and other per-
tinent data relevant to potential infection, the following
approach will be taken:

Each school will provide a program on prevention of exposure
to infectious organisms in professional and personal situations
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 C virus (HCV). In addition, the medical, educational, legal, administrative, and ethical issues related to specific situations involving persons with HIV or HBV infections in the following areas are addressed:

- Administrative policies;
- Residence life;
- Health education;
- Testing for HIV, HBV, HCV infection;
- Confidentiality of information related to persons with AIDS, HIV, HBV, or HCV infection; and
- Patient care.

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.

Definitions

Bloodborne Pathogen: Pathogenic microorganisms that are present in human blood, and can cause disease in humans. These pathogens include, but are not limited to agents such as, human immunodeficiency virus (HIV), Hepatitis B virus (HBV), Hepatitis C virus (HCV), syphilis, and Plasmodium malariae.

Expert Review Panel: A panel appointed by the Chief Administrative Officer of the Health Science Center to review instances of HIV or HBV infection, under which a Health Care Worker who is infected with a bloodborne pathogen and might include:

- Health Care Worker’s personal physician(s);
- An infectious disease specialist with expertise in the epidemiology of HIV and HBV transmission;
- A health professional with expertise in the procedures performed by the affected Health Care Worker;
- A member of the institution’s Infection Policy and Education Committee, preferably a hospital epidemiologist; and
- An occupational health specialist.

Exposure-Prone Procedure: A procedure involving the contact of a Health Care Worker’s finger with a needle tip in a body cavity or the simultaneous presence of the Health Care Worker’s fingers and a needle or other sharp instrument or object in a poorly visualized or highly confined area of the body. Such procedures pose a recognized risk of injury to the Health Care Worker that is likely to result in the Health Care Worker’s blood contacting the patient’s body cavity, sub-cutaneous tissues, or mucous membranes.

HBeAg: That portion of the Hepatitis B virus, whose presence in the blood of a person correlates with higher levels of circulating virus and therefore with greater infectivity of that person’s blood; the presence of HBeAg in blood can be detected by appropriate testing.

Health Care Worker: A person who provides direct patient care services pursuant to authorization of a license, certificate, or registration, or in the course of a training or education program.

Infection Policy and Education Committee: A committee appointed to oversee the development and implementation of educational programs related to bloodborne pathogens, and to advise the administration on policies regarding bloodborne pathogens. The Committee will include, as a minimum, representation from the faculty, the student body, and administrative areas such as, housing services, health services, counseling services, and food services.

Invasive Procedure: Surgical entry into tissues, cavities, or organs; repair of major traumatic injuries; cardiac catheterization and angiographic procedures; a vaginal or cesarean delivery or other invasive obstetric procedure during which bleeding may occur; or the manipulation, cutting, or removal of...
any oral or perioral tissues, including tooth structure, during which bleeding occurs or the potential for bleeding exists.

**System Review Panel:** A panel responsible for reviewing the actions of the Expert Review Panel to assure uniform and consistent compliance with these guidelines and applicable statutes and regulations. The panel shall be composed of an expert in bloodborne infections (including HIV and HBV) from each health component institution appointed by the Chief Administrative Officer and representatives from the UT System Office of Health Affairs, and Office of General Counsel.

**Policies**

**Admissions to Schools:** The existence of a bloodborne pathogen infection should not be considered in admissions decisions unless current scientific information indicates required academic activities will likely expose others to risk of transmission.

**Residential Housing:** Residential housing staff will not exclude bloodborne pathogen-infected students from university housing and will not inform other students that a person with HIV or bloodborne viral Hepatitis infection lives in university housing.

**Employment:** The existence of bloodborne pathogen infection will not be used to determine suitability for employment by the Health Science Center or UT System Administration unless the position requires performance of exposure-prone procedures as identified by the Expert Review Panel.

**Class Attendance:** A student with a bloodborne pathogen infection should be allowed to attend all classes without restrictions, as long as the student is physically and mentally able to participate, perform assigned work, and poses no health risk to others.

**Health Care Workers and Students Assigned to Work Within Clinical Settings (Health Care Workers):** Current information from investigations of bloodborne pathogen transmission from Health Care Workers to patients indicates that when Health Care Workers adhere to recommended infection-control procedures the risk of transmitting HBV from an infected Health Care Worker to a patient is small, and the risk of transmitting HIV is likely to be even smaller; however, the likelihood of exposure of the patient to a Health Care Worker's blood is greater for certain invasive procedures designated as exposure-prone.

Performance of exposure-prone procedures presents a recognized risk of percutaneous injury to the Health Care Worker, and—if such an injury occurs—the Health Care Worker’s blood is likely to contact the patient’s body cavity, subcutaneous tissues, and/or mucous membranes. To minimize the risk of HIV or HBV transmission from an infected Health Care Worker to a patient, the following measures will be followed:

- All Health Care Workers must adhere to universal infection control (standard blood and body fluid) precautions, including the appropriate use of hand washing, protective barriers, and care in the use and disposal of needles and other sharp instruments. Health Care Workers who have exudative (oozing) lesions or weeping dermatitis (oozing inflammation of the skin) must refrain from all direct patient care and from handling patient-care equipment and devices used in performing invasive procedures until the condition resolves. Health Care Workers will also comply with current guidelines for disinfection and sterilization of reusable devices used in the invasive procedures. The Health Science Center shall establish procedures for monitoring compliance with universal precautions.
- Currently available data provide no basis for recommendations to restrict the practice of Health Care Workers infected with HIV or HBV who perform invasive procedures not identified as exposure-prone, provided the infected Health Care Workers practice recommended surgical or dental techniques, and comply with universal infection control precautions and current recommendations for sterilization/disinfection.
- Exposure-prone procedures will be identified at the Health Science Center by the Expert Review Panel.
- Health Care Workers who perform exposure-prone procedures should know their bloodborne pathogen status. Those infected with HBV also should know their HBeAg status.
- All Health Care Workers providing direct patient care should have a complete series of Hepatitis B vaccine prior to the start of direct patient care or complete the series as rapidly as is medically feasible, or should be able to show serologic confirmation of immunity to Hepatitis B virus. The Hepatitis B vaccination is only contraindicated for a small population of Health Care Workers.
- A Health Care Worker who is infected with a bloodborne pathogen may not perform, or engage in activities that might require him or her to perform exposure-prone procedures unless the Expert Review Panel has counseled the Health Care Worker and has prescribed the circumstances under which such procedures may be performed. Continued performance of such procedures must include notifying a prospective patient or person legally authorized to consent for an incompetent patient that the Health Care Worker is infected with a bloodborne pathogen and obtaining consent to perform a procedure before the patient undergoes an exposure-prone procedure. Such notification is not required in a medical emergency when there is insufficient time to locate another Health Care Worker to perform the exposure-prone procedure and to obtain consent without endangering the patient’s health.
- A Health Care Worker infected with a bloodborne pathogen who performs invasive, but not exposure-prone procedures as identified by the Expert Review Panel, shall not have his or her practice restricted solely on the basis of bloodborne pathogen infection provided he or she adheres to the universal precautions for infection control.
- The actions and recommendations of the Expert Review Panel shall be reported to the Chief Administrative Officer and to the appropriate Executive Vice Chancellor and shall be presented to the System Review Panel. Panels may seek assistance from UT System Administration or a UT health component.
- To permit the continued use of the talents, knowledge, and skills of a Health Care Worker whose practice is modified due to infection with a bloodborne pathogen, the worker
should: 1) be offered opportunities to continue appropriate patient care activities, if practicable, 2) receive career counseling and job retraining; or 3) to the extent reasonable and practicable, be counseled to enter an alternative curriculum, if the Health Care Worker is a student.

• A Health Care Worker whose practice is modified because of HBV infection may request periodic redeterminations by the Expert Review Panel based upon change in the worker’s HBeAg status due to resolution of infection or as a result of treatment.

• All Health Care Workers should be advised that failure to comply with the above will subject them to disciplinary procedures by their licensing entities, as well as by the Health Science Center.

Access to Facilities: A person with HIV or HBV infection should not be denied access to any UT facility because of HIV or HBV infection.

Testing for HIV and HBV Infection

Mandatory Testing: No programs for mandatory HIV or HBV testing of employees, students, or patients will be undertaken without their consent unless authorized or required by law, court order, or as specified below.

• A patient may be required to undergo HIV testing if the patient is scheduled for a medical procedure that the Texas Board of Health has determined may expose health care personnel to AIDS or HIV infection if there is sufficient time to receive the test results before the procedure is conducted.

• A person may be required to undergo HIV, HBV, and HCV testing to screen blood, blood products, body fluids, organs, or tissues to determine suitability for donation.

Voluntary Testing for HIV and Counseling: The Health Science Center and student health centers should offer or refer students, faculty, and staff members for confidential or anonymous HIV counseling and testing services. All testing conducted by the Health Science Center will include counseling before and after the test. Unless required by law, test results should be revealed to the person tested only when the opportunity is provided for immediate, individual, face-to-face counseling about:

• the meaning of the test result;

• the possible need for additional testing;

• measures to prevent the transmission of HIV;

• the availability of appropriate health care services, including mental health care, and appropriate social and support services in the geographic area of the person’s residence;

• the benefits of partner notification; and

• the availability of partner notification programs. If a person with a positive HIV test result requests that his/her partner(s) be made aware of the possibility of exposure through a partner notification program, the post-test counselor will have the HIV-infected person sign a statement requesting assistance of a partner notification program. This statement will be made a permanent part of the person’s medical record. A representative of the Health Science Center or student health center will then request

the local health department to contact the partner(s) identified by the HIV-infected person.

Partner Notification: A health care professional who knows a patient is HIV positive and who has actual knowledge of possible transmission of the virus to a third party will notify a partner notification program established by the Texas Department of Health (TDH).

Informed Consent for HIV Testing: Unless otherwise authorized or required by law, no HIV test should be performed without informed consent of the person to be tested.

• Consent will be written on a separate form, or the medical record will document that the test has been explained and consent has been obtained. The consent form will state that post-test counseling will be offered or the medical record will note that the patient has been informed that post-test counseling will be offered.

Reporting of Test Results: Bloodborne pathogen test results will be reported in compliance with all applicable statutory requirements, including the Communicable Disease Prevention and Control Act, Texas Health and Safety Code §81.001, and Texas Department of Health (TDH), Bloodborne Pathogen Control, Exposure Control Plan, 25 TAC §96.202.

Conditions of HIV Testing of Employees at Institution’s Expense: Employees will be informed that they may request HIV testing and counseling at the institution’s expense, if: 1) the employee documents possible exposure to HIV while performing duties of employment; and 2) the employee was exposed to HIV in a manner that is capable of transmitting the infection as determined by guidelines developed in accordance with statements of the TDH and Centers for Disease Control (CDC).

Qualifying for Workers’ Compensation Benefits: State law requires that an employee who bases a workers’ compensation claim on a work-related exposure to HIV must provide a written statement of the date and circumstances of the exposure and document that within ten (10) days after the exposure, the employee had a test result that indicated absence of HIV infection. An employee who may have been exposed to HIV while performing duties of employment may not be required to be tested, but refusal to be tested may jeopardize Workers’ Compensation benefits.

Testing Following Potential Exposure to HIV or HBV: The Health Science Center has developed guidelines and protocols for employees and students who have been exposed to material that has a potential for transmitting a bloodborne pathogen as a result of employment or educational assignments. Testing of employees or students exposed to such material should be done within ten (10) days after exposure and should be repeated after one (1) month. Testing for HIV also should be done after three (3) and six (6) months. These guidelines should follow TDH, U.S. Public Health Service, and CDC guidelines.

• In cases of exposure of an employee or student to another individual’s (“individual” in this paragraph) blood or body
fluid, the Health Science Center, at the institution’s expense, may test that individual for a bloodborne pathogen infection with or without the individual’s consent, provided that the test is performed under approved institutional guidelines and procedures in the institutional Handbook of Operating Procedures that provide criteria for testing and that respect the rights of the person being tested. This includes post-test counseling as specified above. If an HIV test is done without the individual’s consent, the guidelines must ensure that any identifying information concerning the individual’s test will be destroyed as soon as the testing is complete and the person who may have been exposed is notified of the result. Test results will be reported in compliance with all applicable statutory requirements, as specified above.

- A UT System law enforcement officer may request TDH or a health authority duly authorized pursuant to the Local Public Health Reorganization Act, Tex. Health & Safety Code Ann., Chapter 121 (Vernon 1992), to order testing of another person who may have exposed the law enforcement officer to a reportable disease, including HIV infection. The request for such testing may be made only if the law enforcement officer experienced the exposure in the course of employment, if the law enforcement officer believes the exposure places the law enforcement officer at risk of the reportable disease, and the law enforcement officer presents to TDH or the health authority a sworn affidavit that delineates the reasons for the request.

Confidentiality of Records: Except where release is required or authorized by law, information concerning the HIV status of students, employees, or patients and any portion of a medical record will be kept confidential and will not be released without written consent. HIV status in personnel files and Workers’ Compensation files is to remain confidential and have the confidentiality status of medical records.

Education and Safety Precautions for Health Care Workers: The Health Science Center has developed guidelines for Health Care Workers and students in the health professions concerning prevention of transmission of HIV and HBV and concerning Health Care Workers who have HIV and HBV infection. All Health Care Workers shall be provided instruction on universal infection control (standard blood and body fluid) precautions. Each Health Care Worker who is involved in direct patient care should complete an educational course about HIV and HBV infection based on the model education program and workplace guidelines developed by the TDH and the guidelines of this policy.

Education

- New Employee and New Faculty Orientation: The Health Science Center should provide each employee with information about methods of transmission and prevention of bloodborne pathogen infection in the occupational environment. The information should be provided to new employees during orientation

- Information on Prevention Provided to Students: 1) The Health Science Center should routinely offer students programs based on the model HIV education and prevention program developed by the TDH and tailored to the students’ cultural, educational, language, and developmental needs; 2) The student health center should provide information on prevention of HIV infection including: a) the value of abstinence and long-term mutual monogamy, b) information on the efficacy and use of condoms, and c) state laws relating to the transmission of HIV and to conduct that may result in such transmission; and 3) The employee educational pamphlet will be available to students on request.

- Exposure Control Plan: The Health Science Center has adopted policies for the safe receipt, use, storage, and disposal of potentially infectious materials. The Health Science Center Exposure Control Plan contains detailed safety information related to bloodborne pathogens, including educational programs.

- Education of Students Entering Health Professions: Those areas offering medical, dental, nursing, health professions, counseling, and social work degree programs should include within the program curricula information about: 1) methods of transmission and methods of prevention of HIV and HBV infection, including universal infection control precautions; 2) federal and state laws, rules, and regulations concerning HIV infection and AIDS; and 3) the physical, emotional, and psychological stress associated with the care of patients with terminal illnesses.

- Unemployment Compensation Benefits: The Health Science Center will inform employees via employee and faculty guides or other appropriate methods that state law provides that an individual will be disqualified for unemployment compensation benefits:
  - if the Texas Employment Commission (TEC) finds that the employee left work voluntarily rather than provide services included within the course and scope of employment to an individual infected with a communicable disease, including HIV. This disqualification applies if the employer provided facilities, equipment, training, and supplies necessary to take reasonable precautions against infection; or
  - if the TEC finds that the employee has been discharged from employment based on a refusal to provide services included within the course and scope of employment to an individual infected with a communicable disease, including HIV. This disqualification applies if the employer provided facilities, equipment, training, and supplies necessary to take reasonable precautions against infection.

Health Benefits: No student or employee will be denied benefits or provided reduced benefits under a health plan offered through the UT System on the basis of a positive HIV test result

Needlestick Policy

The following procedures apply to students who have had significant contact from a contaminated needle or who have had contamination to an open wound or mucous membrane. These procedures apply whether or not the contamination was received on-site or off-site.

1. Significant Contact from:
a. contaminated needle with puncture of skin surface
b. any wound secondary to a contaminated object
c. contamination of any open wound or mucous membrane by saliva, blood or any body fluid.

2. Insignificant Contact: exposure of unbroken skin by blood or saliva or other body fluids.

3. Procedure:
   a. Cleanse wound thoroughly with soap and water, or appropriate substance for tissue cleaning.
   b. Report incident to appropriate person for documentation. Complete the appropriate institutional incident report available online or at the Student Health Center. Send a copy of the incident report to the Student Health Center.
   c. Obtain patient’s (source of exposure) permission for blood sample to be drawn for Hepatitis B Surface Antigen (HBsAg), Hepatitis C Antibody (Anti-HCV), and Antibody to Human Immunodeficiency virus (Anti-HIV). Sample should be submitted to lab using appropriate paperwork and usual process for the facility (e.g., at University Hospital, Anti-HIV lab slip will need to be signed by a physician and the patient). Be certain you understand how this information can be retrieved.
   d. The student should have her/his blood drawn as soon as possible for HBsAg, Antibody to Hepatitis B Surface Antigen (Anti-HBs), Hepatitis C Antibody, and Anti-HIV. This order form can be obtained at the Student Health Center. If the student has had a documented seroconversion following a Hepatitis B vaccination series, the HBsAg and Anti-HBs are not needed. The student should immediately report to either the Student Health Center or the University Hospital Emergency Room (depending on the time/day). If the student is more than 30–45 minutes from the Student Health Center or University Hospital Emergency Room, we recommend that the student seeks care from the nearest emergency room or health care facility. Report to the Student Health Center on the next (nonholiday) weekday.
   e. The primary purpose of the initial visit is to document the incident, obtain lab order form, and offer prophylactic therapy for HIV exposure.
   f. If the exposure occurs outside the San Antonio area, it is recommended that the student seek medical care from the nearest emergency room or health care facility.
   g. If the source is Anti-HIV negative, further follow up is at the discretion of the student and the student’s physician. If the patient to whom the student was exposed is shown to be Anti-HIV positive, repeat student testing at 6 weeks, 3, 6, and 12 months from initial exposure is recommended. Any charges will be the responsibility of the student.
   h. Any student who seroconverts her/his Anti-HIV or HBsAg will be referred by the Director of the Student Health Service for appropriate follow-up care. Texas law mandates that results of the Anti-HIV test remain confidential; only the student, her/his physician and the Director of the Student Health Service will know the test results. The student’s physician or the Student Health Service Director may inform others of the student’s Anti-HIV test result only after counseling and obtaining written permission from the student.
   i. If the patient to whom the student was exposed is shown to be HBsAg negative, no further Hepatitis B testing or therapy is needed. If the patient to whom the student was exposed is shown to be HBsAg positive, but the student is also HBsAg positive, or the student is Anti-HBs positive (either from prior disease or as a result of a Hepatitis B vaccination series), no further Hepatitis B testing or therapy is needed. If the patient to whom the student was exposed is shown to be HBsAg positive and the student is both HBsAg negative and Anti-HBs negative, the student should receive 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. If the student has already received Hepatitis B vaccination but has a negative Anti-HBs test result, the student should receive HBIG and one dose of Hepatitis B vaccine.
   j. In accidental exposure to blood from a patient with Hepatitis C, the student should have a HCV-PCR in 2–3 weeks post-exposure. The student should also follow-up for Hepatitis C serology at 6 weeks, 3 months, 6 months, and 1 year.
   k. Prophylaxis has been utilized by needlestick recipients in an attempt to decrease their risk of development of HIV infection. Before the student utilizes this form of therapy, several points should be considered:
      1. This risk of transmission of HIV per episode of percutaneous exposure to HIV-infected blood is, on the average, approximately 0.4%.
      2. Anti-HIV seroconversion in a needlestick recipient has been documented despite use of prophylaxis.
      3. Drugs used for HIV prophylaxis have multiple possible side effects. Please contact the Student Health Center prior to discontinuing any prophylaxis medications to ensure it is
Guidelines for Needlestick and Body-Fluid Exposures for Health Science Center Students*

It is recommended that you receive treatment within two hours of a needlestick or body-fluid exposure. You are encouraged to seek counseling at the Student Health Center so that your degree of exposure can be assessed and to assure appropriate data is collected on the source patient. With this necessary counseling, you will be in a better position to manage both your exposure and the related costs.

*Students must be registered in credit courses for this policy to apply.

1. If you sustain an injury with a needle or other sharp object that has been exposed to a patient’s body fluids, or if you splash a patient’s body fluid onto broken skin or mucous membranes, you may be at risk to contract infection with human immunodeficiency virus (HIV), the causative agent of AIDS.

2. If this occurs, treatment is available that can substantially reduce the risk of acquiring HIV infection. The U.S. Centers for Disease Control and Prevention recommends that for maximum protection, you should receive treatment within two hours of exposure.

3. The following are guidelines for what to do if you sustain a needlestick injury or body-fluid exposure.

For Exposures During Normal Weekday Daytime Working Hours in the San Antonio Area

If the exposure occurs during working hours (8:30 a.m.–4:30 p.m.), care may be obtained from the Student Health Center. However:

1. To avoid delays in treatment, CALL before going to the Student Health Center to be sure it is open and that staff is present. Phone number is (210) 567-WELL (9355).

2. If you are more than 30–45 minutes away from the Student Health Center, we recommend that you seek care from the nearest emergency room or health care facility.

3. If the Student Health Center is closed, go to the University Hospital Emergency Room. Contact the ER triage nurse at 358-2488 to expedite your care. Report to the Student Health Center on the next (non-holiday) weekday.

For Exposures After Normal Working Hours in the San Antonio Area

If the exposure occurs after working hours, care may be obtained from the University Hospital Emergency Room. Contact the ER triage nurse at 358-2488 to expedite your care. However:

1. If you are more than 30–45 minutes away from the University Hospital Emergency Room, we recommend that you seek care from the nearest emergency room or health care facility. Report to the Student Health Center on the next (non-holiday) weekday following the exposure.

For Exposures Outside the San Antonio Area

If the exposure occurs outside the San Antonio area, it is recommended that the student seek medical care from the nearest emergency room or health care facility. In Harlingen, during business hours, call 365-8752 for instructions. After hours, call 389-5004, VBMC Emergency Triage. For a medical emergency call 911.

1. If health care providers at the facility have questions about appropriate care, they can call the national HIV Post-Exposure Prophylaxis Hot-Line for Clinicians at 1-888-HIV-4911, which is open 24 hours per day.

2. Contact the Student Health Center by phone at (210) 567-WELL (9355) on the next (non-holiday) weekday.

Incident Reports. Regardless of location, complete an incident report in the facility in which the incident occurred. The report should include information identifying the person whose body fluid was the source of exposure and a contact person at the institution for follow-up. Bring a copy of the incident report to the Student Health Center.

Cost. If the above protocol is followed, cost of medical services received for needlestick or body-fluid exposure will be reimbursed by Health Science Center, up to $500 per case. The reimbursement shall be processed by the Student Health Center after the student submits a medical insurance claim receipt for the same case with a completed incident report.

In order to be eligible to receive the Needlestick Policy benefit, each Health Science Center student must comply with the following requirements:
a. Each student must consult the Student Health Center at (210) 567-WELL (9355) immediately.
b. Each student must seek reimbursement from the student’s private insurance company first. The student must initiate the request for reimbursement from Health Science Center within 30 days from the date the student’s insurance claim is approved/denied.
c. Each student must provide the Student Health Center with a written report of the incident prior to making any request for reimbursement which would include time, date, and location of incident. The incident must relate to your clinical duties as a registered student at the Health Science Center.

7. These guidelines are subject to revision and modification by the Student Health Advisory Committee and the chief student affairs officer of the Health Science Center and supersedes previous needlestick policies.

Recommendations of Student Health Advisory Committee Regarding Post Exposure Prophylaxis for Needlestick or Percutaneous Fluid Exposure

1. For required courses, students should be sent only to locations where the individual schools (medicine, dental, nursing, health professions, and graduate school) have confirmed that resources are available to provide care in the event a student sustains an infectious exposure. Post-exposure prophylaxis (PEP) for HIV, as recommended by the current CDC guidelines, should consist of medical counseling, lab work, and antiviral medications within the recommended time frame. These sites would need to be periodically reviewed to confirm that the appropriate policies and procedures are in effect, possibly as part of the annual affiliation agreements.

Departments will confirm that appropriate policies and procedures are in effect before students are sent to remote locations. This information will also be included in affiliation agreements.

For elective rotations in underserved areas, students will be notified that PEP may not be available as recommended by CDC guidelines. When possible, students will be given information as to the nearest facility where this level of care can be obtained. Administration may consider asking legal counsel to develop an informed consent/ release form to be signed by students acknowledging their understanding that PEP may not be immediately available to them on a chosen elective.

2. All Health Science Center students will be provided adequate education regarding universal precautions for infectious exposure and PEP procedures prior to any clinical rotations. Course directors/faculty must demonstrate that teaching and clinical application of the correct use of universal precautions occurs on clinical rotations.

3. Provide educational support to remote clinical sites, primarily in South Texas, to help bring their policies and procedures up to date regarding treatment of infectious exposures. The Health Science Center will cooperate in providing information to assist in making the needed drug therapy available at these remote sites.

Prior to the placement of a student in a preceptorship, the School of enrollment will by letter of agreement with the preceptor develop information regarding post-exposure prophylaxis, including the nearest facility where this level of care can be obtained. Students will be informed by letter of this same information. The School will inform the administrators of the preceptorship programs of the need for this information prior to student placement with a preceptor and will work with the administrators of the preceptorship program to identify the location of the nearest facility to each matched preceptor where the PEP can be obtained.

4. Continuation of current financial compensation for our students who follow our needlestick protocol and are treated after an injury in a remote location. Students will follow procedures as outlined in the Needlestick Policy, which is given to each student at registration and available on the Web. Reimbursement will be for covered expenses.
Alcohol, Drug, and Chemical Abuse

Click on an item in the list below to be taken to the location of its content.

- Health Science Center Policy on Alcohol, Drug, and Chemical Abuse
- Alcohol on Campus
- Controlled Substances on Campus

In compliance with the federal Safe and Drug-Free Schools and Communities Act Amendment of 1989 and the Drug-Free Workplace Act of 1988, the Health Science Center’s policies with regard to the abuse and/or distribution of alcohol, drugs, and chemicals by faculty, staff, and students are published in the Handbook of Operating Procedures (HOP) and in this Catalog. See specific references below.

- Code of Ethics and Standards of Conduct—HOP, Chapter 2, Policy 2.4.1
- Policy on Alcohol, Drug, and Chemical Matters—HOP, Chapter 8
- Use of Alcoholic Beverages on Campus—HOP, Chapter 8, Policy 8.2.3

Health Science Center Policy on Alcohol, Drug, and Chemical Abuse

Policy

1. The unlawful manufacture, sale, distribution, dispensing, possession, or use of a controlled substance (alcoholic beverages, drugs, or chemicals) is prohibited on any property under the control of the Health Science Center.

2. Alcoholic beverages on Health Science Center property are permissible only by prior written Presidential approval for specific events.

3. These standards of conduct apply to all persons connected with the institution either as employees or students.

   a. Employees: The unauthorized purchase, manufacture, distribution, possession, sale, storage or use of alcohol, illegal drugs or controlled substances while on duty, while in or on premises or property owned or controlled by the Health Science Center premises is prohibited by University policy and will result in a penalty of disciplinary probation, demotion, suspension without pay, or termination depending upon the circumstances. Any employee who is found guilty (including a plea of no contest) or has a sentence, fine, or other penalty imposed by a court of competent jurisdiction under a criminal statute for an offense involving a controlled substance that occurred in or on premises controlled by the University shall report such action to the Vice President of Human Resources within five (5) days.

   b. Students: The Rules and Regulations of the Board of Regents of The University of Texas System provides for disciplinary action against any student who engages in conduct that is prohibited by state, federal, or local law. This includes those laws prohibiting the use, possession, or distribution of drugs and alcohol. A student who is accused of such prohibited conduct is subject to the procedures and regulations governing Student Conduct and Discipline in this Catalog.

4. Violations of this Policy.

   a. Employees: An employee who unlawfully manufactures, sells, distributes, possesses or uses a controlled substance in or on premises or property owned or controlled by the University, regardless of whether such activity results in the imposition of a penalty under a criminal statute, will be subject to appropriate disciplinary action, including termination, or will be required to participate satisfactorily in an approved drug assistance or rehabilitation program or both.

   b. Students: The procedures and regulations governing Student Conduct and Discipline section in this Catalog define penalties that may be assessed to a student when an individual has violated the Standards of Conduct.

Health Risks of Alcohol, Drugs, and Chemicals

Alcohol. Health hazards associated with the excessive use of alcohol or with alcohol dependency include dramatic behavioral changes, retardation of motor skills, and impairment of reasoning and rational thinking. These factors result in a higher incidence of injury and accidental death for such persons than for nonusers of alcohol. Nutrition also suffers and vitamin and mineral deficiencies are frequent. Prolonged alcohol abuse causes bleeding from the intestinal tract, damage to nerves and the brain, psychotic behavior, loss of memory and coordination, damage to the liver often resulting in cirrhosis, impotence, severe inflammation of the pancreas, and damage to the bone marrow, heart, testes, ovaries, and muscles. Cancer is the second leading cause of death in alcoholics and is ten (10) times more frequent than in non-alcoholics. Sudden withdrawal of alcohol from persons dependent on it may cause serious physical withdrawal symptoms.

Drugs and Chemicals. The use of illicit drugs and chemicals may cause the same general type of physiological and mental changes seen with alcohol, though frequently those changes are more severe and more sudden. Death or coma resulting from overdose of drugs and chemicals is more frequent than from alcohol, but unlike alcohol, abstinence can lead to reversal of most physical problems associated with drug use. There are also health risks resulting from intravenous drug use. In addition to the adverse effects associated with the use of a specific drug, intravenous drug users who use unsterilized
needles or who share needles with other drug users can develop AIDS, hepatitis, tetanus (lock jaw), and infections in the heart. Permanent brain damage may also result. Chemicals, which include solvent inhalants and aromatic hydrocarbons, such as glue, lacquers, and plastic cement, also present health risks. Fumes from these substances cause symptoms similar to alcohol. Hallucinations and permanent brain damage may occur.

**Assistance for Students and Employees**

**Students.** The Counseling Service in the Office of Student Services provides evaluation, referral, consultation, and education. All service and records are confidential. Counseling Service records are professional health records that are confidential. Counseling Service records are not a part of the student’s university record. Students may request to review the record. Counseling Service records or summaries of service are provided only with the written authorization of the student. Seeking consultation or receiving treatment for alcohol or drug abuse is not an impediment to making progress in a student’s academic program.

**Employees.** Employees and students of the Health Science Center in need of assistance with an alcohol or drug abuse problem may take advantage of professional referral programs. The Family Service Association of America (Association) provides information on private community organizations involved in rehabilitation programs for alcohol and drug impairment. The number of the Association is 210-226-3391.

**Alcohol on Campus**

The use of intoxicating beverages is prohibited on property and in buildings and facilities owned or controlled by the Health Science Center.

With the prior consent of the President, the foregoing provisions may be waived with respect to a specific affair that is sponsored by the university. However, with respect to the possession and consumption of alcoholic beverages, state law will be strictly enforced at all times on property controlled by The University of Texas System and its institutions. (See Alcohol Policy for Student Organizations.)

**Controlled Substances on Campus**

The Health Science Center will impose at least a minimum disciplinary penalty of suspension for a specified period of time or suspension of rights and privileges, or both, for conduct related to the use, possession, or distribution of drugs that are prohibited by state federal, or local law. Other penalties that may be imposed for conduct related to the unlawful use, possession, or distribution of drugs or alcohol include disciplinary probation, payment for damages to or misappropriation of property, suspension of rights and privileges, suspension for a specified period of time, expulsion, or such other penalty as may be deemed appropriate under the circumstances.

Students can avail themselves of professional referral programs. The Counseling Service in the Office of Student Services, along with the various deans’ offices, provides support measures for impaired health professions students. Other private organizations involved in rehabilitation programs for impaired health professional students can be identified upon request.

The Student Government Association (SGA) supports the university policy on alcohol, drug, and chemical abuse, as outlined in this Catalog, through the use of the following procedures at SGA functions: (1) providing designated drivers, (2) utilizing designated servers, (3) providing nonalcoholic beverages, (4) providing food, and (5) requiring picture identification to insure compliance with the Texas Alcoholic Beverage Commission policies. (See the Student Conduct and Discipline section of this Catalog.)
Immunication Requirements

Prior to Registration, all students are required to have completed the immunizations outlined below.

**Hepatitis B Alone or Hepatitis A&B Combo Vaccine**

All students at the Health Science Center must be immunized against Hepatitis B before contact with patients or any and all other potentially contaminated materials, products, or sources. The Health Science Center will accept either the standard Hepatitis B (3 injections) or the expedited Hepatitis A&B combo vaccine series (3 injections). The Hepatitis B series can take between 4 to 6 months to complete. The Hepatitis A&B combo series can be completed in approximately 5 to 6 weeks, but will require a booster the following year. Students requiring either series should begin the series before starting classes.

Each student must submit written and signed documentation by a licensed healthcare provider stating the student had a completed series of three (3) Hepatitis B or Hepatitis A&B vaccines with positive titer results drawn one to two months post vaccination. It is unnecessary to obtain a titer prior to starting classes if no post results were drawn.

A titer is not required for students whose documentation indicates a series was completed ten (10) or more years before enrollment. All documentation, whether verifying a recent or past completion, should include the date and type of vaccine administered and the date and result of a quantitative antibody titer if one were obtained. Documenting a positive titer alone does NOT meet the Hepatitis B or A&B requirement.

**Tuberculosis**

Annual **TB skin tests** or TB evaluation (for those who have had positive skin test previously)

**Tetanus-Diphtheria (Td) or Diphtheria-Tetanus-Acellular Pertussis (TdaP)**

Proof of booster shot with either the TD or Tdap within the past 10 years is required. Adults 19-64 years of age should substitute Tdap for one booster of Td. Health care workers who have direct patient contact should get one dose of TdaP. A 2-year interval since the last Td is suggested but not required.

**Polio**

All students under the age of 18 are required to show proof of polio vaccination.

**Measles-Mumps-Rubella**

Measles - 2 vaccines required plus
Mumps & Rubella - 1 vaccine each, OR
2 MMR combo vaccines
(or titer proving immunity)

**Varicella (Chicken Pox)**

All students must submit one of the following:

1. Documentation of two immunizations administered on or after the first birthday and at least 30 days apart, or
2. Documentation from a health care provider on the date of the previous disease (chicken pox or zoster), or
3. Laboratory report of positive immune serum antibody titer (IgG).

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. The cost of all immunizations will be the responsibility of the student and/or dependent.
TB Screening, Prevention, and Management

The Health Science Center’s Role

There has been an increase in the number of tuberculosis (TB) cases in Texas and the United States since 1989. Although the increase in Texas appears to be more in the areas of The Valley and Houston, the Bexar County area is taking a proactive role in the screening and prevention of tuberculosis. The UT Health Science Center San Antonio has initiated mandatory yearly tuberculosis screening for all students involved in any form of patient care. This screening is in compliance with the recommendations by the Centers for Disease Control (CDC) and for the screening and prevention of tuberculosis infection in high-risk populations.

Screening for Tuberculosis Infection

Tuberculosis transmission is a recognized risk in health care settings. The greatest risk for health care workers is exposure to patients with unsuspected tuberculosis. Screening is by Mantoux technique (intradermal injection of purified protein derivative [PPD]). This test is offered on a yearly basis by the Student Health Center and on an as-needed basis for any student who might be exposed to an infectious case of tuberculosis, at the student’s expense. All students are required on admission to the university to have a TB skin test. If the student has a history of previous positive PPD, a medical evaluation will be required at the Student Health Center. This evaluation may include retesting, a CXR, liver function tests, antituberculin drug therapy, and/or other tests as indicated.

Policy on Management of Students with Positive TB Skin Tests

Students may have their skin tests evaluated in the Student Health Center at 48 and/or 72 hours after injection of the PPD, and they can receive documentation of their test results. Documentation of a negative result can be obtained only by having the skin test result evaluated in the Student Health Center within 72 hours after the test. All students with any swelling or redness of the site must come to the clinic within 72 hours for further evaluation. These students are medically evaluated, have a chest X-ray performed, and have blood drawn for liver function testing. If the student is without evidence of active tuberculosis, the chest X-ray is determined to be negative, and the liver test is normal, the student may be counseled at the Student Health Center on prophylactic treatment (at the student’s expense), or referred to the City Chest Clinic for further evaluation.

The student should start on prophylactic medication as soon as possible. The usual prophylactic regimen is isoniazid. The recommended duration of treatment is a minimum of six months. Because of the hepato-toxicity of isoniazid, students will be monitored with liver function testing on a monthly basis. The student who has a positive skin test, a negative chest X-ray, and a normal exam, and who is otherwise healthy and receiving preventive treatment for tuberculosis infection, can return to all aspects of clinical care. The student who cannot take or does not accept a complete course of preventive therapy will have her/his work situation evaluated by the associate dean for students of that student’s school to determine whether reassignment is indicated.

All students with a positive skin test or an active case of tuberculosis should be encouraged to have HIV testing.

Health Science Center Tuberculosis Screening Program for Students

The Texas Department of State Health Services recommends yearly tuberculosis screening for all health care personnel. Some of the students at the Health Science Center are at high risk for tuberculosis exposure. With the increasing rate in the country of TB cases, the Student Health Center in conjunction with the Student Health Advisory Committee and the Executive Board of the university, has decided to take an active role in protecting our students. The policy is as follows:

1. All students, including those with a history of Bacillus of Calmette and Guerin (BCG) vaccination, will have a PPD [purified protein derivative] test done within one year prior to initial registration as a student at the Student Health Center unless a previously positive reaction, completion of adequate prevention therapy, or adequate therapy for active disease can be documented. Anyone not tested prior to registration will have a PPD placed by the Student Health Center at the time of the initial registration. If the student has a history of a previous positive PPD, a yearly chest X-ray may be performed after medical evaluation.

2. All students will be screened on a yearly basis.

3. The Student Health Center can provide TB screening during regular clinic hours Monday through Friday, except Thursdays. Appointments are recommended

4. Students who have a PPD test done at another institution within the prior 12 months will need to show proof of test results to the Student Health Center.

5. A student with a previous positive skin test will not be retested. This student will be examined yearly and given the option of a yearly chest X-ray at the student’s expense. If the student has no signs or symptoms of tuberculosis, a chest X-ray will be optional.

6. The cost of TB screening, as with immunization, is at the student’s expense.

7. If students have not been TB tested within the last year, they WILL NOT be allowed to register. The Student Health Center places the student’s registration on "hold" until he/she is in compliance with the policy.

8. Documentation of a negative or positive test is available to the student who returns to the Student Health Center within 72 hours of the test to have the results read by the clinic nurses. This documentation can be used as evidence of testing for clinical rotations.
Compliance and Academic Enrollment

Students who fail to comply with the Tuberculosis and Immunization Policies will not be permitted to register for the upcoming year until they are in compliance.

Management of Students with Active Tuberculosis

Students with current pulmonary or laryngeal tuberculosis pose a risk to patients and other personnel while they are infectious. They will be excluded from school until adequate treatment is instituted for at least three weeks, cough is resolved, and sputum is free of bacilli on three consecutive smears. Students with current tuberculosis at sites other than the lung or larynx usually do not need to be excluded from school, if concurrent pulmonary tuberculosis has been ruled out. Students who discontinue treatment before the recommended course of therapy has been completed will not be allowed to have patient contact until treatment is resumed, an adequate response to therapy is documented, and they have negative sputum smears on three consecutive days.

Confidentiality and TB Screening Results

The Health Science Center requires every TB-infected student and every student with a recent skin-test conversion to report her/his situation to the associate dean for students of the student's school within one week of diagnosis.

Tuberculosis infection will be reported in compliance with all applicable statutory requirements, including the Communicable Disease Prevention and Control Act of the Texas Health and Safety Code, Chapter 38.

Data on the occurrence of tuberculosis among students and skin-test conversions among students will be collected and analyzed by the Student Health Center to determine the risk of tuberculosis transmission in the facility and to evaluate the effectiveness of infection-control and screening practices. The incidence of conversion of skin testing of students is important in determining the risk of acquiring new infection to all health care personnel. When it is in the interest of prevention of exposure of other health care providers (and/or patients), the Student Health Center director may discuss the recent skin test conversion or TB infection of any student with the associate dean for students of that student's school.

Students who fail to comply with either treatment of active disease or preventive treatment will be reported by the Student Health Center director to the associate dean for students of the student's school.
Schools

Dental School
Advanced Dental Education
Graduate School of Biomedical Sciences
School of Health Professions
School of Medicine
School of Nursing
Mission and Roles

The Dental School mission is the acquisition, dissemination, and use of knowledge toward the enhancement of oral health. This mission is addressed through six interrelated action components: education, research, patient care, community, faculty and staff, and infrastructure.

As a component school of The UT Health Science Center San Antonio, the Dental School serves the citizens of the state of Texas, with particular emphasis on the South Texas community, and the nation by: educating oral health care providers and scientists, engaging in biomedical and clinical research to improve the oral health of the public, providing state-of-the-art patient care, enhancing community awareness of oral health issues and practices, and addressing health disparities among the population.

Accreditation

All educational programs in the Dental School 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 occurred in February 2005, resulting in “approval” status for a period of seven years. 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.

Curriculum Goal

The Dental School curriculum is designed to graduate competent general dentists who can independently and collaboratively practice evidence-based comprehensive dentistry with support from dental specialists, allied dental professionals, and other health care providers with the ultimate goal of improving the oral health of society. General dentists are primary care health providers who have a sophisticated knowledge of the biological basis and epidemiology of oral disease, use contemporary therapeutic approaches, demonstrate the capacity for professional and ethical behavior that meet high standards, and can utilize effective communication and interpersonal skills during patient care. The Dental School also strives to graduate general dentists who have the capacity to critically evaluate and appropriately use emerging diagnostic and treatment technologies and who are self-directed learners with the ability to continually enhance their knowledge and clinical skills throughout their career.

Degree

Students who meet all program requirements as described in the Catalog are awarded a Doctor of Dental Surgery (DDS) degree.
Curriculum Model and Philosophy

The Dental School employs a competency-based curriculum model in accordance with the educational philosophy and standards of the Commission on Dental Accreditation. In competency-based dental education, what students learn is based on clearly articulated statements of what graduates should be able to do without faculty assistance when they begin practice. These statements, which describe the outcomes of the educational process, are known as competencies. A competency is a behavior or ability that is essential for the practice of general dentistry. Competency is comprised of numerous components: knowledge, experience, critical-thinking capability, problem-solving skills, ethical values, and capacity to perform procedural tasks in accordance with established criteria. The goal of the Dental School and the faculty who implement the curriculum is to help students blend all facets of competence together into an integrated and cohesive whole so that they are ready to function independently after graduation. Competency assumes that all behaviors are performed with a degree of quality consistent with patient well-being and professional standards, are performed to serve the patients’ needs and without regard for the dentist’s own self-interest, and that the general dentist can self-evaluate diagnostic accuracy and treatment effectiveness and make necessary modifications to enhance practice. The aspects of competency described in the preceding sentence are central tenets of the Dental School curriculum philosophy.

Competency Assessment

The Dental School curriculum is organized around 17 competencies that students are expected to acquire by the time of graduation. These are published on the Dental School Intranet: http://dserver.uthscsa.edu/academic_affairs (these competencies are currently undergoing revision). Each of these competencies is supported by 3–7 educational outcomes which specifically designate the knowledge, skills, and values that students are to master in order to demonstrate they have achieved a particular competency and can utilize that competency in patient care or other aspects of a general dentist’s professional responsibilities. Students’ progress toward competency in each of these 17 curricular components is measured by a series of assessments throughout the dental school curriculum. Specific learning experiences in each course are linked to the educational outcomes associated with various competencies. Students are required to demonstrate mastery of these educational outcomes in order to receive credit for the course and advance to subsequent levels of the curriculum. During the junior and senior years, which are primarily devoted to clinical education, the students’ ultimate ability to appropriately and effectively use all of the knowledge, skills, and values associated with each competency during patient care is evaluated by several mechanisms including formal competency examinations, faculty assessment of procedures performed as part of patient therapy, and comprehensive (global) evaluations of the students’ overall performance on a monthly basis. Criteria and guidelines for students’ academic promotion from year to year and for graduation are described in Standards for Promotion and Graduation of Dental Students that appear in a following section of the Catalog.

Curriculum Overview

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 and summer sessions between years 1 and 2, 2 and 3, and between years 3 and 4. The Dental School 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 Dental School clinics and affiliated community sites.

The following section reviews the focus of each year in the curriculum.

Freshman Year: As a fundamental building block for all competencies, students are introduced to the ethical principles for all health care providers, and students learn the biomedical foundations of normal human structure and function moving from cellular, to gross tissues, to organ systems. Students also acquire the clinical foundations needed for competency in patient assessment including radiological techniques and physical examination methods. Students develop skills in oral health risk assessment and prevention and begin their study of periodontal disease and therapy that prepares them for competency in these important aspects of dental practice. An important component of the freshman year is the students’ introduction to the perceptual and fine-motor skills needed for competency in many types of dental therapy. First-year students are introduced to the clinical environment and acquire clinical support skills that allow them to serve as assistants to upperclass students.

The summer between the freshman and sophomore year allows students to enrich their education with selectives and clinical rotations. A minimum of one selective course is required.

Sophomore Year: Second-year students analyze the causes and clinical presentations of oral abnormalities and diseases of the major organ systems that have implications for dental care that provides the groundwork for competency in patient evaluation and diagnosis. A major focus of the sophomore year is development of procedural skills in preclinical simulation laboratories. Second-year students assist upperclass students in the clinic and receive additional experience in patient eval-
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 GPG’s, 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 pediatric dentistry, oral surgery, dental emergencies, hospital dentistry, oral medicine, the state psychiatric hospital, and in the school’s mobile dental van at various community locations. Students are also provided enrichment courses in oral pathology, pharmacotherapeutics, implantology, esthetics, and other areas. Student evaluation in the senior year is based on several sources including: performance on competency exams, daily assessment of patient care quality by supervising faculty, acceptable clinic utilization (time spent actually providing patient care), a summative monthly evaluation which comprehensively considers all aspects of the student’s performance, successful completion of all rotations, a passing grade on periodic student professionalism evaluations, accumulation of an acceptable number of points for patient care procedures performed throughout the year, and passing all courses in the senior year.

Senior students cannot be certified for graduation if they have an “F” or “Incomplete” in any course at the end of the senior year or if GPG faculty do not certify that the student has adequately demonstrated readiness for graduation based on the evaluation measures previously described.

National Board Dental Examination

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 May 20 and the first excluding days scheduled for summer clinic. The Dental School 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 December of the senior year and students are expected to take the exam in the month of December of the senior year.

For both Parts I and II the National Board policies require students to wait 90 days between attempts. Additionally, candidates who have not passed Part I or Part II after three attempts are required to wait one year (12 months) after their third attempt to apply to retest (effective Jan. 1, 2007).

Admission and Application

Information about admission requirements is detailed in the Applicant Viewbook of the Dental School. 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 in English, biology, physics, and chemistry by the end of the spring semester before entering Dental School, and with a grade no lower than C. 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/ddsgeninfo.html. All applicants who are legal residents of Texas must apply through
the Texas Medical and Dental Application Service. Applications are accomplished online at http://www.utsystem.edu/tmdsas.

Student Background Check Policy

Background Checks for Applicants and Students of the Dental School of The University of Texas Health Science Center at San Antonio.

I. Applicability

This policy applies to applicants to 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:

A. Doctor of Dental Surgery Students
B. Advanced Dental Education Students

II. Policy

Effective immediately, applicants must submit to and satisfactorily complete a background check review as a condition to admission into all programs designated as requiring a background check. An offer of admission will not be final until the completion of the background check(s) with results is deemed favorable. Admission may be denied or rescinded based on a review of the background check.

Additionally, students who are currently enrolled and who do not have a valid background check must submit to and satisfactorily complete a background check review as a condition to enrolling or participating in education experiences at affiliated sites that require a background check.

Students who refuse to submit to a background check or do not pass the background check review may be dismissed from the program.

Applicants or students who are denied admission to or are dismissed may seek admission into another educational program that does not have a clinical component requirement in its curriculum.

III. Rationale

A. 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.

B. Clinical facilities are increasingly required by accreditating agencies, such as Joint Commission on Accreditation of Healthcare Organization (JCAHO), to conduct 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 background checks for students and faculty.

C. 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 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 Dental School, the student or applicant.

D. The Dental School is obligated to meet the contractual requirements contained in affiliation agreements between the university and the various healthcare facilities.

IV. Background Check Report

A. Obtaining a Background Check Report. The Dental School will designate approved company(ies) to conduct the background checks and issue reports directly to the Dental School. 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.

B. Scope. Background checks include the following and cover the past seven years:

- 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
- Social Security Number verification
- Violent Sexual Offender and Predator Registry search
- Office of the Inspector General (OIG) List of Excluded Individuals/Entities
- General Services Administration (GSA) List of Parties Excluded from Federal Programs
- U.S. Treasury, Office of Foreign Assets Control (OFAC), List of Specially Designated Nationals (SDN)
- Applicable State Exclusion List
- Office of Homeland Security information/report

C. 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 Dental School will provide applicants or students a copy of or access to the 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 contacted the designated company to challenge the accuracy of the 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 consulted. Current Students

1. For students who did not have a background check review prior to commencement of an assignment at a health care facility, the background check report will be submitted to the Admissions Committee for its review (or, for Advanced Education Programs, the Program Director). If the report does not contain any negative findings as determined by the committee, the student will be allowed to participate in clinical rotations. If the report contains negative findings, the Associate Dean for Student Affairs (Advanced Ed Program Director) may request that the student submit additional information relating to the negative finding, such as a written explanation, court documents and police reports. The Associate Dean for Student Affairs (or Advanced Ed Program Director) will review all information available to it and determine whether the student should be permitted to participate in clinical rotations or be dismissed from the program.

3. If the Associate Dean for Student Affairs (or Advanced Ed Program Director) determines that dismissal from the program is warranted, a student may appeal that decision in accordance with the university’s grievance procedure for academic matters.

C. 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.

D. Deferment. A reviewing committee may extend an offer of admission for up to one year while the matter is resolved. However, the student may be granted permission to re-enroll in clinical lab(s) section(s) only if space is available.

VI. Confidentiality and Record Keeping

A. Background check reports and other submitted information are confidential and may only be reviewed by university officials and affiliated clinical facilities in accordance with the Family Educational Records and Privacy Act (FERPA).

B. Students. Background check reports and other submitted information of students will be maintained in the Dental School in accordance with the university’s record retention policy for student records.

C. Applicants Denied Admission. 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

A. The Dental School shall inform students who have negative findings in their background check report and are nonetheless permitted to enroll that the Dental School'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.

B. A 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 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.

C. Falsification of information, including omission of relevant information, may result in denial of admission or dismissal from the educational program.

D. Criminal activity, which occurs while a student is in attendance at the university, must be reported immediately by the student to the Dental School 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.

Attendance, Leave of Absence, Readmission

Class Attendance

Students are expected to attend and actively participate in all regularly scheduled classes, laboratories, and clinical periods. Required attendance at regularly scheduled classes, laboratories, and clinical periods is the option and prerogative of the academic department responsible for that particular portion of the curriculum. The policy regarding attendance and the consequences for failure to comply will be announced 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 Dental School, he/she must contact the Office of Student Affairs at 567-3752. The office will maintain a roster of absentees and the reported reasons for absence. Course Directors for these students will be notified.

In cases of absence during an assigned rotation, 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 the Office of Student Affairs.

In cases of absence from clinic sessions, junior students must notify the Office of Clinical Affairs (567-3265). Senior students must notify the Office of Clinical Affairs and the Department of General Practice (567-3450).

Students are responsible for contacting Course Directors upon their return to school to schedule required makeup work.

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 reenrolling as juniors or seniors will need to demonstrate knowledge and skills consistent with the expectations for other students at the same level.

If approved, the student must request and complete a Student Clearance Form available from the Registrar's Office (319L 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 are those in effect at the time of publication but are subject to change. Students are responsible for inquiring about changes each year.
Faculty Advisors

Members of the faculty will be assigned as advisors to dental students and will be available for counseling. Students are urged to become well acquainted with their advisors. While the faculty members are assigned to assist students, the students must be mindful of their own responsibility for seeking help when it is needed and keeping advisors informed of problems they may be encountering.

The Dental School’s Faculty Advisor Program is designed to enhance the relationship between faculty and students and provide the opportunity for faculty to give leadership and guidance to students. A faculty advisor is assigned to one to three students from each entering class and remains as the advisor throughout the freshman and sophomore years. Clinical advisors are assigned for the junior and senior years.

In addition to serving as a role model, the faculty advisor provides for development of appropriate ideals and goals to be incorporated into the student’s professional personality. Faculty advisors meet with advisees, as needed.

Faculty advisors can be helpful to students who are having difficulties with course material or interpersonal problems. Advisors also serve as advocates for students, interpreting for the administration and faculty the impact of rules and procedures on students. They monitor academic progress and provide support and give guidance to students.

It is the student’s responsibility to attend meetings and seek out the faculty advisor when he/she encounters difficulties. A student may be reassigned to a different advisor if, by mutual agreement, the change is required.

Grades

The academic standards for successful completion of courses and grade assignment are established by the department under which the course is administered. In arriving at a final grade, consideration will be given to written and oral examinations, skills assessments, clinical performance, and competency assessments, when applicable. Noncognitive factors such as performance under stress, integrity, initiative, interpersonal relations and personal and professional characteristics are the “values” components of competency and also will be considered. A passing grade will not be awarded to the student whose performance in noncognitive areas is unacceptable. Professional development expectations are published on the Dental School intranet http://dserver.uthscsa.edu/. Course directors may emphasize and further define professionalism for individual courses. A copy of the expectations will be given to the student at the beginning of the course.

Final Grades

A final grade will be reported after completion of a course as:

<table>
<thead>
<tr>
<th>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>
</tbody>
</table>

Other symbols may appear on transcripts as appropriate. These include:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EX</td>
<td>Exemption</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete. Not a final grade</td>
</tr>
<tr>
<td>Q</td>
<td>Course dropped with no penalty</td>
</tr>
<tr>
<td>WP</td>
<td>Withdrew passing</td>
</tr>
<tr>
<td>WF</td>
<td>Withdrew failing</td>
</tr>
</tbody>
</table>

+Assigned by the course director if he/she considers acceptable the reason for a student’s failure to satisfactorily complete all required work.

A grade of I must be corrected in a prescribed time period that is given to the student in writing.

Credit Hours and Grade Point Average

One semester hour credit is given for each:

- 15–18 clock hours of lecture or conference
- 30–36 clock hours of clinic or technique laboratory
- 45–60 clock hours of non-technique laboratory

Grade point average is calculated by assigning the following numerical weight to each letter grade:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Numerical Weight</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>

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 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 Dental School within seven days of the departmental decision. If the Dean agrees to review the matter, he/she will review the case based on the published limitations allowing the original grievance and rendering an appropriate decision. This Dental School policy supersedes any other grievance policies, and decisions made in this process are final.
Policies on Examinations

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. Random
   b. Proctor all written examinations. (Two faculty proctors are a minimum; three or more are recommended.) Proctors shall be present and observant throughout the examination.
   c. Proctor all practical examinations. (Two or more faculty proctors are recommended for each Dental School 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.
   d. Ensure that examinations are conducted in a quiet, comfortable atmosphere.
   e. 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.
   f. Report student misconduct during examinations to the Course Director. If the misconduct falls under specific items in the course syllabus, the consequence as defined in the syllabus will be applied. If misconduct does not fall under specific items in the syllabus and is verified at the department level, it shall be reported to the Associate Dean for Student Affairs in compliance with procedures and regulations governing Student Conduct and Discipline of the Health Science Center verified at the department level, it shall be reported to the Associate Dean for Student Affairs in compliance with procedures and regulations governing Student Conduct and Discipline of the Health Science Center.
   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.

Student Responsibilities

1. It is the responsibility of every dental 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, the faculty must comply with the following policies on examinations:
   a. Proctor all written examinations. (Two faculty proctors are a minimum; 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 Dental School 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. Before beginning an examination, students should be prepared to complete the examination. However, 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.
   d. Students must refrain from all activities that detract from a quiet testing environment.
   e. Students must take reasonable precautions to ensure that responses to examination questions or projects cannot be seen by other students.
   f. Students must turn in their examination papers and practical examination projects promptly at the termi-
nation 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 Associate Dean for Student Affairs.

i. Students are expected to maintain the highest integrity during the examination.

Requests to Change Schedule of Examinations

The official dates and times of all examinations are published in the final Class Schedules 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.

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:

- A written reason for the move that must be compelling and academically sound.
- A written statement from the Course Director stating he/she is in agreement with the change.
- The results (number of yes/no votes) of a secret ballot taken from all members of the class. The Associate Dean for Academic Affairs will review the request and can approve it if the following requirements are met:
  - The request has been submitted within the guidelines.
  - The reason for the move is valid.
  - The Course Director is in agreement with the move.
  - 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.
  - An appropriate classroom is available at the proposed time.

Progress Reports

Reporting of Progress and Final Grades

- Progress reports are submitted to the Associate Dean for Academic Affairs at midyear for each student enrolled in a course that extends into the next semester. Progress is reported as:
  
  S = Satisfactory
  
  U = Unsatisfactory

The course director or task force administering a course may report unsatisfactory progress to the student at any time throughout the duration of the course.

- Final grades are submitted to the Registrar and the Associate Dean for Academic Affairs for each student enrolled in a course when the course has been completed.

Academic Warning

At midyear, a student receives notification from the Associate Dean for Academic affairs or the course director for one or both of the following reasons:

- Receiving an unsatisfactory report (U) for any course in progress.
- Achieving a grade point average less than 2.0 for either Group A* or Group B** courses completed during the fall semester.

This notification serves as an academic warning.

*Group A - all basic science and dental didactic courses

**Group B - all preclinical laboratory and clinic courses

Academic Probation

A student receiving a final grade of F in a course at any time during the academic year is placed on academic probation.

Except for senior students, the Academic Performance Committee does not recommend actions for correction of academic deficiencies until the end of the academic year when the student’s entire academic record can be considered.

Academic Probation Criteria

A student will be placed on academic probation, which prohibits a student from graduation or promotion to the next academic year, if he/she meets one or more of the following conditions:

- Receipt of a final F grade in any course at any time during the academic year.
- For DS1, 2, and 3 students, 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. (See Dismissal.)
- For DS4 students, receipt of an overall GPA less than 2.0, unless the student is dismissed. (See Dismissal.)
- Failure to pass National Board Dental Examinations, Part I by the end of the junior year.
- Failure to pass National Board Dental Examinations, Part II by the end of the senior year.
- A student will remain on academic probation until all academic deficiencies are corrected, unless the student is dismissed.
Removal from Academic Probation

To provide an opportunity for the student to correct academic deficiencies, such as F grades and/or a GPA less than 2.0 in Group A and/or Group B courses of the year’s curriculum, the Academic Performance Committee may recommend remediation of specific courses or repetition of the year in its entirety.

To provide an opportunity for the student to correct National Board deficiencies, the Academic Performance Committee may recommend completion of an altered curriculum designed for skills maintenance, preparation for retesting, and achievement of a passing grade for the National Board Dental Examinations.

A student will be removed from Academic Probation status by the Academic Performance Committee when all academic deficiencies have been corrected. This action will make the student eligible for promotion to the next academic year.

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:

- **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.
  - A course director will not initiate a remediation program for a student unless remediation has been recommended by the Academic Performance Committee and approved by the Dean.
  - The remediation program will be designed by the Course Director and approved by the Curriculum Management Committee.
  - If remediation is not recommended by the Academic Performance Committee the student must repeat the academic year in its entirety.

- **Repetition** of the academic year in its entirety.

- **There is no summer remediation for some of the courses. These will be identified in the syllabus at the beginning of the course.** Failure of these courses will result in repetition of the academic year in its entirety or dismissal.

Correction of a Grade Point Deficiency

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 entire academic record and any extenuating circumstances, the Academic Performance Committee may recommend one of the following actions in lieu of dismissal:

- **Remediation** of one or more courses designated by the Academic Performance Committee that will help raise the deficient GPA to 2.0 or above. 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. (See **Dismissal**.)
  - The remediation program will be designed by the Course Director and approved by the Curriculum Management Committee.
  - Remediation for seniors may be scheduled during the academic year, but all other remediation will occur in a four-week period during the months of June and July.

- **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.

National Board Dental Examination Deficiency

Sophomore students are expected to challenge Part I of the National Boards between the end of the spring semester and the beginning of the fall semester of their junior year (mid-May to early July).

Senior students are expected to challenge Part 2 of the National Boards in late November/December of the Senior Year.

In an effort to help a student correct a National Board deficiency, the Academic Performance Committee will recommend completion of an altered curriculum that includes requirements for skills maintenance, preparation for retesting, and achievement of a passing grade for the National Board Dental Examinations.

- The altered curriculum will be developed by the Associate Dean for Academic Affairs and approved by the Altered Curriculum Committee.

- Eligibility for promotion or graduation will be restored upon satisfactory completion of all requirements of the altered curriculum.

- 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.

Students may retake the NBII examination no sooner than 90 days from the last attempt. Students will not be allowed to graduate with their class if the correction of the NBII deficiency does not occur before the regularly scheduled graduation date. In that case, students will need to enroll for “Independent Studies” in the Dental School for the remainder of the summer, at no additional fees. This will assure that students continue to have all privileges as a student. After August 31, students must enroll as a “senior student on an altered curriculum” for this same benefit. This will require a prorated registration fee, including tuition and other fees, to be determined by the Registrar’s Office.
Course Remediation/Repetition

Final Grade

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.

Following repetition of a course during remediation 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.

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.

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.

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 GPAs for the academic year and the overall GPA; however, the previous grade or grades achieved in each course also will appear on the final transcript.

Failure to Successfully Remediate or Repeat Year

A student who fails to correct an F grade deficiency or raise her/his deficient grade point average to 2.0 or above after remediation or repetition of the academic year will be considered for academic dismissal.

The Academic Performance Committee will review the entire academic record and any extenuating circumstances before making a recommendation for dismissal. Only in exceptional circumstances will the Promotions Committee recommend another correction program in lieu of dismissal. However, no student will be allowed to repeat an academic year more than once.

Dismissal

A student can be considered for dismissal from the school for academic deficiencies or violation of university regulations and Dental School Code of Ethics (see Student Guide). The Academic Performance Committee is responsible for considering students for academic dismissal and makes its recommendations to the Associate dean for Academic Affairs.

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 that 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. Before the vote is taken, all non-committee members will be excused.

A student will be considered for academic dismissal if he/she meets any of the following conditions:

GPA Deficiency

- Receipt of a GPA less than 2.0 in either Group A or Group B courses of the year’s curriculum.
- 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.

“F” Grade Deficiency

- Unsuccessful attempt to remediate a course or courses for which an F grade has been given.
- Receipt of an F grade for a course or courses during the repetition of an academic year.

National Board Deficiency

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 for the National Board Dental Examination, Part I or Part II.

Academic and Professional Misconduct Dismissal

A student may be considered for dismissal if he/she fails to demonstrate to the faculty the intellectual, ethical, or behavioral attributes appropriate for members of the dental profession.

Appeals Process

A student may appeal a decision by the Academic Performance Committee recommending a) remediation, b) repetition of the year, or c) academic dismissal, by submitting to the Dean’s Office within five (5) days following receipt of written notification of the Committee’s recommendation a written request for an opportunity to appeal to the Dean of the Dental School.

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.

Dental School
Disciplinary Probation and Dismissal

Violation of Health Science Center regulations concerning standards of conduct which compromise professional integrity and/or competence will make a student eligible for either disciplinary probation or dismissal. Procedures for dismissal will be governed by the guidelines contained in the procedures and regulations governing Student Conduct and Discipline in this Catalog.

The policies contained in this Catalog concerning grades, promotion, and graduation are those in effect at the time of publication and are subject to change. Students are responsible for inquiring about changes each year.

Promotion

Recommendation for promotion to the next year of the curriculum is made by the Academic Performance Committee to the Dean. 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.

Graduation

The degree Doctor of Dental Surgery is awarded by the Board of Regents upon recommendation of the faculty through the Faculty Council 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 cumulative GPA of 2.0 or above, have passed National Board Dental Examination – Part I and Part II, be of good moral character, and comply with all necessary legal and financial requirements.

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.

Dental School Graduation Ceremony Policy

The faculty marshals chosen by the graduating class and approved by the Dental School administration will hood the Dental School candidates at the graduation ceremony. No other individuals will be allowed to hood the candidates for graduation. However, current Health Science Center faculty members may petition the Dean of the Dental School to allow them to present the diploma to their daughter/son during the ceremony.

Guidelines for 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 dental school 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 dental school 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 clinical attire and grooming because they affect patient safety as well as their own. The clinic manual is published on the Dental School Intranet site, http://dserver.uthscsa.edu/OPC%20Manuals/Admin%20Sect%20docs/Dress.html. The manual includes general guidelines for attire and grooming, as well as specific requirements that relate to patient and personal safety.

Other Academic Recognition Programs

Distinction in Dental Education

The Program in Dental Education recognizes students who, in addition to their clinical dental program, have developed teaching skills and performed academic-related research. Students in the program complete three special teaching electives: Teaching Training, Teaching Experience, and Project Summary and Evaluation. Students who successfully complete this program will graduate with the designation Distinction in Dental Education on their official transcripts.

Distinction in Research

The Distinction in Research program recognizes student investigators who, in addition to their clinical dental program, have acquired research skills and accomplished significant research activity. Students in this program complete three Special Research Electives — Protocol Development, Completion of Individually Designed Research and Manuscript Preparation, and Presentation of Individually Designed Research. Students who successfully complete this program will graduate with the designation Distinction in Research on their official transcripts.

Dean’s List

The Dean’s List was established in 1983 to recognize students who have demonstrated academic achievement by maintaining a 3.9 grade point average or above for the academic year. Each year those students in the four classes are honored.

Scholarship in Basic Sciences

The criterion for selection for this award is achievement of a cumulative GPA of 3.9 for the following courses: biochemistry, gross anatomy, microanatomy, microbiology, physiology, general pathology, neuroscience, and pharmacology. If a course is remediated or repeated, both grades for the course will be included in the calculation of the GPA. Recognition for this award will include a permanent entry on the student’s transcript.
Award for Excellence in Clinical Dentistry

The criterion for this award is achievement of a GPA of 3.8 or above for Group B courses in both the junior and senior years. If a course is repeated or remediated, both grades received in the course will be used in calculating the GPA. Recognition for this award will include a permanent entry on the student’s transcript.

Achievement on National Board Dental Examination, Part I

The criterion for this award is achievement of a score of 90 or above on the National Board Dental Examination, Part I. Recognition for this award will include presentation of a certificate at the annual Dental School Awards Convocation.

Award for Exemplary Achievement on the National Board Dental Examination, Part II

The criterion for this award is achievement of a score of 90 or above on the National Board Dental Examination, Part II. Recognition for this award will include presentation of a certificate at the annual Dental School Awards Convocation.

Dual Degree Programs

Dual degree programs of study at The UT Health Science Center San Antonio provide a mechanism for medical or dental students to obtain an M.S. or Ph.D. degree in addition to an M.D. or D.D.S. The purpose of these programs is to develop clinical scientists who have depth of knowledge in clinical medicine or dentistry and basic sciences, and also experience in research planning and execution. Such scientists are therefore exceptionally qualified to apply specialized research competence to the resolution of clinical problems.

A student who wishes to obtain both a D.D.S. and a Ph.D. must obtain the entrance prerequisites of both the Dental School and the Graduate School of Biomedical Sciences. Students submit applications for admission to the Dual Degree Program through the Texas Medical and Dental Schools Application Service and to the Health Science Center Graduate School of Biomedical Sciences during the fall prior to attendance. Approval for admission is made by the DDS/PhD Admissions Review Panel (through the Dental School Dean and Associate Dean for Student Affairs) and by the Graduate School of Biomedical Sciences.

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 six years. However, utilization of summer sessions and elective periods is mandatory for this total time span. Students accepted into the DDS/PhD program will be required to reapply to Dental School for admission as a traditional DDS candidate if they choose not to complete the DDS/PhD training program.

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 Dental School.

Advanced Education Programs

Certificate and Master of Science degree programs, residency programs in General Dentistry, Dental Public Health, Oral & Maxillofacial Surgery, and an Advanced Education in General Dentistry program are offered at the Health Science Center. The certificate programs in Dental Diagnostic Science, Endodontics, and Pediatric Dentistry require two years of study; Periodontics and Prosthodontics certificate programs require three years. Subsequent admission to the Graduate School of Biomedical Sciences (at the end of the first year of study) and successful completion of graduate study are required for the Master of Science degree offered in the Periodontics, Prosthodontics, Endodontics, or Dental Diagnostic Science programs.

The General Practice residency program and Advanced Education in General Dentistry program, conducted by the Department of General Dentistry, are one year in length as is the program in Dental Public Health. The Orthodontics residency program is 35 months. A 72-month residency program in Oral & Maxillofacial Surgery is affiliated with the Dental School. A complete description of the advanced education programs appears after the predoctoral program course descriptions.

International Dentist Education Program (IDEP)

The Dental School offers qualified graduates of foreign dental programs the opportunity to earn a Doctor of Dental Surgery (DDS) degree. Completion of this 2-year 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.

The IDEP is a full-time, daily program and consists of 2 months of didactic and preclinical laboratory training in the summer followed by matriculation through the 3rd and 4th years of the undergraduate dental program with classroom lectures and direct patient care in the group practices and departmental clinical courses and rotations.

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 80 (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 recommendation; and completion of personal statements about applicant’s clinical experience, dental-related activities, and professional goals.

Information about admission and application requirements is detailed on the Dental School Web site: http://www.dental.uthscsa.edu/admissions.idep.html.

Additional information about the IDEP can be obtained by contacting the IDEP office through e-mail at: IDEP@uthscsa.edu

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# Doctor of Dental Surgery Curricula

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- The Sophomore Year
- The Junior Year
- The Senior Year
- Course Descriptions
- Dental Selectives

Course descriptions follow curricula.

## The Freshman Year

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Group</th>
<th>Semester I</th>
<th>Semester II</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
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<tr>
<td>COMD 5015 - School-Based Prevention</td>
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<td>COMD 5017 - Oral Health Promotion &amp; Disease Prevention for Individuals and Populations</td>
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<td>CSBL 5016 - Gross, Head and Neck Anatomy</td>
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<tr>
<td>DIAG 5009 - Introduction to Dental Radiology</td>
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<tr>
<td>DIAG 5014 - Physical Evaluation I</td>
<td>A</td>
<td>x</td>
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<tr>
<td>DIAG 5049 - Practical Infection Control in Dentistry</td>
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<tr>
<td>EMST 5001 - Basic Cardiac Life Support</td>
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<td>GEND 5001 - Foundations of Professional Development</td>
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</table>

\( x = \text{semester(s) presented} \)

A single grade at the end of the year is given for courses that extend through both semesters.

## The Sophomore Year

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<tr>
<th>Course Description</th>
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<td>DIAG 6035 - Physical Evaluation II</td>
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<td>ENDO 6142</td>
<td>Preclinical Endodontics</td>
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<td>GEND 6001</td>
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<td>Evidence-Based Dentistry</td>
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<td>Clinic Introduction</td>
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<td>ORTH 6075</td>
<td>Sophomore Orthodontics Lectures</td>
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<td>ORTH 6077</td>
<td>Growth and Development</td>
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<td>OSUR 6051</td>
<td>Oral Surgery I</td>
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<td>Local Anesthesia</td>
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<td>OSUR 6140</td>
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<td>PATH 6019</td>
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<td>Preclinical Prosthodontic Treatment for the Edentulous Patient</td>
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<td>Preclinical Operative Dentistry</td>
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<td>Biomaterials II</td>
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x = semester(s) presented

### The Junior Year

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<tr>
<th>Course Code</th>
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<th>Credit Hours</th>
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### Junior Clinic Rotations

All junior dental students enhance their clinical experiences by participating in several Dental School and off-campus required clinical rotations including the following:

- Oral Surgery
- Dental Emergency
- Geriatrics
- Pediatrics
- Frank Bryant Clinic
- Ricardo Salinas Clinic
- Periodontics
- Screening
- Coronado Elementary School/School-Based Clinic

### The Senior Year

<table>
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<tr>
<th>Course Code</th>
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<th>Group</th>
<th>Semester I</th>
<th>Semester II</th>
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Senior Clinical Rotations

All senior dental students enhance their clinical experiences by participating in several Dental School and off-campus required clinical rotations including the following:

- Applied Management
- Dental Emergency
- Dental Hygiene
- Hospital Dentistry
- SAISD Clinic
- Oral Medicine
- Oral Surgery
- Ricardo Salinas Clinic
- Frank Bryant Clinic
- Primary Dental Care - South Texas Rotation

Dental Selectives

The Dental School 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 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 or a six-week research selective. The two-week selective may be one of the following:

- South Texas Rotation
- General Practice Dental Emergency Care (DECC)
- Hospital Dentistry
- Oral and Maxillofacial Surgery
- Pediatric Dentistry Clinical Externship Program

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/educprog/ddsselectives.html.
**INTD**

Distinction in Dental Education (requires the following 3 courses):
- a. SELC 7094 - Special Teaching Elective: Teacher Training
- b. SELC 7095 - Special Elective: Teaching Experience
- c. SELC 7096 - Special Teaching Elective: Project Summary & Evaluation

SELC 7098 - Personal Financial Planning for the Dental Student

Distinction in Research (requires the following 3 courses):
- a. SELC 7027 - Special Research Elective: Protocol Development
  *By arrangement*
- b. SELC 7028 - Special Research Elective: Completion of Individually Designed Research
  *By arrangement*
- c. SELC 7029 - Special Research Elective: Manuscript Preparation and Presentation of Individually Designed Research
  *By arrangement*

SELC 7113 - Women's Health Seminar (online course)

**ORTH**

SELC 8060 - Advanced Graduate Clinic Rotation
SELC 7109 - Graduate Orthodontic Clinic Rotation
SELC 8099 - Orthodontic Literature Review
SELC 7009 - Orthodontic Summer Clinic
SELC 7097 - Preclinical Orthodontic Techniques

**PE DO**

SELC 7032 - Pediatric Dentistry Clinical Externship Program

**PERI**

SELC 7108 - Basic Periodontal Surgery
SELC 7100 - Getting Acquainted with Periodontics
SELC 7107 - Periodontal Flap Design
SELC 8023 - Wonderful World of Periodontics

**PROS**

SELC 7130 - Introduction to Graduate Prosthodontics

**RES D**

SELC 8117 - CAD-CAM (Cerec 3d) Dentistry

**Dental School Courses**

**BIOC 5013 – Biochemistry**

Primarily lectures and conferences, this course is designed as a survey course for dental students. On a limited basis, a small number of graduate students may be accommodated. Content deals with the chemistry and metabolism of carbohydrates, amino acids, lipids, proteins, and nucleic acids. Special topics relating to the biochemistry of the oral cavity will be presented. The relationship between biochemistry and clinical aspects of dentistry is presented by clinical correlation speakers.

*Semester Credit Hours: 5.5*

*Prerequisites: organic chemistry, biology, and consent of instructor*

**COMD 5015 - School-Based Prevention**

Students have the opportunity to participate in a public health preventive program in elementary schools, supervising a fluoride rinse program and providing small-group instruction in toothbrushing. The program aims to demonstrate to dental students effective group prevention and to foster more widespread adoptions of such preventive programs in the community.

*Semester Credit Hours: 0.0*

**COMD 5017 - Oral Health Promotion & Disease Prevention for Individuals and Populations**

Oral diseases have been reported to influence overall health and well-being of individuals and communities in the USA and across the world. This course provides the DS1 student with the basis and application of evidence-based practices to prevent oral diseases and promote oral health among individual patients and groups living in communities. The first part of the course focuses on Oral Health by concentrating on dental public health principles and epidemiology. The course stresses determinants of oral health and methods to reduce disparities. It examines contemporary oral health promotion and oral disease prevention at the community level. The second part of the course describes the Prevention of Oral Diseases for the Individual Patient, using a systematic approach of risk-based prevention. The course reviews the methodology to assess risks for dental caries, periodontal diseases, and oral cancer at the individual level. Students will have the opportunity to learn to develop and apply plans of prevention for oral diseases based upon individual risks, accounting for biological, social, and behavioral factors. The course integrates patient education and counseling practices as a component of individualized prevention practice.

*Semester Credit Hours: 1.5*

**COMD 5031 - Professional Ethics**

This course will introduce students to ethics, how ethical principles apply to dentists, and the professional obligations inherent in the dentist-patient relationship. It will additionally provide insight in how the individual student views the dental
profession and provide a decision-making model to help guide their actions when faced with ethical dilemmas.
Semester Credit Hours: 0.5

COMD 5046 - Cariology
This course covers the scientific background of the etiology, treatment, and prevention of dental caries, as well as dental erosion. It offers an overview of the biological and mineralogical etiology of dental caries and dental erosion.
Semester Credit Hours: 1.0

COMD 6025 - Nutrition
Elements of nutrition are presented in a lecture series. Special attention is given to those aspects of nutrition that relate to dental health and the prevention of dental diseases.
Semester Credit Hours: 0.5

COMD 6048 - Patient-Centered Oral Health Care: Behavioral, Social, and Cultural Dimensions
This course discusses key dimensions of patient-centered clinical care recommended by the Institute of Medicine: a) respect for the patient’s values, preferences, and expressed needs; b) information and education; c) access to care; d) emotional support to relieve fear and anxiety; e) involvement of family and friends; f) continuity and secure transition between health care settings; g) physical comfort; and h) coordination of care. This course focuses on caring for patients and understanding the contexts of their culture, family, and community. The course examines major health belief systems embraced by people from diverse cultures and explores the characteristics of health-illness beliefs and practices. Also, the course provides an overview of anxiety and fear in dentistry. Specifically, the course reviews the typical causes of dental fear, assessment of fear, and effective strategies for reducing fear and anxiety. Psychological approaches for working with patients with needle phobias, gagging, and panic are described in the course. The course emphasizes the development of competence of oral health professionals in instituting patient-centered and culturally relevant oral health care.
Semester Credit Hours: 1.0

COMD 7031 - Professional Ethics
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.
Semester Credit Hours: 0.5

COMD 7050 - Preventive Dentistry Practice
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.
Semester Credit Hours: 1.5

COMD 8014 - Oral Health Care System
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.
Semester Credit Hours: 1.0

COMD 8032 - Jurisprudence
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.
Semester Credit Hours: 0.5

CSBL 5016 - Gross, Head and Neck Anatomy
The focus of this course is the structure of the human body, with emphasis on the functional anatomy of the trunk, neck, head, and nervous system. Regional dissection of a human cadaver, by groups of students, is supplemented by individual study of prosections, models, skeletons, and other demonstration materials and is guided by lectures, conferences, and films. The first part of the course, which deals with the anatomy of the thorax and abdomen, presents a general overview of the functional architecture of most major body systems. The emphasis is on principles of structure, to allow development of a holistic understanding of human biology, both normal and pathological. The latter half of the course is devoted to study of the head and neck; greater emphasis will be placed on anatomical relationships with obvious reference to clinical dentistry. Human materials fee: $500. Laboratory fee: $30.
Semester Credit Hours: 6.0

CSBL 5032 - Dental Histology
Through lectures, demonstrations, and laboratory work, students in this course will be given the opportunity to study the microscopic structure of the basic tissues and organs of the human body, followed by details of the embryologic development and microscopic structure of the various organs of the oral cavity. Current concepts in cellular biology are presented during the portion of the course in which they are most relevant. The general purpose of this course is to give students the opportunity to become acquainted with the basic embryology, cytology, and histology of normal human tissues and organs, thereby providing a foundation of knowledge for the understanding of normal activity and disease processes. Lab fee: $32. Microscope fee: $48.
Semester Credit Hours: 5.0

DIAG 5007 - Graduate Oral and Maxillofacial Radiology Clinic
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.
Semester Credit Hours: 3.0

DIAG 5009 - Introduction to Dental Radiology
This course provides students with an opportunity to learn the special terminology associated with dental radiography in addi-
tion to theoretical principles of intraoral radiography. Students will have the opportunity to develop preclinical technical skills in placing, exposing, processing, and mounting dental radiographs using a technique mannequin (DXTTR), and as technology permits, preliminary experiences using digital imaging technology and the photostimulable phosphor system (PSP). Students will also have the opportunity to gain preliminary experience in the assessment of radiographs for normal anatomic structures, radiographic technique errors, caries, periodontal disease, and other common dental anomalies.

Semester Credit Hours: 1.0

DIAG 5014 - Physical Evaluation I
This course is intended to afford students maximal opportunity to recognize the relevance of basic biomedical sciences to the study of the patient and to provide the fabric for the accumulation of knowledge, skills, and values essential to initiate the clinical process. It includes didactic and clinical experience in obtaining and interpreting a patient history; extraoral and intraoral physical examination procedures; and interpretation of the findings of the examination.

Semester Credit Hours: 1.5

DIAG 5015 - Panoramic Radiology
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.

Semester Credit Hours: 0.5

DIAG 5016 - Head and Neck Anatomy
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.

Semester Credit Hours: 1.0

DIAG 5017 - Literature Review
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 which 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.

Semester Credit Hours: 1.0

DIAG 5018 - Practicum in Oral Medicine
Practice in clinical skills required for diagnosis, management, and treatment of oral and perioral diseases, including such special procedures as sialography, cytological smearing, biopsies, 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.

Semester Credit Hours: 4.0

DIAG 5019 - Digital Imaging
This survey course is designed to give the maxillofacial radiology resident the opportunity to gain a basic understanding of digital imaging. The course utilizes classroom lectures as well as computer laboratory exercises to demonstrate the application of digital imaging in a clinical setting. The course covers all aspects of digital imaging including: fundamental basis for digital imaging, image enhancement and restoration, image analysis, image compression, image synthesis, and image display. The course also covers specific information related to digital imaging modalities such as computed tomography, magnetic resonance imaging, ultrasound, and dental digital radiography.

Semester Credit Hours: 1.0

DIAG 5026 - Diagnostic Imaging of the Jaws Part I
This lecture course is presented over several semesters. The goal 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.

Semester Credit Hours: 2.0

DIAG 5044 - Radiation Physics Lab
This laboratory is given in conjunction with DIAG 5045 Radiation Physics. Students will be given the opportunity to perform laboratory assignments designed to further their understanding of the practical applications of the principles of radiation physics.

Semester Credit Hours: 0.5

DIAG 5045 - Radiation Physics
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 protection, principles of tomography, and panoramic radiography.

Semester Credit Hours: 1.0
This course provides students with an opportunity to learn the special terminology associated with dental radiography in addition to theoretical principles of intraoral radiography. Students will have the opportunity to develop preclinical technical skills in placing, exposing, processing, and mounting dental radiographs using a technique mannequin (DXTTR), and as technology permits, preliminary experiences using digital imaging technology and the photostimulable phosphor system (PSP). Students will also have the opportunity to gain preliminary experience in the assessment of radiographs for normal anatomic structures, radiographic technique errors, caries, periodontal disease, and other common dental anomalies.

**Semester Credit Hours:** 1.0

**DIAG 5050 - Fundamentals of Dental Radiography**

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.

**Semester Credit Hours:** 1.0

**DIAG 5070 - Supervised Teaching**

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.

**Semester Credit Hours:** 1.0

**DIAG 5091 - Case Conference**

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.

**Semester Credit Hours:** 1.0

**DIAG 5092 - Diagnostic Science Seminar**

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.

**Semester Credit Hours:** 1.0

**DIAG 5093 - Diagnostic Science Seminar**

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.

**Semester Credit Hours:** 1.0

**DIAG 5181 - Principles in Forensic Odontology**

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 required for the MS degree.)

**Semester Credit Hours:** 1.0

**DIAG 6005 - Clinical Pathology Conference**

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.

**Semester Credit Hours:** 1.0

**DIAG 6007 - Graduate Oral and Maxillofacial Radiology Clinic**

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.

**Semester Credit Hours:** 3.0

**DIAG 6008 - Orofacial Pain**

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.

**Semester Credit Hours:** 2.0

**DIAG 6009 - Noninfectious Diseases of the Oral Mucosa**

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.

**Semester Credit Hours:** 2.0

**DIAG 6011 - Clinical Medicine**

Today’s clinician must treat more medically and pharmacologically compromised patients than ever before. It is axiomatic that they must have a basic understanding of diseases throughout the body. Such an obligation is tempered by the extent to which a disease or illness affects the physical and emotional ability of the patient to undergo and respond to dental care. Finally, such an obligation is further influenced by the extent to which a condition (infectious disease) may impact on the well being of the oral health care provider. The course is based on the prevalent medical diagnoses suggested by the top 200 drugs dispensed by U.S. community pharmacies. It is designed to present the pathophysiology of disease states of special interest, the principles of current and accepted medical and/or pharmacological management of these conditions, and the clinical consequences of disease and illness in the oral
health-care setting.

Semester Credit Hours: 2.0

**DIAG 6016 - Pharmacotherapeutics**

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.

*Semester Credit Hours: 1.0*

**DIAG 6017 - Literature Review**

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.

*Semester Credit Hours: 1.0*

**DIAG 6018 - OMR Case Conference**

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.

*Semester Credit Hours: 1.0*

**DIAG 6019 - Chemosensory Disorders and Salivary Gland Dysfunction**

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.

*Semester Credit Hours: 2.0*

**DIAG 6020 - Tumor Board**

The class meets for one hour once a week in the School of Medicine or Wilford Hall Medical Center 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.

*Semester Credit Hours: 1.0*

**DIAG 6021 - Medical Radiology Rotation**

Medical radiology training occurs within the dental school using image-acquired data from a medical clinic. It also occurs in the University Hospital, the VA hospital on campus, at Wilford Hall Medical Center at nearby Lackland Air Force Base, and in a private radiology clinic. Rotations to other clinics and institutions are being planned at remote sites within the USA and abroad such as in Europe, Asia and/or Africa. Cases using advanced imaging are available in the program director’s extensive collection to further enhance medical radiology training.

*Semester Credit Hours: 2.5 (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**

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 extrarot 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.

*Semester Credit Hours: 6.0*

**DIAG 6023 - Radiology for Graduate Orthodontics**

The goal of this course is to prepare the Orthodontic graduate student for contemporary practice in the area of radiology.

*Semester Credit Hours: 1.5*

**DIAG 6025 - Diagnostic Imaging of the Head and Neck Part I**

This lecture course is presented over several semesters. The goal 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.

*Semester Credit Hours: 2.0*

**DIAG 6027 - Advanced Imaging Physics**

This course is a continuation of the basic Radiation Physics course that was given during the first year of graduate studies. This course will provide the student with the opportunity to achieve a proficiency level understanding of the physical principles of all the advanced imaging methods and techniques (i.e., computed tomography), magnetic resonance imaging, ultrasound and radionuclide imaging commonly used in medical care, and understanding of the clinical applications of these advanced imaging modalities.

*Semester Credit Hours: 1.0*
DIAG 6035 - Physical Evaluation II
The importance of an accurate diagnosis and patient evaluation upon which to base a rational treatment plan is the emphasis of this course. Lectures on types of clinical exams, chief complaint, and clinical and medical history are presented. Study of the normal appearance and presentation of abnormalities and disease as they relate to various areas of the oral cavity is also included, with special emphasis on the soft tissues. Methodology in diagnosis includes case history, general and oral clinical laboratory, and other supplementary examinations. The rationale of when to prescribe dental radiographs is presented. Factors affecting treatment plans, with emphasis on medical compromises, are also presented.
Semester Credit Hours: 1.5

DIAG 6040 - Advanced Oral and Maxillofacial Radiology Interpretation
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 is conducted over multiple semesters and meets in two-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.
Semester Credit Hours: 2.0

DIAG 6041 - Basic Radiation Biology
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.
Semester Credit Hours: 1.0

DIAG 6043 - Advanced Radiation Biology
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.
Semester Credit Hours: 1.0

DIAG 6060 - Physical Anthropology
This lecture and laboratory course examines the morphology of the human cranial and postcrania1 skeleton, skeletal biology, osteogenesis, and skeletal cariation. The student will have the opportunity to become proficient in distinguishing human from nonhuman bones and in identifying bone fragments relevant to forensic investigation. The human skeleton will be examined in evolutionary perspective with emphasis on comparisons with nonhuman primates and earlier human forms.
Semester Credit Hours: 1.0

DIAG 6061 - Forensic Anthropology
A study of the application of basic anthropology to forensic situations is the focus of this course. Specific emphasis is placed on osteobiography, scene investigation, determination of the time of death, basic anthropologic variables of identification, individualization, and cause and manner of death.
Semester Credit Hours: 1.0

DIAG 6062 - Advanced Forensic Anthropology Lab
The course consists of practice in the application of laboratory skills in anthropology through the facilities of the Center for Archeological Research at The University of Texas at San Antonio, the U. S. Army Central Identification Laboratory in Hawaii, the Oklahoma State Medical Examiner's Office, the Southwest Foundation for Biomedical Research, and other locations. Students are expected to develop selective skills related to their areas of interest within the field.
Semester Credit Hours: 0.5

DIAG 6071 - Supervised Teaching
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.
Semester Credit Hours: 1.0

DIAG 6083 - Forensic Odontology Lab
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 50181 Principles in Forensic Odontology and this course will fulfill requirements for membership in the American Academy of Forensic Sciences.
Semester Credit Hours: 1.0

DIAG 6084 - Advanced Forensic Odontology Lab
The course consists of advanced practice in the laboratory and field skills in forensic odontology in the areas of routine identifications, mass disaster preparedness and management, bite mark evidence and analysis, child abuse detection, and jurisprudence. Students are "on call" to do cases as needed and introduced to new and innovative teachings in the field. Students are allowed to develop selective skills related to their areas of interest.
Semester Credit Hours: 0.0

DIAG 6085 - Forensic Pathology
In this practical lecture and laboratory course, students are concerned with the medicolegal investigation of injury and
**DIAG 6086 - Forensic Dental Photography Lab**
This lecture and laboratory course is designed to acquaint the student with dental photography in the morgue setting, studio and darkroom procedures necessary for special photographic techniques, and the preparation of appropriate case exhibits for the courtroom.
*Semester Credit Hours: 0.5*

**DIAG 6090 - Diagnostic Science Seminar**
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.
*Semester Credit Hours: 1.0*

**DIAG 6091 - Diagnostic Science Seminar**
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.
*Semester Credit Hours: 1.0*

**DIAG 6093 - Diagnostic Science Seminar**
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.
*Semester Credit Hours: 1.0*

**DIAG 6094 - Diagnostic Science Seminar**
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.
*Semester Credit Hours: 1.0*

**DIAG 6095 - Diagnostic Science Seminar**
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.
*Semester Credit Hours: 1.0*

**DIAG 6132 - Dental Radiology I**
This course offers didactic instruction in fundamental concepts of dental radiology and builds on information learned in DIAG 5009. Instructional content covers radiation physics, x-ray unit components and their function in creating a diagnostic image, radiation biology, radiation hygiene, film and image formation, digital imaging concepts, quality assurance, evaluation of panoramic radiographic errors, and recognition of conventional film processing errors.
*Semester Credit Hours: 1.0*

**DIAG 6135 - Clinical Case Conference I and II**
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.
*Semester Credit Hours: 1.0*

**DIAG 7036 - Radiographic Interpretation**
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.
*Semester Credit Hours: 1.0*

**DIAG 7052 - Geriatrics**
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.
*Semester Credit Hours: 1.5*

**DIAG 7055 - Oral Medicine**
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.
*Semester Credit Hours: 2.0*

**EMST 5001 - Basic Cardiac Life Support**
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.
*Semester Credit Hours: 0.0*

**EMST 7001 - Basic Cardiac Life Support**
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.
*Semester Credit Hours: 0.0*
ENDO 5015 - Dental Photography
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.
Semester Credit Hours: 0.5

ENDO 5020 - Introduction to Advanced Endodontics
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.
Semester Credit Hours: 2.5

ENDO 5052 - Endodontic Surgical Anatomy
This course consists of a series of four 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 human head and neck prosected specimens are covered to demonstrate pertinent anatomic structures and the students practice actual surgical procedures on anterior, premolar, and molar teeth in cadaver specimens.
Semester Credit Hours: 1.5

ENDO 5060 - Current Concepts in Endodontics
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.
Semester Credit Hours: 1.0

ENDO 5071 - Supervised Teaching I
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.
Semester Credit Hours: 1.0

ENDO 5073 - Literature Review I
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.
Semester Credit Hours: 1.0

ENDO 5080 - Case Presentations I
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.
Semester Credit Hours: 0.5

ENDO 5081 - Case Presentations I
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.
Semester Credit Hours: 4.0

ENDO 5082 - Case Presentations I
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.
Semester Credit Hours: 4.0

ENDO 6010 - Clinical Endodontics II
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.
Semester Credit Hours: 3.0

ENDO 6011 - Clinical Endodontics II
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.
Semester Credit Hours: 3.0

ENDO 6012 - Clinical Endodontics II
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.
Semester Credit Hours: 5.0
**ENDO 6013 - Clinical Endodontics III**
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.  
*Semester Credit Hours: 2.5*

**ENDO 6014 - Clinical Endodontics III**
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.  
*Semester Credit Hours: 2.0*

**ENDO 6041 - Endodontics Lecture**
This is a lecture course designed to introduce the student to the fundamentals of clinical endodontics.  
*Semester Credit Hours: 1.0*

**ENDO 6060 - Pulp Biology and Pain Pharmacology**
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.  
*Semester Credit Hours: 1.5*

**ENDO 6071 - Supervised Teaching**
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.  
*Semester Credit Hours: 1.0*

**ENDO 6073 - Literature Review II**
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.  
*Semester Credit Hours: 1.0*

**ENDO 6074 - Literature Review II**
The goal of this course is for the student to develop a biological understanding and scientific basis for the diagnosis and treatment of a diverse group of topics and treatment modalities that are specifically listed as content in this course. Each topic and session will have goals and objectives specific to that area so that the student will have the opportunity to be able to assimilate information. 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.  
*Semester Credit Hours: 4.0*

**ENDO 6077 - Current Literature Review**
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.  
*Semester Credit Hours: 1.0*

**ENDO 6083 - Case Presentations II**
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.  
*Semester Credit Hours: 4.0*

**ENDO 6084 - Case Presentations II**
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.  
*Semester Credit Hours: 4.0*

**ENDO 6085 - Case Presentations II**
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.  
*Semester Credit Hours: 4.0*

**ENDO 6086 - Case Presentations III**
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.  
*Semester Credit Hours: 2.0*
ENDO 6087 - Case Presentations III
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.
Semester Credit Hours: 4.0

ENDO 6091 - Research
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.
Semester Credit Hours: 1.0

ENDO 6098 – Thesis
Semester Credit Hours: 4.0

ENDO 6142 - Preclinical Endodontics
A preclinical endodontics course in which the student is introduced, under simulated clinical conditions, to clinical skills necessary to perform root canal therapy on single and multi-rooted teeth. Lab fee included in general laboratory fee.
Semester Credit Hours: 1.5

ENDO 7041 - Junior Endodontics Lecture
This course will build on the cognitive skills attained by the dental student who has successfully completed ENDO 6041 and ENDO 6142 in the Sophomore year. Topics covered include: endodontic case selection, diagnosis and treatment planning, vital pulp therapy, pain control, management of endodontic emergencies, and the evaluation of success and failure. The importance of the inner relationships with other dental disciplines such as periodontics and restorative dentistry are also emphasized.
Semester Credit Hours: 0.5

ENDO 7043 - Endodontics Clinic
Students are required to perform endodontic diagnosis and treatment procedures necessary to provide comprehensive care for patients.
Semester Credit Hours: 1.0

ENDO 8043 - Senior Endodontics Lecture
This course will build on the cognitive skills attained by the dental student who has successfully completed ENDO 6041 and 6142 in their sophomore year, and ENDO 7041 in their junior year. Topics covered include: endodontic radiology, management of the open apex, diagnosis and management of procedural errors that occur during routine endodontic therapy, management of post-operative complications, management of luxation injuries and root resorption, bleaching of endodontically treated teeth, endodontic pharmacology, and principles of endodontic surgery. A review of endodontic information necessary to pass licensing examinations will also be provided.
Semester Credit Hours: 1.0

GEND 5001 - Foundations of Professional Development
The course consists of introductory modules of practice and patient care management aimed at building the skills needed in establishing a successful practice and in contributing to the oral health of our communities. The modules include principles of professionalism, ethics, and behavior expected from health care providers. Students are evaluated on how they apply to their coursework the principles learned throughout the year. Specific modules provide a better understanding of the whole field of dentistry, career choices, and opportunities available in the dental school to assist students in making informed career decisions. Other modules are dedicated to personal finances, the economics of health care, and the foundations of strategic planning. Finally, modules on dental informatics introduce the students to the utilization of computers and to the basic software needed throughout the curriculum and for a successful practice.
Semester Credit Hours: 2.0

GEND 5027 - Pain Control and Sedation
The course is an in-depth, comprehensive assessment of pain control in dentistry. Beginning with neuroanatomy and pain, the course builds a solid 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.
Semester Credit Hours: 3.5

GEND 6001 - Professional Development II
This is a continuation of the first-year course in which the students explored personal and professional goals, basic financial statements and the elements of strategic planning through an interactive web site. The students will continue to use the web site as (1) their main source of educational material, (2) the place where they perform interactive assignments and workshop exercises, (3) a mechanism for taking and organizing class notes, and (4) a place for consulting class reference manuals and linking to outside educational resources. Class time will be used to familiarize the students with the web-based course, facilitate the use of the web site, and answer student questions on its content. During the sophomore year, students will apply financial statement analysis and strategic planning to the internal environment of the practice, will assess strengths and weaknesses in the operation of a dental office, and establish a practice policy.
Semester Credit Hours: 2.0

GEND 7001 - General Dentistry Clinic
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.

*Semester Credit Hours: 4.0*

**GEND 7026 - Practice Administration**

This course presents the various career choices available in dentistry and presents material to aid students in the career decision-making process. The class is 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.

*Semester Credit Hours: 2.5*

**GEND 8026 - Practice Administration**

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.

*Semester Credit Hours: 1.5*

**GEND 8032 - Hospital Dentistry**

A two-week rotation by seniors in the Hospital Dentistry Clinic at University Hospital provides the following Activities/clinical experiences:

- Thorough orientation to the Hospital Dentistry rotation,
- Answering hospital consultation requests,
- Making consultation requests of medical health care providers,
- Attendance at hospital rounds,
- Participation in the care of patients in the operating room,
- Care of patients in the Hospital Dentistry Clinic,
- Performance of oral surgical procedures, and
- Observation of intravenous sedations.

*Semester Credit Hours: 2.5*

**GEND 8075 - Applied Practice Management**

The course is presented as a series of eight small-group seminars and one small-group laboratory session in the fall, and three seminar presentations and one laboratory exercise in the spring semester. In the fall, students will have the opportunity to apply information from the first four seminars to develop a written business plan during the fifth seminar. In the spring, the classes are structured around the content from the *Office Manual of Clinical Practice Management and the Quick Reference for the New Dentist*. Role playing is utilized in some of the seminars to simulate private-practice scenarios. The seminar experiences identify management strategies necessary to establish and run a successful dental practice. The hands-on MD Laboratory session provides each student the opportunity to apply principles of clinical efficiency.

*Semester Credit Hours: 1.5*

**GEND 8077 - General Dentistry Clinic**

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. Seminar 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.

*Semester Credit Hours: 26.5*

**GEND 8078 - General Dentistry Seminar**

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.

*Semester Credit Hours: 2.0*

**INTD 5030 - Introduction to Patient Care**

The first component of this course is an informatics module so that students become familiar with their new computers and are trained on specific software. In the second and overlapping component, students are assigned to a variety of small-group rotations in a clinical setting to prepare them for patient-care activities. In the first semester, the students are required to become certified in basic life support. They also are required to rotate through a clinic orientation that is followed by a rotation as an assistant in the General Practice Groups. They are expected to follow proper infection control protocol and utilize some basic assisting skills. They also are required to rotate through a head and neck exam activity, followed with a patient activity in the second semester. Second semester activities also include intraoral radiography technique, a clinic component of their periodontics, and school-based prevention courses, a sealant lab and clinic, and radiographic interpretation. Students are evaluated primarily on professional development expectations.

*Semester Credit Hours: 5.0*

**INTD 6010 - Evidence-Based Dentistry**

Designed to help students establish an "evidence-based practice," the course will provide students the opportunity to learn the skills necessary to evaluate and select new dental products and clinical procedures. This requires an ability to read and evaluate various sources of knowledge, including articles published in the dental and medical literature, advertisements, Internet sources, and continuing education programs. Lectures and readings are designed to provide a basic understanding of clinical research, epidemiology, and statistical procedures such that dental journal articles and other sources of knowledge can be critically evaluated. The long-range goal is to prepare the student to think critically and to make sound judgments regarding the acceptance of new knowledge, products, and procedures in private practice.

*Semester Credit Hours: 1.0*
INTD 6015 - Case Conferences
As a series of eight conferences, this course is designed to enhance interaction between the basic and clinical sciences while providing a participative learning experience for students. The integrative, multidisciplinary academic format promotes an opportunity for students to develop the analytical, critical thinking, and problem solving skills essential for successful clinical practice. Pertinent topics not covered elsewhere in the curriculum may be included.
Semester Credit Hours: 0.5

INTD 6070 - Teaching Skills for Dental Educators
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.
Semester Credit Hours: 1.0

INTD 6088 - Clinic Introduction
The informatics module, one component of this course, is a continuation from the first-year module. Students continue training on a higher level of computer use. The clinic component of the course is a series of small-group rotations for distinct clinic modules including patient assessment, periodontics, carries detection, preventive methods, sealants, pulp testing, local anesthesia, oral surgery, radiographic technique recertification, radiographic interpretation, digital photography, constructing a stabilizing appliance, patient education, infant exam, and opportunities for assisting in various clinics with the Dental School at external sites. At the end of the sophomore year, students will have had the opportunity to become well acquainted with the clinic environment and techniques for initial patient visits scheduled for the summer clinic. Professional development expectations are emphasized in the overall evaluation.
Semester Credit Hours: 4.5

INTD 7020 - Clinical Patient Management
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.
Semester Credit Hours: 5.0

MICR 5013 - Microbiology
Foundation in immunology, bacteriology, virology, and mycology for all subsequent teaching of microbial pathology and oral infectious diseases is presented. Relevant aspects of preventive medicine and public health are included. Lab fee included in general lab fee.
Semester Credit Hours: 4.0

ORTH 5094 - Research Methodology I
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.
Semester Credit Hours: 1.5

ORTH 6075 - Sophomore Orthodontics Lectures
This introductory course emphasizes the etiology and diagnosis of orthodontic problems, orthodontic force systems, biomechanical principles of appliance design, and the biology of tooth movement.
Semester Credit Hours: 1.5

ORTH 6077 - Growth and Development
This course is designed to present a comprehensive approach to the morphologic, biochemical, and physiologic aspects of human growth and development. A review of the control and influence of genetic, hormonal, and environmental factors on the various tissues and organ systems, from the embryonic period to maturity, with particular emphasis devoted to the functional development of the oral and perioral structures. Etiology of certain orofacial abnormalities of developmental nature are covered. This is a joint presentation by faculty of Pediatric Dentistry and Orthodontics departments.
Semester Credit Hours: 1.5

ORTH 7073 - Junior Orthodontics Lectures and Case Analysis
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.
Semester Credit Hours: 1.0

ORTO 6003 - Introduction to Clinical Practices
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.
Semester Credit Hours: 1.0
Prerequisites: open to Biomedical Engineering graduate students

ORTO 6004 - Biology for Bioengineers
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.
Semester Credit Hours: 3.0
Prerequisites: permission of the instructor

OSUR 6051 - Oral Surgery I
Didactic presentation of basic principles of oral & maxillofacial surgery is included in this course. Detailed instruction in biopsy technique, suturing, tooth removal, preparation of the mouth for dentures, and minor oral surgery is included. Lab fee included in general laboratory fee.
Semester Credit Hours: 1.5

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OSUR 6056 - Local Anesthesia
This is a didactic course dealing with aspects of local anesthe-sia as they relate to dental practice. Neuroanatomy, physiolo-gy, and pharmacology of local anesthesia are presented, as well as the prevention and management of complications and emergencies encountered in clinical local anesthesia.
*Semester Credit Hours: 1.5

OSUR 6140 - Nitrous Oxide and Conscious Sedation
This is a didactic and laboratory course presenting the funda-mentals of patient anxiety control through the use of nitrous oxide conscious sedation for both the adult and child patient.
*Semester Credit Hours: 0.5

OSUR 7051 - Oral & Maxillofacial Surgery Clinic
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, "blackboard"-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.
*Semester Credit Hours: 4.0

OSUR 8055 - Advanced Oral and Maxillofacial Surgery
This course provides essential advanced information about Oral and Maxillofacial Surgery as it relates to the practice of General Dentistry and covered on the National Board exam. The course encompasses material on advanced dentoalveolar surgery, trauma management, reconstructive surgeries, management of sinus and salivary gland disease, cosmetic surgery and other entities managed by the Oral and Maxillofacial surgeon. 
*Semester Credit Hours: 0.5

PATH 5030 - Oral Histopathology
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 multi-headed 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.
*Semester Credit Hours: 1.0

PATH 5035 - Oral Pathology
Clinicopathologic correlations, differential diagnosis, and therapeuetic 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.
*Semester Credit Hours: 2.0

PATH 5121 - Biostatistics
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.
*Semester Credit Hours: 1.0

PATH 6019 - General Pathology
The fundamentals of human pathology, with emphasis on practical clinical applications, are presented. Lectures, independent study, and laboratory experiences are used in a review of the principal diseases of major organ systems. *Lab fee included in general laboratory fee. *$48 microscope fee.
*Semester Credit Hours: 5.0

PATH 6021 - Oral Pathology
This didactic course introduces the basic pathological changes that occur in oral tissue. Lectures are supplemented by Kodachrome illustrations with emphasis placed upon histoclinical correlation.
*Semester Credit Hours: 4.0

PATH 6026 - Surgical Oral Pathology I
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 radiograph-ic and histopathologic changes; discussions follow. Students include those from Oral and Maxillofacial Surgery, Periodontics, Endodontics, and Dental Diagnostic Sciences.
*Semester Credit Hours: 1.0

PATH 6027 - Surgical Oral Pathology II
This course is a continuation of PATH 6026 Surgical Oral Pathology I. 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.
*Semester Credit Hours: 1.0

PATH 7023 - Oral and Maxillofacial Pathology - Clinicopathologic Conference
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 Blackboard Web 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.
Semester Credit Hours: 1.0

PEDO 4038 - Pediatric Dermatology
The purpose of the pediatric dermatology 4-week on-campus rotation is to provide the opportunity for students to increase their recognition of pediatric skin disease and its effect on the child’s well being and family dynamics. The student is required to participate in conferences, didactic sessions, and patient care.
Semester Credit Hours: 4.0

PEDO 5020 - Pediatric and Orthodontic Clinic I
The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience which 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.
Semester Credit Hours: 2.0

PEDO 5021 - Pediatric and Orthodontic Clinic II
The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience which 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.
Semester Credit Hours: 5.0

PEDO 5022 - Pediatric and Orthodontic Clinic III
The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience which 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.
Semester Credit Hours: 6.0

PEDO 5026 - Orthodontics I
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.
Semester Credit Hours: 2.0

PEDO 5027 - Orthodontics Seminar II
These seminars consist of a series of selected orthodontic topics which 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.
Semester Credit Hours: 1.5

PEDO 5028 - Orthodontics Seminar III
These seminars consist of a series of selected orthodontic topics which 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.
Semester Credit Hours: 1.5

PEDO 5042 - Pediatric Dentistry I
This course comprises several seminar series and lectures on a variety of subjects pertinent to advanced pediatric dentistry. Included are conscious sedation, pulpal 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.
Semester Credit Hours: 2.0

PEDO 5043 - Pediatric Dentistry II
This course is largely a continuation of lectures and seminars on the subject matter introduced in PEDO 5042 Pediatric Dentistry I, but also adds case conferences and current literature seminars.
Semester Credit Hours: 6.0

PEDO 5044 - Pediatric Dentistry III
In part, this is a continuation of some lecture and seminar topics from PEDO 5043 Pediatric Dentistry II. 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.
Semester Credit Hours: 6.0

PEDO 5051 - Pediatric Physical Diagnosis
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.
Semester Credit Hours: 1.5

PEDO 5091 – Special Topics
This special topics course will include advanced didactic education in pharmacology and conscious sedation accompanied with a strong clinical component. Additional clinical technique procedures, predominantly practiced for children, will be included with specific clinical cases for appropriate practice applications.
Semester Credit Hours: 5.0

PEDO 5095 - Independent Study
This course involves the selection of a topic of current interest to the practice of pediatric dentistry. Students will be required to conduct thorough exhaustive literature reviews on the topics, develop lecture and/or seminar proposals, and present an overview of the topic and teaching program to the faculty and fellow students.
Semester Credit Hours: 4.0
PEDO 6015 - Case Conferences
As a series of eight conferences, this course is designed to enhance interaction between the basic and clinical sciences while providing a participative learning experience for students. The integrative, multidisciplinary academic format promotes an opportunity for students to develop the analytical, critical thinking, and problem solving skills essential for successful clinical practice. Pertinent topics not covered elsewhere in the curriculum may be included.
Semester Credit Hours: 0.5

PEDO 6023 - Pediatric and Orthodontic Clinic IV
The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience which 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.
Semester Credit Hours: 7.0

PEDO 6024 - Pediatric and Orthodontic Clinic V
The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience which 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.
Semester Credit Hours: 4.5

PEDO 6025 - Pediatric and Orthodontic Clinic V
The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience which 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.
Semester Credit Hours: 7.0

PEDO 6029 - Orthodontics Seminar IV
These seminars consist of a series of selected orthodontic topics which 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.
Semester Credit Hours: 2.0

PEDO 6030 - Orthodontics Seminar V
These seminars consist of a series of selected orthodontic topics which 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.
Semester Credit Hours: 2.0

PEDO 6045 - Pediatric Dentistry IV
A continuation of the case conferences, current literature seminars, and pediatric grand rounds, this course also introduces practice management and topics in clinical genetics.
Semester Credit Hours: 6.0

PEDO 6083 - Investigative Project
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.
Semester Credit Hours: 1.0

PEDO 6084 - Investigative Project
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.
Semester Credit Hours: 1.0

PEDO 6146 - Pediatric Dentistry V
This course continues the case conferences, current literature seminars, and pediatric grand rounds of PEDO 6045 Pediatric Dentistry IV, adding craniofacial anomalies seminars.
Semester Credit Hours: 5.0

PEDO 7041 - Pediatric Dentistry Lecture
This course covers development of the dentition, preventive and interceptive orthodontics, trauma and pulp therapy in primary teeth, pediatric restorative dentistry, periodontics, pediatric oral pathology and surgery, preventive dentistry, behavior management, and special problems in children.
Semester Credit Hours: 1.0

PERI 5037 - Bone & Connective Tissue Biology
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.
Semester Credit Hours: 0.5

PERI 5052 - Surgical Anatomy
This course emphasizes the learning of the head and neck anatomy that is related directly to surgical procedures per-
formed by periodontists and endodontists and the practice of prosthodontic dentistry. Anatomical 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.

Semester Credit Hours: 1.0

PERI 5081 - Periodontics
Freshman Periodontics is the first in a series of required courses designed to provide the opportunity for the student to learn the knowledge, skills, and values to manage patients with periodontal diseases. Students will have the opportunity to learn foundation information related to periodontal diseases and acquire fundamental periodontal clinical skills used in evaluating the periodontal status of patients and for performing some types of periodontal therapy. This course includes classroom discussion as well as preclinical exercises. Topics covered include features of the healthy and the diseased periodontium, the diagnosis of all periodontal diseases, the etiology of periodontal diseases, and clinical decision making.

Semester Credit Hours: 1.5

PERI 6001 - Periodontic Practice Management
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.

Semester Credit Hours: 0.5

PERI 6020 - Emergency Care Seminar
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.

Semester Credit Hours: 0.5

PERI 6082 - Periodontics
Sophomore Periodontics is the second in a series of required courses designed to provide the opportunity for the student to learn the knowledge, skills, and values to manage patients with periodontal diseases. Students will have the opportunity to learn how to plan and to perform nonsurgical or initial periodontal therapy. This course includes classroom discussion as well as preclinical exercises. Topics covered include mechanical and pharmacotherapeutic therapies for patients with periodontal diseases, decision making in planning periodontal therapy, and how to manage periodontal patients in a general practice setting. Microscope fee: $48.

Semester Credit Hours: 2.5

PERI 7059 - Implantology
Through lecture sessions, this introductory course offers students an opportunity to obtain both background and knowledge regarding accepted dental implant systems.

Semester Credit Hours: 1.0

PERI 7081 - Periodontics
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.

Semester Credit Hours: 1.5

PERI 8015 - Periodontics
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.

Semester Credit Hours: 0.5

PHAR 5001 - Pharmacology
This course is a study of the general principles of action of drugs used for the treatment and alleviation of symptoms of medical and dental diseases including pharmacodynamics of major drug groups, toxicology, and contemporary prescription writing.

Semester Credit Hours: 4.0

PHAR 8009 - Pharmacotherapeutics
The emphasis of this course is on understanding the rationale, indications, and contraindications for prescribing pharmacological agents in dentistry. Consideration of the pharmacologic agents that the patient may be taking at the time of the dental visit is emphasized.

Semester Credit Hours: 2.0

PHYL 5013 - Dental Physiology
Lecture instruction in the basic concepts of cell and organ function and in the integrated function of mammalian organ systems is presented. The physiology of the nervous system is included. (Students may elect to substitute CSBL 5019 - Gross Human Anatomy for Graduate Students for this course.)

Semester Credit Hours: 6.5

PROS 5015 - Concepts of Occlusion
Various concepts of occlusion with special emphasis on the clinical application of gnathology is 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.

Semester Credit Hours: 1.0

PROS 5049 - Overview to Maxillofacial Prosthodontics
This course introduces the graduate student to the discipline of maxillofacial prosthetics. Emphasis is placed on treating patients requiring prosthetic devices in the head and neck area due to surgery or trauma.

Semester Credit Hours: 0.5

PROS 5050 - Endosseous Dental Implants
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.

Semester Credit Hours: 1.0
PROS 5053 - Implant Prosthodontics
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.
Semester Credit Hours: 1.5

PROS 6011 - Prostodontic Treatment for the Dentate/Partially Dentate Patient
This is a lecture series designed to provide the basic concepts and principles of fixed prosthodontics, involving single and multiple restorations; the rationale and methodology for full and partial veneer preparations; and the fabrication of restorations and the restoration of endodontically treated teeth.
Semester Credit Hours: 2.5

PROS 6012 - Preclinical Prostodontic Treatment for the Dentate/Partially Dentate Patient
A laboratory course with exercises that include steps involved in the fabrication of crowns and short span, fixed partial dentures. Major emphasis is placed on restoration design and clinically related phases of restoration planning and construction. Projects include coverage of the metal ceramic technique, use of conventional Type III dental gold alloy, and development of natural-appearing tooth contours with restorative material systems. Principles of tooth preparation and restoration design are applied to the fabrication of single crown and multiple abutment restorations. Lab fee included in general laboratory fee.
Semester Credit Hours: 4.0

PROS 6018 - Prosthodontic Treatment for the Edentulous Patient
An introduction to the diagnostic, treatment, and maintenance phases in the rehabilitation of an endentulous patient is presented. Lecture topics include biomechanics of the endentulous state, clinical examinations and diagnosis, endentulous impressions, maxillomandibular relations, denture esthetics, denture occlusion, initial placement of complete dentures, and post-placement care and maintenance of an endentulous patient.
Semester Credit Hours: 1.0

PROS 6019 - Preclinical Prosthodontic Treatment for the Edentulous Patient
A preclinical laboratory course introducing, demonstrating, and exercises in the laboratory phases of the fabrication and repair of complete dentures is presented. Students will be expected to reach the proficiency level required to satisfactorily perform the laboratory and clinical tasks assigned in subsequent courses and to assess those procedures generally performed by dental laboratory technicians. Lab fee included in general laboratory fee.
Semester Credit Hours: 2.0

PROS 6035 - Maxillofacial Prosthodontics
This clinical course provides the opportunity to experience treating patients on the Maxillofacial Prosthetics Service. Patients with congenital and acquired defects are treated under supervision of the maxillofacial prosthodontic faculty.
Semester Credit Hours: 1.0

PROS 6043 - Clinical Geriatric Dentistry
This course offers prosthodontic residents didactic and clinical experience treating geriatric patients.
Semester Credit Hours: 0.5–5.0

PROS 6058 - Implant Prosthodontic Treatment for the Edentulous and Partially Edentulous Patient
This is a preclinical participation course providing instruction and exercises in many phases relating to implant dentistry. Participation in this preclinical laboratory will provide the student with experience in planning implant therapy, placing implants, making implant impressions, fabricating provisional restorations, and performing other implant-related procedures. Implantology fee: $500.
Semester Credit Hours: 1.0

PROS 6059 - Implant Prosthodontic Treatment for the Edentulous and Partially Edentulous Patient
A lecture series designed to orient sophomore dental students to the overall clinical issues inherent to implant dentistry. Lecture topics include the biology and biomaterials of dental implants, patient selection and treatment planning, restorative potential of dental implants, nomenclature and components of implant systems, prosthetic and surgical considerations for implant placement, and implant maintenance.
Semester Credit Hours: 0.5

PROS 6094 - Removable Prosthodontics for the Partially Edentulous Patient
A preclinical lecture course stressing the association of biological and mechanical principles in planning and constructing removable partial dentures. Emphasis is placed on establishing a proper working relationship with commercial dental laboratories.
Semester Credit Hours: 2.0

PROS 6095 - Preclinical Removable Partial Denture-Lab
Exercises associated with the lecture course including diagnosis, treatment planning, survey and design, and the construction technique of removable partial dentures are presented. Lab fee included in general laboratory fee.
Semester Credit Hours: 1.0

PROS 7018 - Fixed Prosthodontics
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.
Semester Credit Hours: 1.0

PROS 7019 - Fixed Prosthodontics Clinic
This clinical course consists of diagnosis and treatment planning, instruction in making complete and partial veneer crown preparations and modifications, management of supportive issues, 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.
Semester Credit Hours: 4.5
PROS 7091 - Removable Partial Denture Prosthodontics
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.
Semester Credit Hours: 0.5

PROS 7092 - Removable Partial Denture Prosthodontics Clinic
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.
Semester Credit Hours: 1.5

PROS 7095 - Complete Denture Prosthodontics Lecture
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.
Semester Credit Hours: 1.0

PROS 7099 - Complete Denture Prosthodontics Clinic
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.
Semester Credit Hours: 2.5

PROS 8001 - Dental Implantology
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.
Semester Credit Hours: 0.5

RESD 5001 - Biomaterials I
An introduction to fundamental physical, mechanical, and chemical properties of materials is provided. Lectures include basic introductions to the fields of metals, polymers, and ceramics.
Semester Credit Hours: 1.0

RESD 5004 - Dental Anatomy and Occlusion
This course is designed to teach the freshman dental students the anatomical, morphological and functional aspects of the oral cavity; as well as to introduce terminology used by the oral health professions. More specifically, to expand his/her knowledge of the dentition, supporting structures, and to provide students with a detailed study of normal occlusal relationships in the various jaw positions.
Semester Credit Hours: 2.0

RESD 5005 - PCL Dental Anatomy and Occlusion
This course is designed to provide the freshman dental student practice in applying the knowledge presented in the Dental Anatomy and Occlusion didactic course. Additionally, it is intended to develop the manual dexterity and eye-hand coordination necessary to perform laboratory and clinical tasks that will be required for clinical practice.
Semester Credit Hours: 3.0

RESD 5095 - Research Methodology II - Development of a Thesis Proposal
This course is a continuation of ORTH 5094 Research Methodology I. Additionally, it is intended to develop the manual dexterity and eye-hand coordination necessary to perform laboratory and clinical tasks that will be required for clinical practice.
Semester Credit Hours: 0.5

RESD 6001 - Operative Dentistry
Lectures provide basic restorative philosophy and techniques in cavity design, instrumentation, and restorative materials manipulation used in modern dentistry. These lectures are designed to augment the preclinical projects conducted in the laboratory that provide simulation of clinical conditions.
Semester Credit Hours: 2.5

RESD 6002 - Preclinical Operative Dentistry
Preclinical projects provide students an opportunity to practice skills presented in the lecture course. Exercises include mixing and placement of interim restorative materials, glass ionomer, silver amalgam, and composite resin. Lab fee included in general laboratory fee.
Semester Credit Hours: 3.5

RESD 6021 - Advanced Dental Materials
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.
Semester Credit Hours: 3.5

RESD 6102 - Biomaterials II
A didactic introduction to dental materials by classification, this course describes the manipulative and technical aspects of each existing material category and relates the basic physical, mechanical, and chemical properties to the desired end use so
that intelligent choices may be made as new materials become available.

Semester Credit Hours: 1.0

RESD 6108 - Tempomandibular Disorders
This course is designed to provide students with a comprehensive approach to the diagnosis and sequential management of patients with temporomandibular disorders.

Semester Credit Hours: 1.0

RESD 7008 - Temporomandibular Disorders
This course is designed to provide students with a comprehensive approach to the diagnosis and sequential management of patients with temporomandibular disorders.

Semester Credit Hours: 1.0

RESD 7010 - Operative Dentistry
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 that are of interest to the class as a whole.

Semester Credit Hours: 1.5

RESD 7011 - Operative Dentistry Clinic
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.

Semester Credit Hours: 4.5

RESD 7050 - Esthetic Dentistry
The course examines the subtle and individual issues of dental esthetics and addresses facial contours, tooth arrangement, individual tooth contours, and tooth shade. The laboratory phase emphasizes the principles of dental esthetics during the fabrication of a porcelain laminate veneer restoration.

Semester Credit Hours: 1.5

RESD 8051 - Senior Esthetic Dentistry
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 chairside color modifications.

Semester Credit Hours: 0.5

SELC 7007 - General Practice Dental Emergency Care (DECC)
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 August. Two students will be required to cover emergencies during the Christmas holiday period and Spring Break. 4 students/400 hrs. clinic @ 35 hrs. wk./summer/1–5 June/8–5 May & July/Rising DS 4.

Semester Credit Hours: 0.0

SELC 7009 - Orthodontic Summer Clinic
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.

Semester Credit Hours: 0.0

SELC 7010 - Commissioned Officer Student Training and Extern Program (COSTEP) Clinical Assignment
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 31 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.

Semester Credit Hours: 0.0

SELC 7011 - Community/Clinical Externship Program
Rising senior 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 senior students will be selected to develop and implement patient education and community outreach services for the clinic. Duration of assignment will be 2–4 weeks in accordance with the schedules of the on-site dentist supervisors. Attendance is mandatory and failure to complete or withdraw from the course will result in a WF entry on the student's transcript. Application for this externship program is made through Dr. Neenan's office. 40 hrs clc/field work/35–45 students per week/Rising DS 4, 2/4–4 weeks/80–160 clinic hours.

Semester Credit Hours: 0.0

SELC 7019 - Hospital Dentistry
Students will have the opportunity to participate in the diagnosis and treatment of medically compromised patients on an inpatient and outpatient basis. This course will provide the opportunity for experience in the treatment of dental emergencies in University Hospital, both in the Hospital Dental Clinic and the Emergency Room after hours. Summer/18 Rising DS 4.

Semester Credit Hours: 0.0

SELC 7027 - Special Research Elective: Protocol Development
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
ment not 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.

**Semester Credit Hours:** 0.0

**SELC 7028 - Special Research Elective: Completion of Individually Designed Research**

In this elective course the student, with guidance of the mentor, will complete individually designed research 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 verifications 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.

**Semester Credit Hours:** 0.0

**SELC 7029 - Special Research Elective: Manuscript Preparation and Presentation of Individually Designed Research**

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.

**Semester Credit Hours:** 2.0

**SELC 7032 - Pediatric Dentistry Clinical Externship Program**

Rising senior students are selected to provide comprehensive dental care to pediatric patients attending the Dental School Pediatric and Santa Rosa Dental Clinic and Salinas Clinic during the summer. This externship program is a supervised clinical experience in diagnosis, treatment planning, and active treatment of patients. Participants will be selected from the list of students who register for the program. Attendance is mandatory and failure to complete or withdrawal from the course will result in an appropriate entry on the transcript. Summer/36 hours week/24 Rising DS 4.

**Semester Credit Hours:** 0.0

**SELC 7088 - Community Service Elective**

This elective offers an opportunity for students to receive up to 1.5 credit hours for 10–45 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 Community Dentistry with health fairs. Students will be able to choose the activities that 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 elective is open to all students. By arrangement/DS 1–4/Dean’s Office/10–45 hours.

**Semester Credit Hours:** 0.5–9.0

**SELC 7090 - Air Abrasion in Dentistry**

This is a course on the uses of air abrasion technology. It is designed to better prepare students to use the technology in the clinic.

**Semester Credit Hours:** 0.0

**SELC 7091 - Selected Topics in Head & Neck Anatomy**

This elective will provide students an opportunity to explore selected aspects of head and neck anatomy in greater depth than can be achieved in the first-year anatomy course. Topics for further study are to be agreed upon by the student and the course director. The principal method of achieving the objective of this course is dissection. In consultation with the course director, these dissections will be planned to produce specimens that display anatomical relationships not readily demonstrable in routine dissections. Selection of participants in this elective will be based on a written statement by the student describing the anatomical area of interest and its relationship to clinical dentistry and on the student’s previously demonstrated dissection skill. Failure to complete or withdrawal from the course will result in an appropriate entry on the transcript. 2 students/June/Rising DS 2, 3, 4/30 hours week.

**Semester Credit Hours:** 1.5

**SELC 7094 - Special Teaching Elective: Teacher Training**

This course is designed to introduce students to many aspects of an academic dental career. Lectures will present teaching methods for use in clinical and didactic situations, preparation of audiovisual aids, philosophies of teaching, information technology in education, mentoring skills, and faculty issues such as benefits packages and promotion and tenure systems. The course is the first of a series of three electives that will be offered as part of an Honors Program in Teacher Training. Students will be selected from the list of students who register for the course. Withdrawal with notification is permitted at any time without recording on the transcript. 10 hours lecture week/unlimited/Rising DS 2, 3, 4.

**Semester Credit Hours:** 1.0
**SELC 7095 - Special Elective: Teaching Experience**

This course is designed to introduce students to the teaching aspects of an academic career. Students will have the opportunity to work alone or in small groups to prepare and deliver presentations for lecture, preclinical, and small-group teaching settings for underclassmen. The course is the second of three electives that will be offered as part of an Honors Program in Teacher Training. Year round.

**Semester Credit Hours:** 1.0

**SELC 7096 - Special Teaching Elective: Project Summary & Evaluation**

This course is designed to allow the student the opportunity to achieve two goals. First, students will be asked to prepare a manuscript-style report on the project undertaken by the student for Graduation with Honors in Teacher Training. Second, the students must complete a survey/exit interview to evaluate the experience that they had teaching, and will receive critiques of their efforts from faculty, course directors, peers, and students. The course is the third of three electives that will be offered as part of an Honors Program in Teacher Training.

**Year round.**

**Semester Credit Hours:** 1.0

**SELC 7097 - Preclinical Orthodontic Techniques**

DS 2 students will have the opportunity to learn the necessary skills to fabricate appliances for conducting limited treatment, orthodontic problems. This is an ungraded elective. 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. *Spring/20 lab hrs/60 sophomore students.*

**Semester Credit Hours:** 0.5

**SELC 7098 - Personal Financial Planning for the Dental Student**

This course is designed to introduce dental students to the basic principles of personal financial planning. Through a combination of in-class presentations, group discussions, and between-class individual projects involving the financial considerations of a simulated couple, the basic aspects of financial tracking, financial goal setting, tax oversight, credit management, insurance considerations, investment decisions, and estate planning will be discussed and reinforced. At the completion of the course, each student will have had the opportunity to learn to become capable of: 1) calculating and tracking personal net worth; 2) creating and analyzing a personal budget; 3) developing and maintaining personal financial goals; 4) evaluating credit and debt decisions; 5) calculating disability and life insurance needs; 6) understanding the basic characteristics of stocks, bonds, and cash equivalent investments; 7) understanding the instruments available for retirement saving; and 8) understanding the basic aspects of wills and trusts. Withdrawal, with notice to the course director, is permitted before last session without transcript recording. 12 hours lecture/10 students/summer/June 1–5, 2009 1–3 pm each day (except for the 5th, 10–12 & 1–3)/Rising DS 2, 3, 4.

**Semester Credit Hours:** 0.5

**SELC 7099 - Special Elective: Teacher Training**

This course is designed to introduce dental students to the basic principles of personal financial planning. Through a combination of in-class presentations, group discussions, and between-class individual projects involving the financial considerations of a simulated couple, the basic aspects of financial tracking, financial goal setting, tax oversight, credit management, insurance considerations, investment decisions, and estate planning will be discussed and reinforced. At the completion of the course, each student will have had the opportunity to learn to become capable of: 1) calculating and tracking personal net worth; 2) creating and analyzing a personal budget; 3) developing and maintaining personal financial goals; 4) evaluating credit and debt decisions; 5) calculating disability and life insurance needs; 6) understanding the basic characteristics of stocks, bonds, and cash equivalent investments; 7) understanding the instruments available for retirement saving; and 8) understanding the basic aspects of wills and trusts. Withdrawal, with notice to the course director, is permitted before last session without transcript recording. 12 hours lecture/10 students/summer/June 1–5, 2009 1–3 pm each day (except for the 5th, 10–12 & 1–3)/Rising DS 2, 3, 4.

**Semester Credit Hours:** 0.5

**SELC 7106 - Endodontics Pain Research Selective**

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.

**Semester Credit Hours:** 0.0

**SELC 7107 - Periodontal Flap Design**

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. *Spring/16 seniors/6 DS 4 students/five 2-hour presentations/Wednesdays 10–12.*

**Semester Credit Hours:** 0.0

**SELC 7108 - Basic Periodontal Surgery**

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 selective, 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). *Spring/six DS 4 students/seven ½ days/3 lecture, 10 clinic.*

**Semester Credit Hours:** 0.0

**SELC 7109 - Graduate Orthodontic Clinic Rotation**

The objective of this 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. Three students can participate in each of the five graduate clinic sessions held each week, Tuesday and Thursday – all day; Wednesday – pm session only. The number of sessions each person can attend will depend on the number of eligible students who apply. By arrangement/fall & spring/juniors & seniors/16 clinic hours per semester.

**Semester Credit Hours:** 0.0
SELC 7113 - Women's Health Seminar (online course)
This is a multi-professional course on some special health issues unique to women. The goal is to sensitize interested dental students to these issues and inform them of important questions and special examination techniques that they should incorporate into their patient assessment and treatment planning strategies. Five main health topics will be covered: Ethics, Bone Health, Impact of Socio-cultural Roles on Women’s Health, Cardiovascular Health, and Maternal Oral Health. Additionally, students are required to choose five topics from the remaining 25 online lectures, for a total of 10 lecture hours. Students must answer pre- and post-test questions for each lecture viewed.
*Course Format: This is an online, interactive course in two phases:
Phase I – Lecture: there are 27 virtual women’s health lectures on line. You must select a minimum of 10 to view.
Phase I – Discussion Board with the following components:
You will see a list of 25 topics with the top 2 publications for each topic.
1) You must read ONE of the publications for one topic.
2) You must enter onto the discussion board your reflection of the article and a summary.
3) There will be other entries on this discussion board—you must respond to one of these entries. You must enter any experience you had with a woman patient. There will be other entries on the discussion board; you must respond to one other entry. Your responses to other entries can take a variety of forms. If you agree, you can comment further; if you disagree, you can state why; if you want to share a similar experience, ask advice, etc. This is a new course and we will see what form these discussions take. Your evaluation is based on completing the assignment. It is a credit/no credit (F) entry.
Summer/DS 1–4.
Semester Credit Hours: 0.5

SELC 7120 - Preventive Dentistry Outreach
Paired groups of DS I students are required to participate in a three-week Rotation during the summer session between the freshman and sophomore years. The students will be based at Mercy Ministries of Laredo. 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 (dentist, dental hygienists, and dental assistants). Activities will include clinical preventive patient education, dental surveys, and dental assisting. 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. 3-week rotation/Rising DS 2/June & July/6–8 students/9-5.
Semester Credit Hours: 0.0

SELC 7121 - Heroes for the Homeless: Innovative Strategies for Teaching Dental Students about Cultural Competency
Didactic, clinical, and social courses and experiences relative to providing dental care to a portion of the homeless population of San Antonio, Texas will be provided to the senior dental student. On-campus activities include clinical medicine courses relative to this patient population. In addition, students must also travel to select homeless shelters in San Antonio and provide basic dental care, and coordinate and interact with social case workers managing socioeconomic issues for this patient population. Students must document their experiences throughout this 16-week selective via photos and blogs on a course Web site. Enrolled students must present a collaborative PowerPoint presentation to freshman, sophomore, and junior dental students highlighting new-found knowledge and increased confidence acquired during this selective. Spring, fall, & spring/20 DS 4 students.
Semester Credit Hours: 0.0

SELC 7130 - Introduction to Graduate Prosthodontics
This course intends to familiarize students with a graduate prosthodontics residency. Participants will be introduced to complex and challenging situations in clinical prosthodontics through a series of lectures, pertinent literature reviews, patient diagnosis and treatment planning seminars, demonstrations of clinical patient treatment, and the laboratory procedures that support treatment. Withdrawal, with notice to the course director, will be permitted without recording of the withdrawal on the student’s transcript. Summer/2 weeks (July) 8–5/Rising DS 3 & 4 (1st priority to DS 3 students).
Semester Credit Hours: 2.0

SELC 8023 - Wonderful World of Periodontics
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. The case presentations will include four one-hour brown-bag discussions each moderated by a different 2nd- or 3rd-year postdoctoral student. Spring/4 one-hour, noontime presentations (dates tba)/freshmen, sophomores, juniors, & seniors/150 students max.
Semester Credit Hours: 0.0

SELC 8032 - Senior South Texas Rotation
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. Rising DS
SELC 8035 - Mobile Van Mission Dental Care Program
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 mobile dental care facilities and/or 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 border areas of Texas and Mexico, as well as other dentist shortage areas in Texas, thus becoming familiar with the oral health needs of various segments of the 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. Medical teams are also located at each dental clinic manned by physicians, nurses, and medical students, thereby coordinating care and providing an opportunity for interdisciplinary training with medical disciplines. By arrangement/20 hours clinic. Semester Credit Hours: 0.0

SELC 8060 - Advanced Graduate Clinic Rotation
This course is designed for the student who is seriously considering specializing in orthodontics upon graduation from Dental School. The student will be trained in all facets of clinical orthodontics and will be expected to perform a variety of orthodontic procedures on patients under the supervision of clinical faculty and residents on a regular basis. Students must complete a minimum of 40 clinical hours per semester for credit. Fall & spring/40 clinic hours per semester. Semester Credit Hours: 1.5

SELC 8094 - Enteral Conscious Sedation and Emergency Procedures
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. Seniors only/14 lecture hours/spring/May. Semester Credit Hours: 0.5

SELC 8099 - Orthodontic Literature Review
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. Spring/six 2-hour evening sessions by arrangement with course director/12 students/juniors & seniors/12 seminar hours. Semester Credit Hours: 0.0

SELC 8117 - CAD-CAM (Cerec 3d) Dentistry
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. Semester Credit Hours: 0.5

SELC 8160 - Molar Endodontic Selective
This course is designed to allow students to develop skills and appreciation for endodontics therapy on uncomplicated molar cases. It is a self-paced course that involves VitalBooks and Web-based (BlackBoard) reading assignments, video reviews, and hands-on pre-clinical projects on extracted molar teeth. Students who successfully complete this course and go on to complete two molar cases to the satisfaction of the supervising endodontics faculty, will be qualified to perform endodontics therapy on selected molar cases in the General Practice Clinic. Completion of ENDO 6041 and 6142 are required, as well as successful completion of one simple (singlerooted) clinical case, demonstrating good basic understanding of principles and procedures. Withdrawal is permitted at any time without recording on the transcript. Year round/by arrangement. Semester Credit Hours: 1.0

SELC 8175 - Geriatric Dentistry
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. In the 10 clinic sessions scheduled by arrangement at the Extended Care Therapy Center at South Texas Veterans Health Care System, senior dental students will review a patient's medical history, medical problems, medications, physical disabilities, sensory deficits, psychosocial status, and environmental factors, as well as review previous dental treatment. These variables will be assessed and used to determine the impact these factors may have on the dental management of the patient. Students, with their faculty supervisor, must develop dental treatment plans and will have the opportunity to provide dental treatment to these patients. Withdrawal from the selective, with notice to the course director, will be permitted at any time without recording of the withdrawal on the transcript. Summer/40 hrs/Wed. 1–5/10 Rising DS 4. Semester Credit Hours: 1.0

SELC 8180 - Senior Selective in Oral Medicine
This is a seminar-based course designed to expose the student to a series of clinically relevant and challenging oral medicine cases. The goal is to expand on Competency 01 (Graduates must be competent in patient assessment and diagnosis) as it pertains to the management of the medically complex patient. This course is open to all, but is specifically targeted for students who are contemplating or planning to apply to a General Practice Residency, an Advanced Education General Dentistry program, an oral and maxillofacial surgery residency, or residency in periodontics. Attendance is mandatory and failure to complete or withdraw will result in appropriate entry on the transcript. Summer/Mondays 1–5/10 Rising DS 4. Semester Credit Hours: 0.0

SELC 8181 - General Dentistry Implant Selective
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.

*Semester Credit Hours: 0.0*

**SELC 8185 - FAST CATS: Academic Detailing**
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.

*Semester Credit Hours: 1.0*

**SELC 8528 - Oral and Maxillofacial Surgery**
**Senior Selective**
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. *Summer/18 Rising DS 4.*

*Semester Credit Hours: 0.0*
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Class Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday, July 06, 2009</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>DDS Years 3 &amp; 4</td>
</tr>
<tr>
<td>Monday, July 13, 2009</td>
<td>Orientation</td>
<td>DDS Year 1</td>
</tr>
<tr>
<td>Monday, July 13, 2009</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>DDS Years 1 &amp; 2</td>
</tr>
<tr>
<td>Tuesday, July 21, 2009</td>
<td>Census Date</td>
<td>DDS Years 3 &amp; 4</td>
</tr>
<tr>
<td>Tuesday, July 28, 2009</td>
<td>Census Date</td>
<td>DDS Years 3 &amp; 4</td>
</tr>
<tr>
<td>Monday, September 07, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Thursday, November 26, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Friday, November 27, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Friday, December 18, 2009</td>
<td>Term Ends</td>
<td>All</td>
</tr>
<tr>
<td>Saturday, December 19, 2009</td>
<td>Graduation (No Ceremony)</td>
<td>Graduating Students</td>
</tr>
<tr>
<td>Thursday, December 24, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Friday, December 25, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Monday, December 28, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Tuesday, December 29, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Wednesday, December 30, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Thursday, December 31, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Friday, January 01, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Monday, January 04, 2010</td>
<td>Classes Resume</td>
<td>All</td>
</tr>
<tr>
<td>Monday, January 18, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Wednesday, January 20, 2010</td>
<td>Census Date</td>
<td>All</td>
</tr>
<tr>
<td>Monday, February 15, 2010</td>
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<td>All</td>
</tr>
<tr>
<td>Monday, March 01, 2010</td>
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<td>All</td>
</tr>
<tr>
<td>Friday, March 05, 2010</td>
<td>Spring Break Ends</td>
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<td>DDS Year 4</td>
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<td>Tentative University Holiday</td>
<td>All</td>
</tr>
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<td>Friday, May 14, 2010</td>
<td>Term Ends</td>
<td>DDS Years 1, 2, &amp; 3</td>
</tr>
<tr>
<td>Monday, May 17, 2010</td>
<td>Classes Resume</td>
<td>DDS Years 1, 2, &amp; 3</td>
</tr>
<tr>
<td>Saturday, May 22, 2010</td>
<td>Tentative Graduation Ceremony</td>
<td>Graduating Students</td>
</tr>
<tr>
<td>Monday, May 31, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Friday, July 02, 2010</td>
<td>Term Ends</td>
<td>DDS Years 1, 2, &amp; 3</td>
</tr>
</tbody>
</table>
Advanced Dental Education

Students are responsible for all information contained in this Catalog up to and including their school’s section.

- Certificate and Degree Programs
- Residency Training
- Admission and Application
- Application Procedures
- General Policies
- Advanced Dental Education Program Curricula
- Advanced Dental Education Academic Calendar

Postdoctoral dental education programs at The UT Health Science Center at San Antonio consist of specialty certificate programs, graduate degree programs, and residencies. The combined resources of the Dental School, the School of Medicine, the Graduate School of Biomedical Sciences, and affiliated patient care institutions in the community provide opportunities for flexibility in offerings in order to meet the demands of today’s dental practitioners.

Certificate and Degree Programs

The certificate and master’s degree programs provide opportunities for the development of well-trained clinicians, competent in providing broad-spectrum care, and teachers with a comprehensive background of clinical experience, current basic science knowledge relevant to dentistry, and an understanding of research methodology. Certificate programs are administered by the Dental School; master of science and Ph.D. degrees are granted by the Graduate School of Biomedical Sciences.

Master’s degree and certificate programs are offered in Dental Diagnostic Science, Dental Public Health, Endodontics, Prosthodontics, and Periodontics. A certificate program only is available in Pediatric Dentistry and Orthodontics; however, a master’s degree option for Pediatric Dentistry students is available in basic sciences and public health.

Program lengths vary: Prosthodontics and Periodontics programs (Periodontics requires a master’s degree) require three years; Dental Diagnostic Science certificate program requires 30 months, plus an additional six months for the master’s degree in Oral & Maxillofacial Radiology; Pediatric Dentistry and Endodontics certificate programs are two years, with an additional six months required for the master’s degree in Endodontics.

<table>
<thead>
<tr>
<th>Program</th>
<th>Certificate</th>
<th>Master’s</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental Diagnostic Science</td>
<td>X</td>
<td>X</td>
<td>30 mos. 36 mos.</td>
</tr>
<tr>
<td>Dental Public Health</td>
<td>X</td>
<td></td>
<td>12 mos.</td>
</tr>
<tr>
<td>Endodontics</td>
<td>X</td>
<td>X</td>
<td>26 mos. 30 mos.</td>
</tr>
<tr>
<td>Orthodontics</td>
<td>X</td>
<td></td>
<td>35 mos.</td>
</tr>
<tr>
<td>Pediatric Dentistry</td>
<td>X</td>
<td></td>
<td>24 mos.</td>
</tr>
</tbody>
</table>

Residency Training

The Health Science Center and associated hospitals offer residency training programs which include an Advanced Education in General Dentistry Program, a General Practice Residency, an Oral & Maxillofacial Surgery Residency, and a Dental Public Health Residency. These programs focus on providing educational opportunities by maximizing patient care activities.

Advanced Education in General Dentistry (AEGD)

The AEGD certificate program presents advanced clinical techniques, and experiences, and expands clinical training with significant didactic contributions. Diagnosis and treatment planning of complex and comprehensive cases and the promotion of clinical skills and techniques are emphasized. The program is from one to two years in length.

Dental Public Health

The Department of Community Dentistry offers a one-year, full-time or a two-year, part-time Residency in Dental Public Health. The program is designed to allow dentists with the Master of Public Health degree or its equivalent to complete the educational requirements for Board Certification as a recognized specialist in Dental Public Health.

Oral and Maxillofacial Surgery Residency

A program of study for dentists in Oral and Maxillofacial Surgery is offered at the Health Science Center. The Medical Program combines formal medical education leading to an M.D. degree with clinical training. This is a six-year course of study with openings for two positions per year. Individuals accepted into the residency program are automatically accepted into the second-year class of the School of Medicine. (The MCAT is not required.)

General Practice Residency

The General Practice Residency Program is designed to prepare graduate dentists to become competent general practitioners, capable of providing comprehensive, state-of-the-art
dental care. Dental care for medically compromised patients serves as the framework for clinical training. The program is from one to two years in length. Research opportunities are available.

Orthodontics
The Department of Orthodontics offers a 35-month residency for advanced training in orthodontics and dento-facial orthopedics. This program is designed to offer a broad spectrum of clinical and didactic experience in the field. Certificate only programs are available in both Pediatric Dentistry and Orthodontics; however, a master’s degree option for students is available in basic sciences and public health. The training program will meet the formal requirements for eligibility to take the postgraduate component of examinations administered by the American Board of Orthodontics. For more information call 210-567-3500 or -3510.

Admission and Application
Certificate Programs
Students are admitted to certificate programs through registration as postdoctoral certificate students in the Dental School. To be eligible for admission, individuals must have earned a D.D.S. or D.M.D. degree prior to matriculation and must present acceptable academic records and references. A personal interview is recommended.

Graduates of dental schools which have not been accredited by the Commission on Dental Accreditation must take the Graduate Record Examination Aptitude Test prior to application and achieve a minimum combined score of 1,000 on the verbal and quantitative portions.

Applicants for whom English is not the native language are required to submit scores from the Test of English as a Foreign Language (TOEFL). A minimum score of 560 is recommended on the paper-based test or 68 on the Internet-based test.

At the conclusion of the first year in a certificate program, students have the option of applying to enter the degree program or of continuing in the certificate program.

Master’s Degree Programs
Admission to the degree programs in Periodontics, Prosthodontics, Endodontics, or Dental Diagnostic Science from the certificate program in the same specialty is dependent upon satisfactory scholastic performance during the first year of the certificate program, a minimum grade average of B in postdoctoral courses, faculty recommendations, a recommended minimum score of 1,000 on the verbal and quantitative portions of the GRE Aptitude Test*, and approval by the Graduate Faculty Council of the Graduate School of Biomedical Sciences.

*Scores on GRE tests taken more than five years prior to the date of application are not acceptable.

Application Procedures
Application forms for postdoctoral certificate programs and appropriate dates for the return of completed forms and required supplementary information may be obtained from the Dental School Web site at http://dental.uthscsa.edu, or in writing to the specific program directors.

General Policies
Degree Programs
Postdoctoral dental students who enter the Graduate School of Biomedical Sciences’ degree programs after the first year of study in one of the certificate programs are subject to policies and procedures of the Graduate School of Biomedical Sciences as well as general regulations and requirements of The UT Health Science Center at San Antonio. Information regarding admission, registration, grading, continuation, etc., is presented in the Graduate School of Biomedical Sciences section of this Catalog.

Certificate Programs
Postdoctoral dental students in certificate programs are subject to general policies of the Dental School and the Health Science Center as well as those explained below.

Registration
Students must register and pay tuition and fees on the date of official registration shown in the General Academic Policies and Financial Information sections of this Catalog. A late registration fee of $100 will be assessed students who register after the official registration period closes.

Grading
A letter grading system is used in the certificate programs. To calculate a grade point average, grade points are assigned to letter grades.

- A = 4 points (above average postgraduate work)
- B = 3 points (average postgraduate work)
- C = 2 points (below average postgraduate work)
- D = 1 point (failing postgraduate work)
- F = 0 points (failing postgraduate work)

Grades of D and F are not acceptable for postgraduate credit and must be upgraded to an acceptable level. Course directors may require the student to repeat a failed course during the next period that the course is offered. Grades for repeated courses will be assigned using the grading system outlined previously. Course directors may also permit abbreviated, remedial instruction aimed at raising student competence in specific areas for a failed course. A grade of C will be given for successful remediation. Grades earned in repeated or remediated courses will be substituted for the original grade in the computation of the grade point average.

The grades S (satisfactory), U (unsatisfactory), or H¹ (Honors) are given for the following courses:

- Seminar
- Literature Searching
- Supervised Teaching
- Research
S. U, and H grades are not included in the computation of the grade point average; however, a grade of U must be upgraded to an S either through remediation or repetition of the course.

1 Supervised Teaching only

Other symbols used in reporting the standing of students in their classes are: WP (withdrew passing) and WF (withdrew failing); Q (course dropped while receiving a passing grade—no penalty); and I (incomplete). 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 in order for the symbol I to be converted into a letter grade by the instructor. If the work is not completed within one year, the letter grade F will be assigned.

Waiver of Courses and Advanced Standing

Postgraduate students may apply for waiver of a course requirement or for advanced standing in a course.

Permission may be granted on an individual basis with a recommendation from the program director and the course director, subject to the approval of the departmental Committee on Postdoctoral Studies and the Associate Dean for Student Affairs.

Continuation

Continuation in the postgraduate certificate program is dependent upon the following:

- Postgraduate students are required to satisfactorily demonstrate clinical competence as determined by the program director and the Committee on Postdoctoral Studies. Clinical competence will include, but not be limited to: (a) professional demeanor, including patient, student, and faculty relationships; (b) professional appearance; and (c) application and demonstration of clinical operating skills.

- Postgraduate students will be monitored on a regular basis by the departmental Committee on Postdoctoral Studies. Students will be apprised in writing of any deficiency and, when indicated, placed on probation by the Dean. In such cases that the Committee on Postdoctoral Studies determines that improvement has not been achieved in a particular area cited, dismissal will be recommended.

Probation and Dismissal

A student whose average falls below B (3.0) will be placed on academic probation by the Dean upon recommendation of the departmental Committee on Postdoctoral Studies of the appropriate program. Additionally, a student will be placed on academic probation for any one of the following: a final grade of F, D, or U during any one grading period.

A student placed on academic probation will be given written notification by the Dean of such status. This notification will serve as an official warning to the student that her or his academic performance is below standard and continuation in the postgraduate program is in jeopardy. Upon the student's successful correction of all D, F, and U grades, he or she will be removed from academic probation. A student will remain on probation for 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 departmental Committee on Postdoctoral Studies.

A student will be subject to dismissal without a probationary period if he or she receives a final grade of D or F for 4 (four) or more credit hours of required course work during a single grading period. Academic dismissal will be recommended by the Committee on Postdoctoral Studies for consideration by the Advanced Education Committee. The student may request permission to appear before the Advanced Education Committee to present her or his views. The Advanced Education Committee will transmit recommendations for dismissal through the Associate Dean for Student Affairs to the Dean. Students may appeal academic dismissal to the Dental Dean. Procedural appeal may be made to the President in accordance with Health Science Center policy.

Failure of the student to demonstrate the intellectual, ethical, and behavioral attributes prerequisite to meeting the responsibilities for patient care are grounds for dismissal from the postgraduate program.

Leave of Absence

Permission for a leave of absence from a postgraduate program for a maximum period of one year may be granted by the Dean upon the recommendation of the Advanced Education Committee. Such permission will be granted only for extenuating circumstances and indicates the student will be allowed to return to the program within the one-year limit.

The student must submit a written request for leave to the Chairman of the departmental Committee on Postdoctoral Studies. The request is then forwarded with appropriate endorsements to the Advanced Education Committee, the Associate Dean for Student Affairs, and the Dean for approval. The grading symbol I (incomplete) will be recorded for each course not completed, and the student will be required to complete these courses as soon as they are offered after the student’s return.

Withdrawal

Permission to withdraw from a postgraduate program may be granted by the Associate Dean for Student Affairs upon written request by the student and upon recommendation of the departmental Committee on Postdoctoral Studies of the student’s program. In the case of withdrawal before the end of the term (and thus the dropping of all courses), the grading symbol WP or WF will be recorded for each course not completed, depending upon the student’s standing on the last day of enrollment. In the case of a student’s withdrawal at the end of the term, the appropriate grading symbol will be recorded for each course completed.
An application for readmission by a student who has withdrawn is subject to the same requirements, procedures, and acceptance considerations that apply to first-time applicants.

**Graduation**

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.

M.D. degrees are awarded through the School of Medicine at the end of the third year of the OMS (Oral & Maxillofacial Surgery) program.

**Financial Information**

Tuition information for resident and nonresident students enrolled in postdoctoral certificate and degree programs, fee information, and information about other expenses is outlined in the general information ("Health Science Center") section of this Catalog.

**Compensation**

Postdoctoral students may receive stipends on a year-to-year basis, depending upon funds available. Program directors will provide current information.

**Curriculum**

The curriculum for the certificate programs is designed to give students the opportunity to develop clinical judgment and skills necessary to provide comprehensive patient care, broader in scope and greater in depth than that offered by undergraduate programs. Biomedical sciences relevant to each specialty are integrated to facilitate correlation of biological, pathological, behavioral, and clinical disciplines.

The offerings of each program are designed to meet the formal education requirements for eligibility to take the certifying examinations of the American Board of Periodontology, American Board of Endodontics, American Board of Pediatric Dentistry, American Board of Prosthodontics, American Board of Oral Medicine, and American Board of Oral and Maxillofacial Radiology. The faculty is composed of members of the Dental School clinical and basic science teaching staffs.

The curriculum for the master's programs is also provided in this section. For the degree programs in Dental Diagnostic Science, Periodontics, Endodontics, and Prosthodontics the curriculum for the first two years is identical to that of the certificate program with, in some cases, additional teaching and research. An additional 6 (six) months or longer are required for graduate degree students who must also complete a thesis.

**Multidisciplinary Courses**

The five certificate programs have in common many basic science courses as well as some dental courses. Descriptions of multidisciplinary courses follow the outlines of the programs.
## Advanced Dental Education Programs

- **Dental Diagnostic Science - Certificate Program**
- **Dental Diagnostic Science - Master of Science**
- **Endodontics – Certificate**
- **Endodontics - Master of Science**
- **Pediatric Dentistry**
- **Periodontics – Certificate**
- **Periodontics - Master of Science**
- **Prosthodontics – Certificate**
- **Prosthodontics - Master of Science**
- **Multidisciplinary Courses**
- **Associated Programs**

### Certificate Program

**Courses Descriptions**

**FIRST YEAR**

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DIAG 5012</td>
<td>Practicum in Clinical Radiology</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>DIAG 5024</td>
<td>Plain Film Radiography and Anatomy</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>DIAG 5044</td>
<td>Radiation Physics Lab</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>DIAG 5045</td>
<td>Radiation Physics</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>*ORTH 5094</td>
<td>Research Methodology</td>
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</tr>
<tr>
<td></td>
<td>PEDO 5026</td>
<td>Orthodontics</td>
<td>1.5</td>
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**Total Semester Hours**: 6.0

**Fall (minimum semester hours: 15.0)**

<table>
<thead>
<tr>
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<tr>
<td></td>
<td>DIAG 5015</td>
<td>Panoramic Radiology</td>
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<td></td>
<td>DIAG 5070</td>
<td>Supervised Teaching</td>
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<tr>
<td></td>
<td>*PATH 5121</td>
<td>Biostatistics</td>
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<td></td>
<td>*PATH 5035</td>
<td>Oral Pathology</td>
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<td></td>
<td>*INTD 5020</td>
<td>Dental Biomedical Core Course</td>
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<td></td>
<td>DIAG 5045</td>
<td>Radiation Physics</td>
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<tr>
<td></td>
<td>DIAG 5044</td>
<td>Radiation Physics Lab</td>
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<tr>
<td></td>
<td>DIAG 5091</td>
<td>Case Conference</td>
<td>1.0</td>
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<tr>
<td></td>
<td>DIAG 5017</td>
<td>Literature Review</td>
<td>1.0</td>
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<tr>
<td></td>
<td>DIAG 5012</td>
<td>Practicum in Clinical Radiology</td>
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**Total Semester Hours**: 15.0

**SECOND YEAR**

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</thead>
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<tr>
<td></td>
<td>DIAG 6007</td>
<td>Graduate Oral and Maxillofacial Radiology Clinic</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>*DIAG 6097</td>
<td>Research</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>DIAG 6075</td>
<td>Practicum in Clinical Radiology</td>
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</table>

**Total Semester Hours**: 6.0

**Electives**

<table>
<thead>
<tr>
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<th>Course Title</th>
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<tr>
<td>DIAG 6075</td>
<td>Practicum in Clinical Radiology</td>
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**Summer (minimum semester hours: 6.0)**

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<th>Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>DIAG 6007</td>
<td>Graduate Oral and Maxillofacial Radiology Clinic</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>*DIAG 6097</td>
<td>Research</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>DIAG 6075</td>
<td>Practicum in Clinical Radiology</td>
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**Total Semester Hours**: 6.0

**Fall (minimum semester hours: 11.0)**

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DIAG 6027</td>
<td>Advanced Imaging Physics</td>
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</tr>
<tr>
<td></td>
<td>DIAG 6025</td>
<td>Oral and Maxillofacial Radiology Interpretation</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>DIAG 6007</td>
<td>Graduate Oral and Maxillofacial Radiology Clinic</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>DIAG 6071</td>
<td>Supervised Teaching</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>DIAG 6041</td>
<td>Basic Radiation Biology</td>
<td>1.0</td>
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<tr>
<td></td>
<td>DIAG 6018</td>
<td>OMR Case Conference</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>DIAG 6017</td>
<td>Literature Review</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>*DIAG 6097</td>
<td>Research</td>
<td>1.0</td>
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</table>

**Total Semester Hours**: 11.0

**Electives**

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<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>INTD 6070</td>
<td>Teaching Skills</td>
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### THIRD YEAR

#### Spring (minimum semester hours: 10.0)
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>DIAG 6007</td>
<td>Graduate Oral and Maxillofacial Radiology Clinic</td>
<td>3.0</td>
</tr>
<tr>
<td>DIAG 6018</td>
<td>OMR Case Conference</td>
<td>1.0</td>
</tr>
<tr>
<td>DIAG 6040</td>
<td>Advanced Oral and Maxillofacial Radiology</td>
<td>2.0</td>
</tr>
<tr>
<td>DIAG 6071</td>
<td>Supervised Teaching</td>
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#### Electives:
- DIAG 6021 Medical Radiology Rotation 2.5
- DIAG 6020 Tumor Board 1.0
- DIAG 6075 Practicum in Clinical Radiology 0–4.0

#### Total Semester Hours: 10.0

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#### Electives:
- DIAG 6021 Medical Radiology Rotation 2.5
- DIAG 6020 Tumor Board 1.0
- DIAG 6075 Practicum in Clinical Radiology 0–4.0

#### Fall (minimum semester hours: 9.0)
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#### Electives:
- DIAG 6021 Medical Radiology Rotation 2.5
- DIAG 6020 Tumor Board 1.0
- DIAG 6075 Practicum in Clinical Radiology 0–4.0

#### Subtotal of Credits for Certificate Program: 73.0

#### Additional Requirement #1: Hospital Rotations: 7.5

#### Additional Requirement #2: Tumor Board: 2.0

#### Total Credits for Certificate Program: 82.5

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**Special Electives**

**Special Electives Course Descriptions**

The following special electives are available on an individual basis:

- DIAG 5014 - Physical Evaluation I
- DIAG 5018 - Practicum in Oral Medicine
- DIAG 6005 - Clinical Pathology Conference
- DIAG 6008 - Orofacial Pain
- DIAG 6009 - Noninfectious Diseases of the Oral Mucosa
- DIAG 6016 - Pharmacotherapeutics
- DIAG 6019 - Chemosensory Disorders and Salivary Gland Dysfunction
- DIAG 6022 - Practicum in Oral Medicine
- DIAG 6072 - Supervised Teaching
- DIAG 6135 - Clinical Case Conference I and II
- DIAG 6060 - Physical Anthropology
- DIAG 6061 - Forensic Anthropology
- DIAG 6062 - Advanced Forensic Anthropology Lab
- DIAG 6084 - Advanced Forensic Odontology Lab
- DIAG 6085 - Forensic Pathology
- DIAG 6086 - Forensic Dental Photography Lab

**Courses: Dental Diagnostic Science - Certificate Program**

**Courses Descriptions**

Courses unique to the program in Dental Diagnostic Science are listed below. Offerings common to one or more programs are described under “Multidisciplinary Courses.” Special Electives courses are described in the next section.

- DIAG 5007 - Graduate Oral and Maxillofacial Radiology Clinic
- DIAG 6007 - Graduate Oral and Maxillofacial Radiology Clinic
- DIAG 5014 - Physical Evaluation I
- DIAG 5015 - Panoramic Radiology
- DIAG 5016 - Head and Neck Anatomy
- DIAG 5018 - Practicum in Oral Medicine
- DIAG 5019 - Digital Imaging
- DIAG 5026 - Diagnostic Imaging of the Jaws Part I
- DIAG 5092 - Diagnostic Science Seminar
- DIAG 5093 - Diagnostic Science Seminar
- DIAG 6090 - Diagnostic Science Seminar
- DIAG 6091 - Diagnostic Science Seminar
- DIAG 6093 - Diagnostic Science Seminar
- DIAG 6094 - Diagnostic Science Seminar
- DIAG 6095 - Diagnostic Science Seminar
- DIAG 5017 - Literature Review
- DIAG 6017 - Literature Review
- DIAG 5045 - Radiation Physics
- DIAG 5044 - Radiation Physics Lab
- DIAG 5070 - Supervised Teaching
- DIAG 6071 - Supervised Teaching
- DIAG 6135 - Clinical Case Conference I and II
- DIAG 5091 - Case Conference
- DIAG 5181 - Principles in Forensic Odontology
- DIAG 6008 - Orofacial Pain
- DIAG 6009 - Noninfectious Diseases of the Oral Mucosa

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*Excluding 7.5 credit hours of hospital rotations & 2 credit hours of Tumor Board

*Multidisciplinary course

Note: Unless otherwise specified, 7.5 credit hours of hospital rotations represent 3 months with full-time student participation.
DIAG 6018 - OMR Case Conference
DIAG 6022 - Practicum in Oral Medicine
DIAG 6023 - Radiology for Graduate Orthodontics
DIAG 6025 - Diagnostic Imaging of the Head and Neck
Part I
DIAG 6027 - Advanced Imaging Physics
DIAG 6040 - Advanced Oral and Maxillofacial Radiology Interpretation
DIAG 6041 - Basic Radiation Biology
DIAG 6043 - Advanced Radiation Biology
DIAG 6016 - Pharmacotherapeutics
PATH 5121 - Biostatistics
PEDO 5026 - Orthodontics I

Dental Diagnostic Science - Master of Science

Courses Descriptions

The curriculum for the first two and one-half years of the master’s degree program is identical to that of the certificate program. First 2½ Years of Program are as listed for the Dental Diagnostic Science - Certificate Program 82.5

THIRD YEAR continued

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* ^including 7.5 credit hours of hospital rotations & 2 credit hours of Tumor Board

Diag 6009 - Noninfectious Diseases of the Oral Mucosa
Diag 6016 - Pharmacotherapeutics
Diag 6019 - Chemosensory Disorders and Salivary Gland Dysfunction
Diag 6022 - Practicum in Oral Medicine
Diag 6072 - Supervised Teaching
Diag 6135 - Clinical Case Conference I and II
Diag 6060 - Physical Anthropology
Diag 6061 - Forensic Anthropology
Diag 6062 - Advanced Forensic Anthropology Lab
Diag 6084 - Advanced Forensic Odontology Lab
Diag 6085 - Forensic Pathology
Diag 6086 - Forensic Dental Photography Lab

Course Descriptions

Courses unique to the program in Dental Diagnostic Science are listed below. Offerings common to one or more programs are described under “Multidisciplinary Courses.” Special Elective courses are described in the next section.

DIAG 5007 - Graduate Oral and Maxillofacial Radiology Clinic

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.

**Semester Credit Hours: 3.0**

DIAG 6007 - Graduate Oral and Maxillofacial Radiology Clinic

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.

**Semester Credit Hours: 3.0**

DIAG 5014 - Physical Evaluation I

This course is intended to afford students maximal opportunity to recognize the relevance of basic biomedical sciences to the study of the patient and to provide the fabric for the accumulation of knowledge, skills, and values essential to initiate the clinical process. It includes didactic and clinical experience in obtaining and interpreting a patient history; extraoral and intraoral physical examination procedures; and interpretation of the findings of the examination.

**Semester Credit Hours: 1.5**

DIAG 5015 - Panoramic Radiology

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.

**Semester Credit Hours: 0.5**

Special Electives

Special Electives Course Descriptions

The following special electives are available on an individual basis:

- DIAG 5014 - Physical Evaluation I
- DIAG 5018 - Practicum in Oral Medicine
- DIAG 6005 - Clinical Pathology Conference
- DIAG 6008 - Orofacial Pain

*Multidisciplinary course

^TOP / Adv. Dental Programs
DIAG 5016 - Head and Neck Anatomy
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.
Semester Credit Hours: 1.0

DIAG 5018 - Practicum in Oral Medicine
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.
Semester Credit Hours: 4.0

DIAG 5019 - Digital Imaging
This survey course is designed to give the maxillofacial radiology resident the opportunity to gain a basic understanding of digital imaging. The course utilizes classroom lectures as well as computer laboratory exercises to demonstrate the application of digital imaging in a clinical setting. The course covers all aspects of digital imaging including: fundamental basis for digital imaging, image enhancement and restoration, image analysis, image compression, image synthesis, and image display. The course also covers specific information related to digital imaging modalities such as computed tomography, magnetic resonance imaging, ultrasound, and dental digital radiography.
Semester Credit Hours: 1.0

DIAG 5026 - Diagnostic Imaging of the Jaws
Part I
This lecture course is presented over several semesters. The goal 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.
Semester Credit Hours: 2.0

DIAG 5092 - Diagnostic Science Seminar
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.
Semester Credit Hours: 1.0

DIAG 5093 - Diagnostic Science Seminar
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.
Semester Credit Hours: 1.0

DIAG 6090 - Diagnostic Science Seminar
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.
Semester Credit Hours: 1.0

DIAG 6091 - Diagnostic Science Seminar
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.
Semester Credit Hours: 1.0

DIAG 6092 - Diagnostic Science Seminar
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.
Semester Credit Hours: 1.0

DIAG 6093 - Diagnostic Science Seminar
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.
Semester Credit Hours: 1.0

DIAG 6094 - Diagnostic Science Seminar
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.
Semester Credit Hours: 1.0

DIAG 6095 - Diagnostic Science Seminar
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.
Semester Credit Hours: 1.0

DIAG 5017 - Literature Review
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.
Semester Credit Hours: 1.0

DIAG 6017 - Literature Review
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
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 required for the MS degree.)

Semester Credit Hours: 1.0

DIAG 6022 - Practicum in Oral Medicine
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.

Semester Credit Hours: 6.0

DIAG 6023 - Radiology for Graduate Orthodontics
The goal of this course is to prepare the Orthodontic graduate student for contemporary practice in the area of radiology.

Semester Credit Hours: 1.5

DIAG 6025 - Diagnostic Imaging of the Head and Neck Part I
This lecture course is presented over several semesters. The goal 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.

Semester Credit Hours: 2.0

**DIAG 6027 - Advanced Imaging Physics**

This course is a continuation of the basic Radiation Physics course that was given during the first year of graduate studies. This course will provide the student with the opportunity to achieve a proficiency level understanding of the physical principles of all the advanced imaging methods and techniques (i.e., computed tomography), magnetic resonance imaging, ultrasound and radionuclide imaging commonly used in medical care, and understanding of the clinical applications of these advanced imaging modalities.

Semester Credit Hours: 1.0

**DIAG 6040 - Advanced Oral and Maxillofacial Radiology Interpretation**

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 is conducted over multiple semesters and meets in two-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.

Semester Credit Hours: 2.0

**DIAG 6041 - Basic Radiation Biology**

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.

Semester Credit Hours: 1.0

**DIAG 6043 - Advanced Radiation Biology**

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.

Semester Credit Hours: 1.0

**DIAG 6016 - Pharmacotherapeutics**

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.

Semester Credit Hours: 1.0

**PATH 5121 - Biostatistics**

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.

Semester Credit Hours: 1.0

**PEDO 5026 - Orthodontics I**

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.

Semester Credit Hours: 2.0

**Special Elective Course Descriptions**

Electives are offered on a regular and/or variable basis pending availability of faculty.

**DIAG 5181 - Principles in Forensic Odontology**

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 required for the MS degree.)

Semester Credit Hours: 1.0

**DIAG 6005 - Clinical Pathology Conference**

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.

Semester Credit Hours: 1.0

**DIAG 6020 - Tumor Board**

The class meets for one hour once a week in the School of Medicine or Wilford Hall Medical Center 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.

Semester Credit Hours: 1.0

**DIAG 6021 - Medical Radiology Rotation**

Medical radiology training occurs within the dental school using image-acquired data from a medical clinic. It also occurs in the University Hospital, the VA hospital on campus, at Wilford Hall Medical Center at nearby Lackland Air Force Base, and in a private radiology clinic. Rotations to other clinics and institutions are being planned at remote sites within the USA and abroad such as in Europe, Asia and/or Africa. Cases using advanced imaging are available in the program director's extensive collection to further enhance medical radiology training.

Semester Credit Hours: 2.5 (A minimum of 7.5 semester credit hours are required. Each student must enroll in a minimum of three one-month rotations.)

**DIAG 6062 - Advanced Forensic Anthropology Lab**

The course consists of practice in the application of laboratory skills in anthropology through the facilities of the Center for Archeological Research at The University of Texas at San Antonio, the U. S. Army Central Identification Laboratory in Hawaii, the Oklahoma State Medical Examiner's Office, the Southwest Foundation for Biomedical Research, and other locations. Students are expected to develop selective skills related to their areas of interest within the field.

Semester Credit Hours: 0.5

**DIAG 6084 - Advanced Forensic Odontology Lab**

The course consists of advanced practice in the laboratory and field skills in forensic odontology in the areas of routine identifications, mass disaster preparedness and management, bite mark evidence and analysis, child abuse detection, and jurisprudence. Students are "on call" to do cases as needed and introduced to new and innovative teachings in the field. Students are allowed to develop selective skills related to their areas of interest.

Semester Credit Hours: 0.0

**DIAG 6060 - Physical Anthropology**

This lecture and laboratory course examines the morphology of the human cranial and postcranial skeleton, skeletal biology, osteogenesis, and skeletal cariation. The student will have the opportunity to become proficient in distinguishing human from nonhuman bones and in identifying bone fragments relevant to forensic investigation. The human skeleton will be examined in evolutionary perspective with emphasis on comparisons with nonhuman primates and earlier human forms.

Semester Credit Hours: 1.0

**DIAG 6019 - Chemosensory Disorders and Salivary Gland Dysfunction**

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.

Semester Credit Hours: 2.0

**DIAG 6061 - Forensic Anthropology**

A study of the application of basic anthropology to forensic situations is the focus of this course. Specific emphasis is placed on osteobiography, scene investigation, determination of the time of death, basic anthropologic variables of identification, individualization, and cause and manner of death.

Semester Credit Hours: 1.0

**DIAG 6086 - Forensic Dental Photography Lab**

This lecture and laboratory course is designed to acquaint the student with dental photography in the morgue setting, studio and darkroom procedures necessary for special photographic techniques, and the preparation of appropriate case exhibits for the courtroom.

Semester Credit Hours: 0.5

**DIAG 6083 - Forensic Odontology Lab**

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 50181 Principles in Forensic Odontology and this course will fulfill requirements for membership in the American Academy of Forensic Sciences.

Semester Credit Hours: 1.0

**DIAG 6085 - Forensic Pathology**

In this practical lecture and laboratory course, students are concerned with the medicolegal investigation of injury and death. Special emphasis is placed on the medical examiner/coroner system, criteria for death, the medicolegal autopsy, forensic toxicology, and the medicolegal autopsy report.

Semester Credit Hours: 0.0

^TOP / Adv. Dental Programs
### Endodontics – Certificate

#### Course descriptions

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Total Credits for the Certificate Program: 94.5

### Endodontics - Master of Science

#### THIRD YEAR

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**Endodontics - Course Descriptions**

Courses unique to the program in Endodontics are listed below. Offerings common to one or more programs are described under "Multidisciplinary Courses."

**ENDO 5010 - Clinical Endodontics I**
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.

**Semester Credit Hours:** 2.5

**ENDO 5011 - Clinical Endodontics I**
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.

**Semester Credit Hours:** 3.0

**ENDO 5015 - Dental Photography**
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.

**Semester Credit Hours:** 0.5

**ENDO 5017 - Clinical Seminar I**
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.

**Semester Credit Hours:** 2.0

**Cross-listed/Concurrent ENDO 5018**

**ENDO 5018 - Clinical Seminar I**
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.

**Semester Credit Hours:** 2.0

**Cross-listed/Concurrent ENDO 5017**

**ENDO 5020 - Introduction to Advanced Endodontics**
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.

**Semester Credit Hours:** 2.0

**ENDO 5052 - Endodontic Surgical Anatomy**
This course consists of a series of four 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 human head and neck prospected specimens are covered to demonstrate pertinent anatomic structures and the students practice actual surgical procedures on anterior, premolar, and molar teeth in cadaver specimens.

**Semester Credit Hours:** 1.5

**ENDO 5071 - Supervised Teaching I**
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.

**Semester Credit Hours:** 1.0

**ENDO 5073 - Literature Review I**
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.

**Semester Credit Hours:** 1.0

**ENDO 5074 - Literature Review I**
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.

**Semester Credit Hours:** 4.0

**ENDO 5075 - Literature Review I**
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.

**Semester Credit Hours:** 4.0

**ENDO 5080 - Case Presentations I**
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.

**Semester Credit Hours:** 0.5

**ENDO 5081 - Case Presentations I**
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.

**Semester Credit Hours:** 4.0

**ENDO 5082 - Case Presentations II**
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.

**Semester Credit Hours:** 4.0

**ENDO 5097 - Research**
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.

**Semester Credit Hours:** 2.0

**Cross-listed/Concurrent ENDO 5098**

**ENDO 5098 - Research**
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.

**Semester Credit Hours:** 2.0

**Cross-listed/Concurrent ENDO 5097**

**ENDO 6010 - Clinical Endodontics II**
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.

**Semester Credit Hours:** 3.0

**ENDO 6011 - Clinical Endodontics II**
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.

**Semester Credit Hours:** 3.0

**ENDO 6012 - Clinical Endodontics II**
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.

**Semester Credit Hours:** 5.0

**ENDO 6013 - Clinical Endodontics III**
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.

**Semester Credit Hours:** 2.5

**ENDO 6014 - Clinical Endodontics III**
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.

**Semester Credit Hours:** 2.0

**ENDO 6031 - Hospital Endodontics Rotation**
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.

**Semester Credit Hours:** 1.0

**Cross-listed/Concurrent ENDO 6032**

**ENDO 6032 - Hospital Endodontics Rotation**
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.

**Semester Credit Hours:** 1.0

**Cross-listed/Concurrent ENDO 6031**

**ENDO 6083 - Case Presentations II**
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.
confidence and competence.
Semester Credit Hours: 1.0

ENDO 6070 - Pulp Biology and Pain Pharmacology
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.
Semester Credit Hours: 1.5

ENDO 6071 - Supervised Teaching
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.
Semester Credit Hours: 1.0

ENDO 6073 - Literature Review II
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.
Semester Credit Hours: 1.0

ENDO 6074 - Literature Review II
The goal of this course is for the student to develop a biological understanding and scientific basis for the diagnosis and treatment of a diverse group of topics and treatment modalities that are specifically listed as content in this course. Each topic and session will have goals and objectives specific to that area so that the student will have the opportunity to be able to assimilate information. 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.
Semester Credit Hours: 4.0

ENDO 6075 - Current Literature Review
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.
Semester Credit Hours: 0.5
Cross-listed/Concurrent ENDO 6076

ENDO 6076 - Current Literature Review
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.
Semester Credit Hours: 1.0
Cross-listed/Concurrent ENDO 6075

ENDO 6077 - Current Literature Review
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.
Semester Credit Hours: 1.0

ENDO 6084 - Case Presentations II
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.
Semester Credit Hours: 4.0

ENDO 6085 - Case Presentations II
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.
Semester Credit Hours: 4.0

ENDO 6086 - Case Presentations III
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.
Semester Credit Hours: 2.0

ENDO 6087 - Case Presentations III
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.
Semester Credit Hours: 4.0
ENDO 6091 - Research
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.
Semester Credit Hours: 1.0

ENDO 6092 - Research
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.
Semester Credit Hours: 2.0

ENDO 6093 - Research
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.
Semester Credit Hours: 2.0

ENDO 6094 - Research
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.
Semester Credit Hours: 4.0
Cross-listed/Concurrent ENDO 6095

ENDO 6095 - Research
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.
Semester Credit Hours: 4.0

ENDO 6098 – Thesis
Semester Credit Hours: 4.0

^TOP / Adv. Dental Programs
### Pediatric Dentistry Course Descriptions

Courses unique to the program in Pediatric Dentistry are listed below. Offerings common to one or more programs are described under “Multidisciplinary Courses.”

**PEDO 5042 - Pediatric Dentistry I**

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.

*Semester Credit Hours: 2.0*

**PEDO 5043 - Pediatric Dentistry II**

This course is largely a continuation of lectures and seminars on the subject matter introduced in PEDO 5042 Pediatric Dentistry I, but also adds case conferences and current literature seminars.

*Semester Credit Hours: 6.0*

**PEDO 5044 - Pediatric Dentistry III**

In part, this is a continuation of some lecture and seminar topics from PEDO 5043 Pediatric Dentistry II. 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.

*Semester Credit Hours: 6.0*

**PEDO 5091 - Special Topics**

This special topics course will include advanced didactic education in pharmacology and conscious sedation accompanied with a strong clinical component. Additional clinical technique procedures, predominantly practiced for children, will be included with specific clinical cases for appropriate practice applications.

*Semester Credit Hours: 5.0*

**PEDO 5095 - Independent Study**

This course involves the selection of a topic of current interest to the practice of pediatric dentistry. Students will be required to conduct thorough exhaustive literature reviews on the topics, develop lecture and/or seminar proposals, and present an overview of the topic and teaching program to the faculty and fellow students.

*Semester Credit Hours: 4.0*

**PEDO 6045 - Pediatric Dentistry IV**

A continuation of the case conferences, current literature seminars, and pediatric grand rounds, this course also introduces practice management and topics in clinical genetics.

*Semester Credit Hours: 6.0*

**PEDO 6146 - Pediatric Dentistry V**

This course continues the case conferences, current literature seminars, and pediatric grand rounds of PEDO 6045 Pediatric Dentistry IV.
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 III**

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 5023 - Pediatric and Orthodontic Clinic IV**

The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience which 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 5024 - Pediatric and Orthodontic Clinic V**

The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience which 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 5025 - Pediatric and Orthodontic Clinic V**

The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience which 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 5051 - Pediatric Physical Diagnosis
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.
*Semester Credit Hours: 1.5

PEDO 6084 - Investigative Project
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.
*Semester Credit Hours: 1.0

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**Periodontics – Certificate**

**Course descriptions**

**FIRST YEAR**

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**Spring**

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**SECOND YEAR**

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**Spring**

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## THIRD YEAR

### Third Year Course Descriptions

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*Multidisciplinary course

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### Spring

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**Total Credits for the Master’s Degree Program**  **92.0**

*Multidisciplinary course
# Periodontics - Master of Science

## FIRST YEAR

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## SECOND YEAR

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## THIRD YEAR

**Third Year Course Descriptions**

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Periodontics Course Descriptions

Courses unique to the program in Periodontics are listed below. Offerings common to more than one program are described under "Multidisciplinary Courses."

**ANES 6081 - Anesthesia Rotation**
Semester Credit Hours: 1.5

**DIAG 6016 - Pharmacotherapeutics**
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.
Semester Credit Hours: 1.0

**GEND 5027 - Pain Control and Sedation**
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.
Semester Credit Hours: 3.5

**INTD 5013 - Interdisciplinary Course I - Peri/Pros/Endo/Orth**
This seminar brings together the residents and graduate staff from the periodontic, prosthodontic, and endodontic 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.
Semester Credit Hours: 1.0

**INTD 5020 - Dental Biomedical Core Course I**
Semester Credit Hours: 4.0

**INTD 5021 - Dental Biomedical Core Course II**
Semester Credit Hours: 1.0

**INTD 6014 - Interdisciplinary Course II - Peri/Pros/Endo/Orth**
This seminar brings together the residents and graduate staff from the periodontic, prosthodontic, and endodontic 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.
Semester Credit Hours: 1.0

**ORTH 5094 - Research Methodology I**
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.
Semester Credit Hours: 1.5

**PATH 5030 - Oral Histopathology**
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.
Semester Credit Hours: 1.0

**PATH 5035 - Oral Pathology**
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.
Semester Credit Hours: 2.0

**PATH 5121 - Biostatistics**
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.
Semester Credit Hours: 1.0

**PATH 6026 - Surgical Oral Pathology I**
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.
Semester Credit Hours: 1.0

**PATH 6027 - Surgical Oral Pathology II**
This course is a continuation of PATH 6026 Surgical Oral Pathology I. 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.
Semester Credit Hours: 1.0

**PERI 5010 - Clinical Periodontics I**
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.

**Semester Credit Hours:** 1.0
**Cross-listed/Concurrent PERI 5011/5012**

**PERI 5011 - Clinical Periodontics I**
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.

**Semester Credit Hours:** 1.0
**Cross-listed/Concurrent PERI 5010/5012**

**PERI 5012 - Clinical Periodontics II**
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.

**Semester Credit Hours:** 1.0
**Cross-listed/Concurrent PERI 5010/5011**

**PERI 5025 - Case Presentation Seminar**
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.

**Semester Credit Hours:** 0.5
**Cross-listed/Concurrent PERI 6025**

**PERI 5031 - Periodontics Lecture Series**
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.

**Semester Credit Hours:** 1.0-5.0
**Cross-listed/Concurrent PERI 6030/6031**

**PERI 5037 - Bone & Connective Tissue Biology**
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.

**Semester Credit Hours:** 0.5

**PERI 5052 - Surgical Anatomy**
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 prospection on human cadavers is presented with a strong emphasis on surgical anatomy.

**Semester Credit Hours:** 1.0

**PERI 5073 - Literature Seminars**
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.

**Semester Credit Hours:** 1.0-5.0
**Cross-listed/Concurrent PERI 6073**

**PERI 5074 - Current Literature Seminar**
Current periodontal literature published during the academic year is discussed in a seminar format.

**Semester Credit Hours:** 1.0-5.0
**Cross-listed/Concurrent PERI 6074**

**PERI 5075 - Mock Board Exams**
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.

**Semester Credit Hours:** 0.5
**Cross-listed/Concurrent PERI 6075**

**PERI 5097 - Periodontics Research**

**Semester Credit Hours:** 1.0-9.0

**PERI 6001 - Periodontic Practice Management**
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.

**Semester Credit Hours:** 0.5

**PERI 6011 - Clinical Periodontics II**
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.

**Semester Credit Hours:** 1.0-10.0

**PERI 6020 - Emergency Care Seminar**
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.

**Semester Credit Hours:** 0.5

**PERI 6025 - Case Presentation Seminar**
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.

**Semester Credit Hours:** 0.5
**Cross-listed/Concurrent PERI 5025**

**PERI 6030 - Periodontics Lecture Series**
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.

**Semester Credit Hours:** 1.0-5.0
**Cross-listed/Concurrent PERI 5031/6031**
PERI 6050 - Periodontal Medicine
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.
Semester Credit Hours: 0.5

PERI 6071 - Supervised Teaching
Semester Credit Hours: 2.0

PERI 6073 - Literature Seminars
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.
Semester Credit Hours: 0.5-5.0
Cross-listed/Concurrent PERI 5073

PERI 6074 - Current Literature Seminar
Current periodontal literature published during the academic year is discussed in a seminar format.
Semester Credit Hours: 1.0-5.0
Cross-listed/Concurrent PERI 5074

PERI 6075 - Mock Board Exams
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.
Semester Credit Hours: 0.5
Cross-listed/Concurrent PERI 5075

RESD 5044 - Occlusion & TMD
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 TMJs of their partners.
Semester Credit Hours: 0.5

Third Year Course Descriptions

Courses unique to the program in Periodontics are listed below. Offerings common to more than one program are described under “Multidisciplinary Courses.” The Master’s degree includes all courses for the Certificate program (first and second years) and the courses in the following list (third year).

INTD 6115 - Interdisciplinary Course III - Peri/Pros/Endo/Orth
This is a seminar that brings together the residents and graduate staff from the periodontic, prosthodontic, and endodontic 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.
Semester Credit Hours: 1.0

PERI 6020 - Emergency Care Seminar
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.
Semester Credit Hours: 0.5

PERI 6001 - Periodontic Practice Management
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.
Semester Credit Hours: 0.5

PERI 6011 - Clinical Periodontics II
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.
Semester Credit Hours: 1.0-10.0

PERI 6012 - Clinical Periodontics III
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.
Semester Credit Hours: 1.0-5.0

PERI 6025 - Case Presentation Seminar
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.
Semester Credit Hours: 0.5
Cross-listed/Concurrent PERI 5025

PERI 6030 - Periodontics Lecture Series
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, pathology, and clinical and surgical aspects of periodontal disease will be discussed.
Semester Credit Hours: 1.0-5.0
Cross-listed/Concurrent PERI 5031/6031

PERI 6031 - Periodontics Lecture Series
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, pathology, and clinical and surgical aspects of periodontal disease will be discussed.
Semester Credit Hours: 1.0-5.0
Cross-listed/Concurrent PERI 5031/6030
PERI 6050 - Periodontal Medicine
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.
Semester Credit Hours: 0.5

PERI 6070 - Supervised Teaching
Semester Credit Hours: 2.0

PERI 6071 - Supervised Teaching
Semester Credit Hours: 2.0

PERI 6072 - Supervised Teaching
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.
Semester Credit Hours: 2.0

PERI 6073 - Literature Seminars
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 Literature Seminar
Current periodontal literature published during the academic year is discussed in a seminar format.
Semester Credit Hours: 1.0-5.0
Cross-listed/Concurrent PERI 5074

PERI 6075 - Mock Board Exams
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.
Semester Credit Hours: 0.5
Cross-listed/Concurrent PERI 5075

PERI 6076 – Research
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.
Semester Credit Hours: 1.0-9.0
Prerequisites: admission to candidacy for the Master of Science degree

Prosthodontics – Certificate

Course Descriptions

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<th>FIRST YEAR</th>
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<td>Summer</td>
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<tr>
<td>PROS 5031 - Clinical Prosthodontics I</td>
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<tr>
<td>PROS 5015 - Concepts of Occlusion</td>
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<tr>
<td>*ORTH 5094 - Research Methodology I</td>
<td>1.5</td>
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<tr>
<td>PROS 5097 - Research</td>
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<td>*PROS 5050 - Endosseous Dental Implants</td>
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<tr>
<td>PROS 5053 - Implant Prosthodontics</td>
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<tr>
<td>*PATH 5035 - Oral Pathology</td>
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<td>*PROS 6097 – Research</td>
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<td><strong>Total Semester Hours</strong></td>
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<tr>
<th>Fall</th>
<th>Credit Hours</th>
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<tr>
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<tr>
<td>PROS 6032 - Clinical Prosthodontics II</td>
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Prosthodontics - Master of Science

Courses required for the Certificate and Master of Science are identical, with one additional required course for the master’s, PROS 6098 Thesis. Offerings, which are common to one or more programs, are described under “Multidisciplinary Courses.”

Course Descriptions

Courses required for the Certificate and Master of Science are identical, with one additional required course for the master’s, PROS 6098 Thesis. Offerings, which are common to one or more programs, are described under “Multidisciplinary Courses.”

Courses unique to the program in Prosthodontics are listed below. Offerings common to one or more programs are described under “Multidisciplinary Courses.”

PROS 5015 - Concepts of Occlusion
Various concepts of occlusion with special emphasis on the clinical application of gnathology is 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.

Semester Credit Hours: 1.0

PROS 5031 - Clinical Prosthodontics I
The objective of this course is to provide extensive clinical experience in the broad spectrum of prosthodontics on a graduated basis. Each prosthodontics student will have the opportunity to maintain a comprehensive prosthodontic practice involving fixed, removable, and implant treatment procedures.

Semester Credit Hours: 1.0–5.0

PROS 6035 - Maxillofacial Prosthodontics
This clinical course provides the opportunity to experience treating patients on the Maxillofacial Prosthetics Service. Patients with congenital and acquired defects are treated under supervision of the maxillofacial prosthodontic faculty.

Semester Credit Hours: 1.0

PROS 6043 - Clinical Geriatric Dentistry
This course offers prosthodontic residents didactic and clinical experience treating geriatric patients.

Semester Credit Hours: 0.5–5.0

PROS 5050 - Endosseous Dental Implants
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.

Semester Credit Hours: 1.0

PROS 5053 - Implant Prosthodontics
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.

Semester Credit Hours: 1.5
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.

**Semester Credit Hours:** 1.0

**PROS 6074 - Literature Seminar II**

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.

**Semester Credit Hours:** 1.0

**PROS 6076 - Literature Seminar III**

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.

**Semester Credit Hours:** 1.0

**PROS 6097 - Research**

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 programs will be expected to collect and analyze data for a thesis which must be defended as the culmination of research efforts.

**Semester Credit Hours:** 1.0-9.0

**PROS 6022 - Advanced Prosthodontics II**

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.

**Semester Credit Hours:** 1.0

**PROS 6032 - Clinical Prosthodontics II**

The objective of this course is to provide extensive clinical experience in the broad spectrum of prosthodontics on a graduated basis. Each postdoctoral student will have the opportunity to maintain a comprehensive prosthodontic practice involving fixed, removable, and implant treatment procedures.

**Semester Credit Hours:** 1.0-5.0

**PROS 6046 - Oral & Maxillofacial Surgery/Prosthodontics Patient Management Seminar**

This course is a seminar devoted to the discussion and coordination of treatments of patients under joint management of the Oral & Maxillofacial Surgery and Prosthodontics departments.

**Semester Credit Hours:** 0.5-5.0

**PROS 6047 - Oral & Maxillofacial Surgery/Prosthodontics Patient Management Seminar 3**

This course is a seminar devoted to the discussion and coordination of treatments of patients under joint management of the Oral & Maxillofacial Surgery and Prosthodontics departments.

**Semester Credit Hours:** 0.5-5.0

**PROS 6069 - Supervised Teaching**

**Semester Credit Hours:** 2.0

**PROS 6070 - Supervised Teaching**

**Semester Credit Hours:** 2.0

**PROS 6071 - Supervised Teaching**

**Semester Credit Hours:** 2.0

**PROS 6073 - Literature Seminar II**

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.

**Semester Credit Hours:** 1.0

**ORTH 5094 - Research Methodology I**

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.

**Semester Credit Hours:** 1.5

**PATH 5035 - Oral Pathology**

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.

**Semester Credit Hours:** 2.0

**PATH 5121 - Biostatistics**

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.

**Semester Credit Hours:** 1.0

**INTD 5013 - Interdisciplinary Course I - Peri/Pros/Endo/Orth**

This seminar brings together the residents and graduate staff from the periodontic, prosthodontic, and endodontic 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. 
Semester Credit Hours: 1.0

INTD 5020 - Dental Biomedical Core Course I
Semester Credit Hours: 4.0

INTD 5021 - Dental Biomedical Core Course II
Semester Credit Hours: 1.0

INTD 6014 - Interdisciplinary Course II - Peri/Pros/Endo/Orth
This seminar brings together the residents and graduate staff from the periodontic, prosthodontic, and endodontic 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.
Semester Credit Hours: 1.0

PROS 5049 - Overview to Maxillofacial Prosthodontics
This course introduces the graduate student to the discipline of maxillofacial prosthetics. Emphasis is placed on treating patients requiring prosthetic devices in the head and neck area due to surgery or trauma.
Semester Credit Hours: 0.5

ENDO 5060 - Current Concepts in Endodontics
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.
Semester Credit Hours: 1.0

RESD 6021 - Advanced Dental Materials
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.
Semester Credit Hours: 3.5

PROS 6098 – Thesis
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.
Semester Credit Hours: 1.0-9.0
Prerequisites: admission to candidacy for the Master of Science degree
**Multidisciplinary Courses**

The following are basic science and multidisciplinary courses common to the curriculum of two or more programs:

**DIAG 5050 - Fundamentals of Dental Radiography**

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.

*Semester Credit Hours: 1.0*

**ENDO 5071 - Supervised Teaching I**

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.

*Semester Credit Hours: 1.0*

**DIAG 6071 - Supervised Teaching**

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.

*Semester Credit Hours: 1.0*

**ENDO 6071 - Supervised Teaching**

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.

*Semester Credit Hours: 1.0*

**DIAG 6005 - Clinical Pathology Conference**

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.

*Semester Credit Hours: 1.0*

**ENDO 6098 - Thesis**

*Semester Credit Hours: 4.0*

**ENDO 5060 - Current Concepts in Endodontics**

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.

*Semester Credit Hours: 1.0*

**GEND 5027 - Pain Control and Sedation**

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.

*Semester Credit Hours: 3.5*

**INTD 5067 - Introduction to Bioinformatics and Computational Biology**

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.

*Semester Credit Hours: 2.0*

**INTD 6070 - Teaching Skills for Dental Educators**

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.

*Semester Credit Hours: 1.0*

**ORTH 5094 - Research Methodology I**

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.

*Semester Credit Hours: 1.5*

**PATH 5030 - Oral Histopathology**

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.

*Semester Credit Hours: 1.0*
PATH 5035 - Oral Pathology
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.
Semester Credit Hours: 2.0

PATH 6026 - Surgical Oral Pathology I
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.
Semester Credit Hours: 1.0

PATH 6027 - Surgical Oral Pathology II
This course is a continuation of PATH 6026 Surgical Oral Pathology I. 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.
Semester Credit Hours: 1.0

PERI 5052 - Surgical Anatomy
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.
Semester Credit Hours: 1.0

PROS 5050 - Endosseous Dental Implants
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.
Semester Credit Hours: 1.0

RESD 5095 - Research Methodology II - Development of a Thesis Proposal
This course is a continuation of ORTH 5094 Research Methodology I.
Semester Credit Hours: 0.5

SELC 7090 - Air Abrasion in Dentistry
This is a course on the uses of air abrasion technology. It is designed to better prepare students to use the technology in the clinic.
Semester Credit Hours: 0.0
**Advanced Education in General Dentistry (AEGD)**

The Advanced Education in General Dentistry (AEGD) program is designed to offer intensive clinical and didactic training in comprehensive care of the dental patient with complex problems. Administered by the Department of General Dentistry, the AEGD involves the direct delivery of advanced dental care in each of the dental specialties through the Health Science Center’s dental clinic as well as extramural sites. AEGD residents work closely with residents of the General Practice Residency program and share a common clinic facility, clinical faculty, and some didactic courses. The AEGD and General Dentistry Residency programs are designed to complement each other as they share similar but differing objectives.

The curriculum is intended to provide the scientific basis for dental practice and to develop the residents’ skill in lecture preparation and presentation. In the year of training, the resident spends more than 300 clock hours in seminar, lecture, and presentation courses that cover each of the specialty areas of dentistry. Courses are designed at the postdoctoral level to complement the clinical experiences residents will encounter and the treatments they will be providing. Residents participate as educators/audience for presentations that are required in many of the courses. Clinical faculty of the AEGD are integrally involved in the major portion of the didactic component as course directors and lecturers. In some courses, AEGD residents participate alongside specialty students. Residents are afforded time to attend continuing education offerings at the Health Science Center.

Clinical training begins in July. Patient assignment to residents is closely managed to assure each resident a broad mix of treatment experiences. Comprehensive treatment of complex cases is required of each resident, although residents are also allowed to seek assignment of patients requiring treatment appropriate to her/his specific educational needs or aims. For 35 hours each week, residents provide care in the Advanced General Dentistry Clinic to patients; a substantial proportion of the patients are medically, mentally, and/or physically compromised. Four-handed dentistry is stressed as are other aspects of dentistry necessary for modern private practice. Clinical faculty are general dentists from the Department of General Dentistry, each of whom has received postdoctoral training in general dentistry. Specialty faculty fill a major role, providing consultation and supervision as needed. The specialty residency clinics serve as a referral both to and from the Advanced General Dentistry Clinic. AEGD residents provide emergency call service to patients of dental students, and the Advanced General Dentistry Clinic. Further clinical experiences are gained through 16 days of rotations at extramural sites.

**General Practice Residency**

The General Practice Residency program offers graduate dentists an opportunity to become broadly competent general practitioners capable of providing comprehensive, state-of-the-art dental care. To accomplish this goal, clinical, educational, and research objectives are addressed. Dental care for the medically compromised patient serves as the framework upon which clinical training is based. Such patients include organ transplant recipients, chemotherapy patients, prosthetic cardiac valve candidates, and individuals with a variety of other medical complications. Treatment of these patients is offered in both inpatient and outpatient settings, with emphasis on the management of their medical problems.

In the hospital environment, the residents’ responsibilities include consultations, treatment of inpatients, operating room dentistry, and emergency room dentistry. Complementing this exposure, the outpatient experience allows residents the opportunity to advance their knowledge and clinical skills in all the dental specialties, with continued emphasis on comprehensive care.

Research opportunities are available within the program and throughout the Health Science Center to supplement the clinical exposure. Resident participation in an ongoing or new clinical research project is encouraged. This experience is provided to give residents an appreciation of research design, data analysis, and the publication process. In addition, this exercise is designed to equip residents with the expertise required to judge the merits of future trends and treatment techniques. Educational experiences are comprised of lectures, seminars, and case presentations given by the residents. Residents are required to develop these presentations (to include outline, bibliography, and audiovisual aids) from literature reviews. The experience is intended to acquaint residents with the organization, preparation, and delivery of a lecture/seminar.

Outpatient dentistry is performed in the Advanced General Dentistry Clinic, with each resident assigned a group of comprehensive care patients. The clinic is comprised of 16 operators, panoramic and intraoral radiographic capabilities, a waiting room, secretarial office, resident office, break room, and dental laboratory. Oral hygiene care is provided by dental hygienists. The clinic is equipped for both intravenous and inhalation sedation, and complete laboratory facilities are proximate. A small reference library is supported by the exceptionally comprehensive Health Science Center Library. Required rotations include three weeks in general anesthesia, two weeks in the Emergency Center, and two months in the dental clinic at University Hospital.

Applications must be submitted before the deadline, October 15 each year, for the program beginning July 1 and ending June 30 of the succeeding year. Applicants must hold a degree from an accredited North American dental school. The GPR
program participates in the Postdoctoral Application Support Service (PASS) (optional) and in the Postdoctoral Dental Matching Program (mandatory). Program applications may be obtained from the Postdoctoral Division of the Department of General Dentistry in the Dental School and submitted directly to the GPR program. Additional information about this residency is available on the division Web site at http://www.dental.uthscsa.edu/educprog/advgpr.html. All residents in the program receive a stipend.

^TOP / Adv. Dental Programs

Dental Public Health Residency

The Department of Community Dentistry offers a one-year, full-time or a two-year, part-time Residency in Dental Public Health. The program, which is accredited by the Commission on Dental Accreditation adheres to the guidelines of the American Board of Dental Public Health and is designed to allow dentists with the Master of Public Health degree or its equivalent to complete the educational requirements for Board Certification as a specialist in Dental Public Health. A stipend and travel costs for South Texas research projects may be available to U.S. citizens and permanent residents.

Public health dentists prevent and control oral diseases and promote oral health through organized community efforts. They are concerned with dental education of the public, with applied dental research, and with administration and operation of group dental care programs, both public and private. The Institute of Medicine has defined the public health mission as “fulfilling society’s interest in assuring conditions in which people can be healthy.” Three broad functions to achieve this are:

- Assessment—the regular collection and dissemination of data on oral health status, community needs, and epidemiologic studies.
- Policy—the use of the base of scientific knowledge in policy decisions affecting the public’s oral health.
- Assurance—of constituents that services necessary to achieve predetermined goals for oral health are available, either by providing them, by assisting and funding others, or by regulation.

Public health dentists and dental hygienists are employed in various health agencies at all levels of government, in the insurance industry, in dental and hygiene schools, in schools of public health, in community health centers, in the uniformed services, and in the health industry as consultants.

We encourage dentists to complete the MPH degree at an accredited School of Public Health including The University of Texas SPH programs in San Antonio, Brownsville, El Paso, Dallas, and Houston, and at the Texas Department of Health-Austin, as well as other schools of public health in Texas, such as University of North Texas-Fort Worth and TAMU School of Rural Public Health-Bryan, Texas. Residency and distance MPH programs are also offered by other accredited schools of public health (http://www.ceph.org/list.htm). The MPH degree can be completed as a full-time student or as a part-time student while maintaining employment. Likewise, this Residency will admit dentists with the MPH degree on a full-time or half-time basis, maintaining continuity of employment. Special educational provisions are made for distant residents and they will conduct their research projects on topics valuable to their employing agencies.

In this program, half of the resident’s time is concerned with design, implementation, analysis, interpretation, and reporting of two research projects. One third of the time is devoted to advanced seminars in Prevention of Oral Disease and Financing of Dental Care. Program Planning and Administration is addressed both through seminars and agency visits; other field, clinical, and teaching experiences are offered. Dental graduates with superior career attainments in dental public health may be eligible to combine the MPH degree at The University of Texas School of Public Health, San Antonio Program and this residency, but separate applications to each program are required.

The Department of Community Dentistry has programs in epidemiology, oral disease prevention and health promotion, health services, nutrition, cariology, and sialochemistry, and cooperates in several school, mobile, and community health center clinical primary care programs. Other resources to the program include the Texas Department of Health, Bureau of Dental Health, the San Antonio Metropolitan Health District, and The University of Texas School of Public Health, San Antonio Program.

Application deadline is March 31 for the program commencing September 1 each year and ending on August 31 the following year. Further information is available from the Department of Community Dentistry of the Dental School.

Application forms for qualified applicants — those dentists holding or completing the MPH degree or equivalent — are available from the Department of Community Dentistry. The following Web site has further information: http://dental.uthscsa.edu/.

^TOP / Adv. Dental Programs

Oral and Maxillofacial Surgery Residency

The Oral and Maxillofacial Surgery Residency, a six-year medical degree/certificate program, opens two positions each year. The course of study is designed to integrate the advanced biological sciences into progressive clinical training. Additionally, opportunities and facilities are available for the resident to pursue clinically relevant research. Every resident is required to have a research project published and presented at a national meeting prior to receiving a certificate of residency training.

In the clinical portion of the training program, 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, and interpretation of laboratory data. Other activities that are used to supplement hospital clinical oral and maxillofacial surgery experience and rotations include a dental school assignment, emergency room duty, special clinics, conferences, and teaching rounds. There is an excellent balance between inpatient admissions and outpatient visits encompassing dentoalveolar surgery; maxillofacial trauma; pathology; and orthognathic, prosthodontic, temporomandibular, and reconstructive surgery. Approximately 450 hospital admis-
sions and 10,000 outpatient procedures are performed annually through the oral surgery clinic at University Hospital, South Texas Medical Center.

While assigned to the Oral and Maxillofacial Surgery service, residents rotate for six months in the Dental School’s outpatient surgery suite. The suite is a fully equipped outpatient operating facility with general anesthesia capabilities. The resident participates in an extensive number and variety of cases that are beyond the capability of undergraduate dental students. These cases include, but are not limited to, impactions, tori, biopsies of oral lesions, implants, scar revision, osteotomies, and fractures. An opportunity for clinical teaching experience with dental students and other dental specialties is provided also.

In the first year, the resident is enrolled in the School of Medicine (pathophysiology year) for approximately 10 months. When he/she is not in class, the resident participates in oral and maxillofacial surgery rotations. The second year is comprised of clinical clerkships (49 weeks) which are part of the medical curriculum. During this time, the resident/medical student is assigned to medical and surgical rotations. As time permits, he/she also attends conferences and rounds with the oral and maxillofacial service.

In the third year, as a junior resident in oral and maxillofacial surgery, the resident is given increasing clinical responsibility and participates in major surgical procedures. This year is divided between assignments at the nearby Audie L. Murphy Memorial Veterans Hospital (“V. A.” Hospital) and University Hospital, South Texas Medical Center. Four to six months of inpatient anesthesia is also scheduled this year. Upon successful completion of School of Medicine requirements, the resident is awarded a Doctor of Medicine degree at spring commencement.

During the fourth-year general surgery internship, residents rotate on general surgery services for an opportunity to learn basic surgery techniques and surgical management — particularly pre- and postoperative care. This experience includes general surgery, thoracic surgery, vascular surgery, head and neck surgery, and neurosurgery. Following the successful completion of the internship, the resident is eligible to take the state licensure examination in medicine.

In the fifth year, the resident receives additional training in oral and maxillofacial surgery, progressively receiving more and more complex cases. In the fifth year, residents are routinely scheduled to work side by side with senior residents and teaching staff on all major surgeries.

Serving as chief resident in the Oral and Maxillofacial Surgery Service during the sixth year of the program, the resident has increasing latitude for independent action commensurate with her/his knowledge and skills. In addition to performing all aspects of oral and maxillofacial surgery, the resident is responsible for running the oral and maxillofacial surgery services at the Audie L. Murphy Memorial Veterans Hospital and University Hospital.

Each resident is required to participate in research activities during training. While clinical research projects predominate, there is opportunity for basic science research as well. The research effort is expected to result in papers submitted to journals for publication and in abstracts for presentation at professional meetings.

School of Medicine tuition and fees for the second, third, and fourth year of the program are approximately $7,000 per year.

Additional information about this residency is available from the Division of Oral and Maxillofacial Surgery, Department of Surgery.

Orthodontics

The Department of Orthodontics offers a 35-month residency for advanced training in orthodontics and dentofacial orthopedics. This program is designed to offer a broad spectrum of clinical and didactic experience in the field. Certificate-only programs are available in both Pediatric Dentistry and Orthodontics; however, a master’s degree option for students is available in basic sciences and public health. The training program will meet the formal requirements for eligibility to take the phase II and phase III portion of the American Board of Orthodontics. For more information call 210-567-3500 or -3510.
## Advanced Dental Education
### Academic Calendar 2009–2010

#### Fall 2009

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Category</th>
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<tbody>
<tr>
<td><strong>Friday, May 01, 2009</strong></td>
<td>Web Regular Registration Begins</td>
<td>All</td>
</tr>
<tr>
<td><strong>Tuesday, June 30, 2009</strong></td>
<td>Web Regular Registration Ends</td>
<td>All</td>
</tr>
<tr>
<td><strong>Wednesday, July 01, 2009</strong></td>
<td>Web Add/Drop/Late Registration Begins</td>
<td>All</td>
</tr>
<tr>
<td><strong>Tuesday, August 18, 2009</strong></td>
<td>Web Add/Drop/Late Registration Ends</td>
<td>All</td>
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<tr>
<td><strong>Monday, August 24, 2009</strong></td>
<td>Term Begins (Official 1st Class Day)</td>
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<tr>
<td><strong>Tuesday, September 01, 2009</strong></td>
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<td><strong>Friday, November 27, 2009</strong></td>
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<td><strong>Friday, December 18, 2009</strong></td>
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<td>Graduating Students</td>
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<tr>
<td><strong>Saturday, December 19, 2009</strong></td>
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#### Spring 2010

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<td><strong>Sunday, November 01, 2009</strong></td>
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<td><strong>Monday, November 30, 2009</strong></td>
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<tr>
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<td><strong>Tuesday, December 29, 2009</strong></td>
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<tr>
<td><strong>Monday, January 04, 2010</strong></td>
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<td><strong>Monday, January 18, 2010</strong></td>
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<td><strong>Friday, April 23, 2010</strong></td>
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<td><strong>Wednesday, May 19, 2010</strong></td>
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<td><strong>Thursday, May 20, 2010</strong></td>
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<td>MS Students</td>
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<tr>
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<tr>
<td>Date</td>
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<tr>
<td>Wednesday, June 30, 2010</td>
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The Graduate School of Biomedical Sciences (GSBS) was established in 1972 and currently hosts doctoral programs in Biochemistry, Biomedical Engineering, Cellular and Structural Biology, Microbiology and Immunology, Molecular Medicine, Nursing, Pharmacology, Physiology, and Radiological Sciences. Masters degrees are offered in each of these disciplines as well as in several areas of oral health sciences (Dental Diagnostic Science, Endodontics, Periodontics, and Prosthodontics), Health Professions (Clinical Laboratory Sciences and Dental Hygiene) and Clinical Investigation. These programmatic vehicles 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. A compelling aspect of graduate education in a health science center environment is the opportunity for graduate students to interface with health professionals with diverse technological and conceptual capabilities and perspectives in the biomedical sciences. The proof of accomplishment or enduring value of any educational process must be accounted 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 have, during the past three and one-half decades, achieved outstanding success in their educational mission of preparing professional scientists who function well in academic, industrial, and government sectors. Our educational and research faculty are drawn from all five schools of The UT Health Science Center San Antonio. More than 300 faculty members from the Graduate School of Biomedical Sciences are training approximately 350 students in our combined graduate programs. There is a diversity of talent, but a unity of purpose in teaching and mentoring students in an exciting array of interdisciplinary and discipline-based fields of study and research. The academic programs offered by the GSBS are designed to provide a fundamental foundation of knowledge and scientific inquiry for our graduate students to ultimately become independent scientists and thinkers.

Programs

The University of Texas Graduate School of Biomedical Sciences at San Antonio offers graduate programs in the biomedical sciences leading to the Doctor of Philosophy degree in the Integrated Multidisciplinary Graduate Program (effective fall 2008 semester), Molecular Medicine, and Radiological Sciences and a Master of Science degree in Cellular & Structural Biology, Physiology, and Radiological 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. One very special advantage of our graduate programs is that we operate in a prominent academic health science university 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. (Students who matriculated before Fall, 2008 may be enrolled in doctoral

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Additionally, graduate programs emphasizing the development of professional competence are offered in Nursing, Pharmacy, Dentistry, Medicine, and Health Professions. The graduate program leading to the Master of Science in Nursing and Doctor of Philosophy degrees are conducted by the faculty of the Health Science Center’s School of Nursing and administered through the Graduate School of Biomedical Sciences. Postdoctoral certificate and Master’s degree programs in Endodontics, Periodontics, Prosthodontics, and Dental Diagnostic Science are offered under the joint auspices of the university’s Dental School and the Graduate School of Biomedical Sciences. A Master’s program in Clinical Investigation is designed for interested selected graduate students and health care professionals in the design and conduct of clinical studies. A Master of Science and Doctoral Program in Biomedical Engineering is jointly offered by the Graduate School of Biomedical Sciences at the Health Science Center and the Graduate School at the University of Texas at San Antonio (UTSA). The program leading to the Doctor of Pharmacy degree is jointly administered by the College of Pharmacy of the University of Texas at Austin and the Graduate School of Biomedical Sciences. Graduate programs in Health Professions disciplines (Dental Hygiene and Clinical Laboratory Sciences) are administered by the Graduate School of Biomedical Sciences. Detailed information about these programs can be found in the schools respective section in this Catalog. In addition, detailed information about each of these graduate programs can be found in the Graduate School of Biomedical Sciences Applicant Viewbook.

Each program is supervised by a Committee on Graduate Studies (COGS) composed of members of the graduate faculty of that program. An exception is the Integrated Multidisciplinary Graduate Program, and its governance is described in its respective section of this Catalog. 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. The Chair of the Committee on Graduate Studies is the administrative head of each program. The 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. In several of the programs, one graduate faculty member serves as both Graduate Advisor and Chair of the COGS. The 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.

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. These include such matters as general academic requirements for admission to graduate study and to candidacy, for continuation of studies, and awarding of a degree; standards of student professional conduct; grading systems; graduate program review; and criteria for thesis and dissertation research, its supervision, and its defense. Each COGS is responsible to the Graduate Faculty Council and submits recommendations on various graduate program matters, including the granting of a degree, to the Council for review and action.

The Dean of the Graduate School of Biomedical Sciences 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 Associate Deans of the Graduate School, the Associate Dean for Graduate Nursing Program, the Assistant Dean(s) of the Graduate School, and Registrar. The voting members of the Council consist of the COGS chairs of the programs in Biochemistry, Biomedical Engineering, Cellular and Structural Biology, Clinical Investigation, Microbiology and Immunology, Molecular Medicine, Nursing, Pharmacy, Pharmacology, Physiology, and Radiological Sciences and one faculty representative each from the graduate programs in Dentistry and Health Professions. A student representative can be elected from each of the following graduate student constituencies: Graduate Student Association, dentistry, nursing, and health professions to serve as nonvoting members of the Council.
Committees on Graduate Studies (COGS)

<table>
<thead>
<tr>
<th>Biomedical Sciences Programs</th>
<th>Physiology</th>
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<tr>
<td>Biochemistry</td>
<td>James Nelson, PhD</td>
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<td>Chair and Graduate Advisor</td>
<td>Chair and Graduate Advisor</td>
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<tr>
<td>Biomedical Engineering</td>
<td>Geoffrey Clarke, PhD</td>
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<tr>
<td>Chair and Graduate Advisor</td>
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<tr>
<td>Cellular &amp; Structural Biology</td>
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<td>Clinical Investigation</td>
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<td>Pharmacology</td>
<td>William Clarke, PhD</td>
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<tr>
<td>Chair and Graduate Advisor</td>
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</table>

Application

Students interested in the Ph.D. programs in the Integrated Multidisciplinary Graduate Program, Molecular Medicine or Radiological Sciences and M.S. programs in Cellular & Structural Biology, Clinical Investigations, Dental Sciences, Physiology, or Radiological Sciences, apply online at http://apply.embark.com/grad/UTHSCSA.

Students interested in applying to graduate programs in the School of Health Professions or the School of Nursing apply through the Texas Common Application at http://www.applytexas.org.

Students interested in the Biomedical Engineering program apply through UTSA at http://engineering.utsa.edu/BME_program/index.html.

Non-Degree Students

An individual who wishes to enroll in courses presented in the Graduate School of Biomedical Sciences without entering a

Information on the application deadlines for the different graduate programs can be found in the Applicant Viewbook of the Graduate School of Biomedical Sciences.

Admissions

Requirements for admission to graduate programs are detailed in the Applicant Viewbook of the Graduate School of Biomedical Sciences.

Satisfactory scores on the Graduate Record Examination (GRE) General (Aptitude) Test are desirable. Although a minimal score is not required, program-specific competitive scores are needed for admission. For example, the competitive score for admission to the Integrated Multidiscipline Graduate Program is 1200. Individual programs may prefer higher minimum scores. Scores on GRE tests taken more than five years prior to the date of application are not acceptable.

Applicants from countries where English is not the native language are also required to submit scores on the Test of English as a Foreign Language (TOEFL). A minimum score of 560 is required on the paper test or 68 on the Internet-based test. (With the exception of the School of Nursing, whose minimum Internet-based test score will be 83). Scores on TOEFL tests taken more than two years prior to the date of application are not acceptable.

In lieu of a GRE score, applicants to the Clinical Investigation program must provide proof of a degree in medicine, dentistry, allied health science, or evidence of concurrent enrollment in the Graduate School of Biomedical Sciences.

For students applying to the MD/PhD program, competitive scores from the Medical College Aptitude Test (MCAT) may be substituted for the GRE.

For students applying to the DDS/PhD program, competitive scores from the Dental Aptitude Test (DAT) may be substituted for the GRE.

For students applying to the Dental Hygiene program and the Nursing doctoral program, satisfactory scores from the Millers Analogy Test (MAT) may be substituted for the GRE.

Scores on the MCAT, DAT, and MAT taken more than five years prior to the date of application are not acceptable.

As part of the application process, applicants to all programs will be required to provide authorization for a security background and sanction check to be performed.

Non-Degree Students

An individual who wishes to enroll in courses presented in the Graduate School of Biomedical Sciences without entering a
degree program must apply for admission as a Non-degree Student. The basic requirements for such admission are the same as those for degree students, except letters of recommendation and the GRE 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 application. Non-degree Students must receive approval of registration each semester by the Dean of the Graduate School and by the instructor of each course, maintain a grade point average of at least a B (3.0 in 4.0 system) in courses taken as a Non-degree Student, and maintain a maximum course load of nine semester hours in fall or spring semesters and six semester hours in summer session. In exceptional circumstances, an individual who is under consideration for admission to a degree program in the Graduate School may be permitted to register for a greater course load, with the concurrence of the Graduate Advisor of the degree program concerned. In general, students may not register as Non-degree Students 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 admitted subsequently 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 policies for Non-degree Students are the same as those for degree-seeking students. Non-degree Student status will not be granted to premedical students for the purpose of taking School of Medicine courses. International students currently residing abroad should consult with the immigration office prior to making application as a non-degree student. In most instances, only degree-seeking applicants are eligible to apply for the required visa status to initiate study abroad.

Dual Degree Programs

Dual degree programs of study provide a mechanism for students to obtain a Ph.D. degree in addition to an M.D. or D.D.S. degree at The UT Health Science Center at San Antonio. The purpose of these programs is to offer students the opportunity to pursue a course of study to become clinician-scientists who have not only depth of knowledge in clinical medicine or dentistry and in a basic science discipline, but also experience in research planning and execution. Students who take advantage of these programs have the opportunity to become scientists who are exceptionally qualified to apply specialized research competence to the resolution of clinical problems.

Those wishing to obtain both a professional degree and a graduate degree must satisfy the entrance requirements of both the School of Medicine or Dental School and the Graduate School of Biomedical Sciences. At this time, admission to each school is accomplished separately. MCAT or DAT scores may be used in lieu of GRE scores in these programs.

Through the interdigitation of the academic curricula in the professional school and the graduate school and of laboratory research for the dissertation, requirements for the dual degrees can be accomplished in a timely manner. In every instance, a specific graduate program or schedule shall be planned between the student, the appropriate Committee on Graduate Studies of the Graduate School, and the director of the respective dual degree program, who in turn will coordinate curricular issues with the deans’ offices of the participating schools.

Additional information about dual degree programs is available from the Dean’s office or the Graduate School.

A combined MD Residency/PhD program is offered through Radiological Sciences. Physicians may complete their residency in radiology, psychiatry, or radiation oncology concomitant with completing requirements for a Ph.D. degree in Radiation Biology that includes a training track in Human Imaging. Students in this program study and perform research within dedicated groups of medical physicists, biomedical imaging specialists, and biomedical researchers from specialties using imaging as a research tool. For more information, visit the Web site http://radsci.uthscsa.edu/index.php/Human_Imaging.

Requirements and Regulations

A student enrolled in the Graduate School of Biomedical Sciences 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 or personal emergency. 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.

For student employees, refer to policy 4.3.5 in the Handbook of Operating Procedures.

Residence Required for Graduation

Each doctoral student must spend a minimum of two full 16-week semesters, or the equivalent, as a full-time student in residence at The UT Health Science Center at San Antonio Graduate School of Biomedical Sciences. A candidate for the M.S. degree must be registered in the thesis course for at least one term; a candidate for the Ph.D. degree must be registered in the dissertation course for at least two terms. The residence requirement is based on the premise that the scholarship and proficiency necessary for achievement of a graduate degree in the biomedical sciences are best acquired through endeavors devoted wholly to study and research in the university environment.
Time Limits

The median time for completion of the M.S. degree and the Ph.D. degree is 3 years and 6 years, respectively, in the Graduate School of Biomedical Sciences.

Ph.D. Degree. Each program has a written policy on time-to-degree 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 that will guide the student.

Credit Hour Requirements

The majority of the total semester credit hours taken for an M.S. or Ph.D. degree must be earned at the Health Science Center. Students are admitted to an MS, PhD, MD/PhD, DDS/PhD, or MD residency/PhD degree program. A minimum of 30 semester credit hours is required for an M.S. degree, and a minimum of 72 semester credit hours is required for a Ph.D. degree. A minimum of 72 semester credit hours is required for the Ph.D. component of the dual degree programs. Specific curriculum requirements vary depending on individual programs.

Ph.D. Degree. 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 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. With the exception of dual degree programs, all work for the M.S. degree is ordinarily done at the Health Science Center’s Graduate School of Biomedical Sciences.

A maximum of six semester hours of graduate course work from another institution may be applied for credit toward the Master’s 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 graduate programs in Nursing should consult the “Transfer of Credit” policies under the General Policies for Graduate Nursing Program in the School of Nursing section.

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 course work. 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

Demonstration of proficiency in a foreign language is not required for either the M.S. or Ph.D. degree.

Ethics Course Requirement

All doctoral students must take the course INTD 6002 - Ethics in Research or its equivalent, as a requirement for graduation. Master of Science students are strongly encouraged to take the INTD 6002, 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).

Quantity-of-Work Rule

Full-time graduate students may be awarded stipends as teaching or research assistants when funds are available. Student stipends funded from federal sources are governed by federal regulations. Full-time students are discouraged from taking employment; stipends serve as scholarships to meet financial need.

There may be circumstances under which part-time graduate students desire gainful employment within the Health Science Center (or full-time employees desire to pursue part-time graduate studies), and the following guidelines should apply:

Within funds 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 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 committee 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 to provide proper salary rate information.
Graduate Hours Registered for | Maximum Hours Per Week Permitted to Work
--- | ---
15 | 0–0.00%
14 | 3–7.50%
13 | 6–15.00%
12 | 10–25.00%
11 | 13–32.50%
10 | 16–40.00%
9 | 20–50.00%
8 | 23–57.50%
7 | 26–65.00%
6 | 30–75.00%
5 | 33–82.50%
4 | 36–90.00%
3 | 40–100.00%
2 | 40–100.00%
1 | 40–100.00%

*Present policy permits an employee to enroll in a 3-semester-hour course without reduction in pay.

**Registration**

The Registrar’s Office will announce and provide the registration process to all students, department chairs, Committee on Graduate Studies (COGS) Chairs, and their assistants prior to the start of each semester. For individual registration concerns, confer with your program’s Committee on Graduate Studies (COGS) Chair.

A student must register each semester and summer session 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**

Students are responsible for paying their tuition and fees by the census date (which is always the 12th class day of the spring and fall semesters, or the 7th class day of the summer term) of each semester for which they are registered. For details on consequences of non-payment of tuition and fees, see [Student Enrollment Policy](#) and [Tuition & Fees](#). International students must also contact the Office of International Services. Additional actions also may be taken by the Graduate School. They are:

- Discontinued enrollment in the graduate program that results in termination with loss of pay, benefits, and privileges. This also will disrupt research activities.
- Necessity to re-apply for admission for the following semester.
- A bar against readmission for the student.
- Initiation of loan repayments, if a student has loans.
- Potential loss of visa status and deportation for international students.
- Withholding of the student’s grades and official transcript.
- Withholding of a degree to which the student otherwise would be entitled.

**Semester Credit Hours**

One semester hour of credit earned through:

1. Lecture clock hours: 15 to 18 (normally 16). Conference hours are equivalent to lecture hours.
2. Laboratory clock hours: 45 to 60 (normally 48).

A course, for example, has a credit value of three semester hours if the class meets for three lecture hours per week in the 17-week fall or 18-week spring semesters, or meets for four lecture hours per week in the 12-week summer session.

A course with two lecture hours and six laboratory hours each week for one semester has a credit value of four semester hours.

**Full-Time Status**

The minimum half-time course load for a semester is 4.5 semester hours and 3.0 in the summer. The minimum full-time course load for a semester is 9 semester hours and for a summer session is 6 semester hours. The maximum load is individually determined by the student’s faculty advisor and the Committee on Graduate Studies involved. If a student is employed as a teaching assistant, graduate assistant, research assistant, or tutor, the course load may be reduced correspondingly.

Doctoral students must be enrolled for a minimum of 9 semester credit hours each fall and spring semester, and 6 semester credit hours each summer term, in order to be considered full-time doctoral graduate students.

Master’s students must be enrolled for a minimum of 6 semester credit hours each fall and spring semester, and 3 semester credit hours each summer term, in order to be considered full-time master’s graduate students.

**Adding Courses**

Students may add courses during official add days as designated by the Registrar’s Office each semester. Students are not permitted to add classes to their schedules after the census date, which is always the 12th class day of the spring and fall semesters, or the 7th class day of the summer term.

**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.
Transfer of Credit

Credit for coursework taken at another institution may be transferred if the student submits a Request for Transfer of Credit form available in the Graduate School Dean's Office. The same procedure should also be used to request transfer of credit from other schools within the Health Science Center. 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 the graduate programs in Nursing should consult the Processes for Transferring of Courses policies under the Graduate Program Policies for the Graduate Nursing Program.

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 the Ph.D. programs are required to fulfill a minimum of 72 semester credit hours of coursework. 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.

Registration for Thesis

Students in M.S. programs may register for the Thesis course XXXX 6098 where XXXX represents one of the following: BIOC, CLS, CSBL, DENH, DIAG, ENDO, MEDI, MICR, MMED, NURS, ORTO, PERI, PHAR, PHYL, PROS, or RADI. 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.

A candidate for the M.S. degree must register for the thesis course for at least one term.

Registration for Dissertation

Students in Ph.D. programs may register for the Dissertation course XXXX 7099 where XXXX represents one of the following: BIOC, CSBL, MICR, MMED, NURS, ORTO, PHAR, PHYL, or RADI. 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;
2. Approval of the dissertation research proposal by the Committee on Graduate Studies of the program and the Dean;
3. Approval of the membership of the candidate’s Supervising Committee by the Committee on Graduate Studies of the program and the Dean.

A candidate for the Ph.D. degree must register for the Dissertation course for at least two terms. Only one of the terms may be a summer session.

Registration for Final Term

It is a requirement that a student be registered for the semester or summer session in which he or she graduates.

Final Credit Hours

A student in her/his final semester or summer session registering only for a thesis or dissertation 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 hours for which he/she registers.

A student may register for final credit hours only once during her/his degree program. “Request for Designation of Final Hours” forms are available in the Registrar’s Office or on the Student Services Web site at http://studentservices.uthscsa.edu/GI_forms.aspx.

International Students

Because of requirements dictated by certain types of visas, international students must consult with their COGS Chair prior to registering for final hours.

Any student wishing to enroll in Final Hours must submit a completed “Request for Designation of Final Hours” form to their COGS Chair for approval. Once programmatic approval is given, the form is to be submitted to the Registrar’s Office for official enrollment in the course.

Registration at Other U. T. System Components

A student who has been formally admitted to a graduate program may apply to take courses at any of the other components of The University of Texas System. Consent of the Committee on Graduate Studies and the Dean of the Graduate School must be obtained before the student may apply to another component for permission to register to take courses.

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. No 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 to the Associate Dean of the Graduate School for admission as a Non-Degree Student.

**Continuation, Probation, and Dismissal**

Continuation in the graduate programs is dependent upon three requirements:

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. 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 graduate student who has been dismissed may be readmitted for further graduate study by petition from the Committee on Graduate Studies of her or his graduate program. The request will be considered by the Graduate Faculty Council and, according to the recommended action, will be approved or disapproved by the Dean. 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.

**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 Registrar’s Office, Room 319L MED), submit the form for signature to the COGS Chair and the Graduate School dean, 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 or summer session (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 or summer session, the appropriate grading symbol 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.

**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

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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.

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. Grades for Thesis or Dissertation hours are reported as “In Progress” (IP) until the work is completed. 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.
extenuating circumstances and indicates that the student will be allowed to return to the program within the one-year time limit. There is no guarantee that a 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 his/her 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 Registrar’s Office (319L MED). The student should then complete and sign the upper portion of this Form, obtain on it the signatures of the COGS Chair and the Graduate School dean, and obtain authorized signature clearance from each area listed on the lower portion of the Form. The student should also drop any courses for which they are currently enrolled.

In Absentia (INTD 5004-1)

In lieu of taking a leave of absence, a student may opt to enroll In Absentia for up to two consecutive semesters. Enrolling In Absentia essentially creates a placeholder that will allow the student's matriculation record to remain active. It will not, however, afford an individual the status of an officially enrolled student. The student's matriculation record to remain active. It will not, however, afford an individual the status of an officially enrolled student. Additionally, a $25 fee is charged for enrolling In Absentia.

Students not prepared to return as an officially enrolled student at the end of their second consecutive term of In Absentia enrollment should follow the above procedures for requesting a leave of absence.

In Absentia (INTD 5004-2)

Students must be registered for the semester in which they graduate and all fees and tuition apply. A special arrangement is made for students who defend the dissertation or thesis after the last Graduate Faculty Council (GFC) meeting of the semester and before the first class day of the following semester.

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 should be designated as zero credit hours and the student will be charged a $25 fee.

Nonregistration

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 Committee on Graduate Studies and the Dean 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 make written 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 wish such a transfer must have an interview with the Dean.

Graduation

The degree of Doctor of Philosophy is awarded by the Board of Regents upon the satisfactory completion of a minimum of 72 semester credit hours, the satisfactory completion of a prescribed program of study as documented by the Committee on Graduate Studies, recommendation of the Graduate Faculty Council, and certification of the candidate by the Dean and President to the Board of Regents.

The degree of Master of Science is awarded upon the satisfactory completion of a minimum of 30 semester hours, the requirements particular to each graduate program as documented by the Committee on Graduate Studies, recommendation of the Graduate Faculty Council, and certification of the candidate by the Dean and President to the Board of Regents.

Commencement

Graduation exercises are held each year in May.

Candidates for graduation of the Health Professions master’s programs will participate in the School of Health Professions Commencement. The Graduate School Dean will be present to address the students and participate in the presentation of diplomas. Candidates for graduation of the doctoral graduate nursing programs also participate in the Graduate School Commencement.

Sequential Procedures

Doctor of Philosophy degree

Phase 1. (From matriculation through admission to candidacy.)

1. Approval of research advisor. 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 re-
search 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 Qualifying Examination is comprehensive in nature and may be written, oral, or both. The Committee on Graduate Studies determines the format of the examination and the composition of the Qualifying Examination Committee, with the proviso that one member must not be one of 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 or failed to the Committee on Graduate Studies.

4. 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 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.

Phase II. (From admission to candidacy through granting of the degree.)

1. 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 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.

2. 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 which 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 other faculty members who have knowledge and expertise in the area of the research proposal and who have been selected by mutual agreement among the candidate, the supervising professor, and the Committee on Graduate Studies. 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).

3. 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. The Supervising Committee must consist of at least five persons, as follows:
   a. One member must be from outside the Health Science Center and must be an expert in the field of the proposed dissertation;
   b. Two members must be members of the graduate faculty of the program;
   c. One member must be a faculty member of the Health Science Center 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 guide the candidate through the dissertation research 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.
5. Approval of the dissertation proposal and supervising committee. The Graduate Faculty Council and the Dean will review the recommendation of COGS on the proposal and supervising committee. After approval by the Dean of both the proposal and the Supervising Committee, the candidate may register for the Dissertation course (____ 7099). Any subsequent change in the Composition of the Supervising Committee must be approved by the COGS and approved by the Dean, who will then report the change at a regularly scheduled GFC meeting.

6. 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.

7. 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 and then to all other members of the Supervising Committee for review and recommendations for modification of content. An electronic copy will also be submitted 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 the Instructions for Preparation and Submission of Electronic Theses, Dissertations and Dissertation Abstracts. If the alternative chapter format appears to be 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 dissertation in accordance with the schedule of deadlines provided each term by the Graduate School Dean’s Office.

8. Final oral examination. When the Supervising Committee judges the dissertation to be suitable for defense, the Supervising Professor shall be responsible for submitting a signed Request for Final Oral Examination Form (GSBS Form 40) through the Committee on Graduate Studies to the Dean and request scheduling of the Final Oral Examination. Three copies of the Abstract and Vitae (stapled together) should 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 with the Supervising Professor as chair. 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 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.

9. 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 either by e-mail or on a disk or USB drive. The dissertation Approval Page signed by the Supervising Professor and Committee members must also be submitted to the Graduate School Dean’s Office. When both the Report and the electronic dissertation in final form have been received and approved, 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 President of The University of Texas Health Science Center at San Antonio that the candidate has fulfilled all requirements of the Gradu-
Master of Science Degree (Biomedical Sciences Programs)*

*The Sequential Procedures for the thesis-option Master of Science in Nursing degree, the Master of Science degree in dental specialties, and the Master of Science degree in Clinical Investigation are modified to correlate with the curricula of these programs. A copy of the appropriate Sequential Procedures may be obtained from the Graduate Advisor of the 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. 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. 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 prior to admission to candidacy for the M.S. degree. However, the Committee on Graduate Studies may require the student to pass a written and/or oral Qualifying Examination prior to consideration for admission to candidacy, or it may waive such examination.

4. 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:

   1. Satisfactory completion of all required courses;

   2. Cumulative grade point average of at least 3.0 in all coursework undertaken since matriculation in the program;

   3. Report by the Qualifying Examination Committee that the student has passed the examination;

   4. 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 Dean for approval.

Phase II. (From admission to candidacy through granting of the degree)

1. Selection of supervising professor. No later than one month 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.

2. Draft of the 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.

3. Appointment of the supervising committee. 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. 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 the Health Science Center in a supporting area outside the program or a person outside the Health Science Center who is an expert in the field of the proposed thesis.

Immediately upon selection of the Supervising Committee, the Chair of the Committee on Graduate Studies will submit to the Graduate School Dean's Office a completed Form 42 Composition of Supervising Committee — The Master of Science Degree. A copy of the proposed work in electronic form must accompany the form. Each member of the Supervising Com-
mittee is required to sign the form to certify her/his approval to serve on the committee. Any subsequent change in the Composition of the Supervising Committee must be approved by the COGS and approved by the Dean.

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 guide the candidate through the thesis research 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 an M.S. thesis and, in their opinion, defended it satisfactorily.

5. **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 appropriate intervals thereafter, 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.

6. **Submission of the thesis.** After 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 and then to the other members of the Supervising Committee for review and recommendations for modification of content. An electronic copy will also be submitted 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 the Instructions for Preparation and Submission of Electronic Theses, Dissertations and Dissertation Abstracts. 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.

7. **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 that program.

Option 1. If the Committee on Graduate Studies does elect to require that the thesis be defended in formal Final Oral Examination scheduled through the Graduate School Dean’s Office and open to all interested persons, then the procedures in number 11 (see “Phase II” of Doctor of Philosophy degree) for

Option 2. If the Committee on Graduate Studies chooses a less formal format, 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.

Three copies of the Abstract and the Vita should be submitted with the request for the candidate’s files in their respective department, the Registrar’s Office, and the Graduate School Dean’s Office.

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 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.

8. **Recommendation for granting of the degree.** If the Committee on Graduate Studies approves the favorable recommendation by the Supervising Committee, the Chairman 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 either by e-mail or on a disk or USB drive. The thesis Approval Page signed by the Supervising Professor and Committee members must also be submitted to the Graduate School Dean’s Office. When both the Report and the electronic thesis have been received, 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 President of The University of Texas Health Science Center at San Antonio that the candidate has fulfilled all requirements for the degree Master of Science. Upon the candidate’s certification by the President, the de-
gree is conferred by the Board of Regents of The University of Texas System.

*The Sequential Procedures for the thesis-option Master of Science in Nursing degree, the Master of Science degree in dental specialties, and the Master of Science degree in Clinical Investigation are modified to correlate with the curricula of these programs. A copy of the appropriate Sequential Procedures may be obtained from the Graduate Advisor of the program.

Sequential Procedures Forms

The following forms, required for the sequential procedures described above, are available online at http://gsbs.uthscsa.edu.

Form No. Procedure
31 Petition for Admission to Candidacy for M.S. Degree
32 Petition for Admission to Candidacy for Ph.D. Degree
33 Petition for Admission to Candidacy for M.S. in Nursing Degree
30 Recommendation for Approval of Dissertation Research Proposal and Supervising Committee (Ph.D.)
40 Request for Final Oral Examination (Ph.D. or M.S.)
41 Report on Final Oral Examination (M.S.)
42 Composition of Supervising Committee (M.S.)
43 Report on Final Oral Examination (Ph.D.)
A completed Application for Degree and Diploma Name Request must be filed during the semester before the term in which the candidate expects to graduate. This form is available from the Registrar’s Office or the Graduate School Dean’s Office.

Instructions for Preparation and Submission of Electronic Theses, Dissertations, and Dissertation Abstracts

The candidate should obtain these instructions online at http://gsbs.uthscsa.edu before writing the thesis or dissertation.
Programs and Course Descriptions

Course descriptions are included at the end of the Program descriptions.

- Integrated Multidisciplinary Graduate Program
- Biochemistry
- Biomedical Engineering
- Cellular and Structural Biology
- Clinical Investigation
- Microbiology & Immunology
- Molecular Medicine
- Pharmacology
- Pharmacy
- Physiology
- Radiological Sciences
- Coordinate Graduate Courses
Integrated Multidisciplinary Graduate Program (IMGP)

**IMGP Courses**

The Graduate School of Biomedical Sciences offers a doctoral level Integrated Multidisciplinary Graduate Program (IMGP) designed to develop both scholarly and laboratory expertise. Our discipline-based doctoral programs in Biochemistry, Cellular & Structural Biology, Microbiology & Immunology, Pharmacology, and Physiology have evolved into the IMGP that provides contemporary, interdisciplinary advanced education and scientific research based on fundamental principles in the biomedical sciences. Effective with admission for Fall 2008, prospective students seeking a Ph.D. degree apply to the IMGP rather than to the former individual, discipline-based doctoral programs.

The IMGP is currently composed of eleven multidisciplinary tracks, which address several compelling training areas in the biomedical sciences. These thematic tracks have been aligned with the major research foci of the faculty in the institution, and faculty from all five schools in the university participate in these doctoral training tracks. Faculty members may participate in four different tracks. The eleven tracks are:

1. Biology of Aging
2. Cancer Biology
3. Cellular & 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
11. Pharmacology

Detailed information on the research focus and scholarly activities of participating faculty members of each of these tracks may be found at [http://www.uthscsa.edu/gsbs/](http://www.uthscsa.edu/gsbs/). Each track is under the leadership of two faculty members, appropriate faculty committees, and the Committees on Graduate Studies in different programs.

**Research Activities**

The research activities of faculty members in the IMGP are diverse and range from very basic to strongly clinically oriented research. An overview of research activities may be found under the research descriptions for different programs within this Catalog and on school, department, and track Web sites. More detailed research descriptions may be found under individual faculty members’ Web sites.

**Requirements for Admission**

Applicants are required to have a minimum of a Bachelor’s degree. Applicants should have received credit for courses taken in

<table>
<thead>
<tr>
<th>Subject</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>2 years as required for science majors</td>
</tr>
<tr>
<td>Chemistry</td>
<td>1 year organic &amp; inorganic chemistry; Analytical and Physical Chemistry are recommended.</td>
</tr>
<tr>
<td>Physics</td>
<td>1 year</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Minimum of 1 semester of Calculus</td>
</tr>
</tbody>
</table>

*Courses should include laboratory experience.

In addition, the Graduate Record Examination (GRE) for all applicants and the Test of English as a Foreign Language (TOEFL) for international applicants must be taken within 5 years for the GRE and 2 years for the TOEFL prior to date of application. The minimum required scores for the TOEFL are 560 for the paper-based test and 68 for the Internet-based test.

**Required Student Background Checks:** The University of Texas Health Science Center at San Antonio is committed to admit and retain students who meet high professional standards. The Health Science Center requires all applicants to undergo security and criminal background checks. See Background Checks under the General Regulations and Requirements section of this Catalog.

**Apply Online.** To apply online to the IMGP, go to [http://gsbs.uthscsa.edu](http://gsbs.uthscsa.edu). Application priority deadline is January 15th with a final application deadline of April 15th. Applicants are strongly encouraged to apply early and submit complete applications with all supporting materials to receive priority review. There is NO application fee. For more information, please read the Applicant Viewbook.

**Supporting Documents Required with Online Application**

- Transcripts: one official transcript in a sealed envelope is required from each college/university attended. If you have attended a non-U.S. college/university, all international transcripts must be evaluated by an accredited foreign credentialing service.
- Official test scores (HSC code 6908): the GRE and TOEFL scores must be sent directly from the Educational Testing Service (ETS) to the Health Science Center. No photocopies or faxed copies will be accepted.

**NOTE:** Applicants who are Permanent Residents of the U.S. must supply a certified copy of both the front and back sides of their federal Permanent Resident (“Green”) Card.
Mail all supporting documents to:
UT Health Science Center San Antonio
Registrar's Office-Graduate
MSC 7702
7703 Floyd Curl Drive
San Antonio, Texas 78229-3900
USA

Applications are reviewed by an Admissions Committee composed of faculty members representing all 11 tracks in the IMGP. Highly qualified applicants are invited for personal interviews beginning early in the spring semester while highly qualified international applicants are interviewed via telephone.

Required Health Insurance Coverage
Prior to Enrollment
Refer to the Student Health Insurance section under General Regulations and Requirements in this Catalog.

Required Immunizations Prior to Enrollment
Refer to the Immunization Requirements section in this Catalog. The Board of Regents may require immunizations against additional diseases for some students. The Board of Regents may require further immunizations in times of emergency or epidemic. The cost of all immunizations will be the responsibility of the student.

Financial Support for Graduate Students
The Graduate School of Biomedical Sciences offers financial assistance, in the form of teaching assistantships, to full-time students admitted to the IMGP doctoral program. The annual stipend currently is $26,000, which may cover most living and educational expenses, including tuition and fees. In Year 1 stipend support is provided by the Graduate School of Biomedical Sciences and by dissertation supervising professors beginning in Year 2 of the program. Assistantships are renewed annually based on demonstration of satisfactory progress in meeting degree requirements. Graduate students/teaching assistants are considered in-state residents regardless of the length of time they have lived in Texas and are entitled to pay in-state tuition. Funds for short-term and emergency loans as well as traditional Federal Aid Programs are available through the Office for Financial Aid.

For International Students Only
For questions regarding student visas, required documents, and forms, please refer to the Office of International Services or contact the office at 210-567-6241.

Curriculum
Students entering the IMGP are admitted “undifferentiated,” that is, without admission into a specific track. All entering students take an interdisciplinary core course in Fundamentals of Biomedical Sciences and participate in laboratory rotations in the first two semesters. In the second semester students select a specific track and a supervising professor to guide them through their advanced course work and research experiences. Also, in the second semester, students enroll in track-specific courses and electives and in Ethics in Research. The curriculum is interdisciplinary in nature such that students in a particular track may take courses in other tracks. In the second year, students continue taking track-specific electives and journal clubs, participating in seminars, and engaging in research in the laboratory of their supervising professor. Major milestones are the advancement to Ph.D. candidacy exam and formal approval of a dissertation supervising committee. Admission to Ph.D. candidacy depends upon successful completion of requisite courses, satisfactory performance in the advancement to Ph.D. candidacy exam, and proficiency in independent laboratory work and research skills. Following the student’s admission to Ph.D. candidacy, students develop a dissertation research proposal and conduct research under the direction of a supervising professor and a dissertation supervisory committee. The dissertation supervisory committee periodically meets to review the student’s progress. The Ph.D. degree is awarded after the student’s demonstration of acquired skills and knowledge in the selected field of specialization, the ability to do independent research in the area, and a successful, public defense of the dissertation, which represents an original contribution to biomedical science and which is of publishable quality in reputable, scholarly journals. Full-time students register for a minimum of 9 semester credit hours in both the fall and spring semesters and 6 semester credit hours in the summer term. For the Ph.D. degree, a minimum of 72 semester credit hours is required. The Ph.D. degree typically requires 5–6 years of intense course work and research.

IMGP Courses
The following courses are available to students enrolled in the IMGP. The Fundamentals of Biomedical Sciences, Ethics in Research, and Laboratory Rotations courses are required. Other requisite courses depend upon the specific track chosen by the student.

BIOC 5077 Presentation of Published Research
A research article will be chosen for each student by the course director in consultation with selected Biochemistry faculty. The student will have the opportunity to become comprehensively knowledgeable in the specific area covered by the article, to the extent that he/she will be able to critically analyze the experimental design, the techniques/technology used, present the results obtained, and discuss the merit(s) of the research. The student should be able to identify the results that represent credible advances and criticize faulty design and methodology that may have led to invalid conclusions.
Semester Credit Hours: 1.0
Prerequisites: enrolled in INTD 5005

BIOC 5083 Hydrodynamic Methods
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.

Semester Credit Hours: 2.0

**Prerequisites:** INTD 5000

**BIOC 5085 Biophysical Methods in Biology**

This course is required for all students enrolled in the Molecular Biophysics and Biochemistry track. For all other students, it is an elective course. This 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.

Semester Credit Hours: 2.0

**Prerequisites:** INTD 5000

**BIOC 5087 Molecular Biochemistry**

This course is required for all students enrolled in either the Molecular Biophysics and Biochemistry track or Metabolism and Metabolic Disorders tracks. The objective of this course is to provide comprehensive treatment of the exploration of genes and proteins through molecular biological techniques tailored towards experimental biochemistry. Topics to be covered include: basic enzymology; methods of enzyme characterization including kinetics, protein-ligand binding equilibrium studies, the physiological significance of multisite enzymes; the theory and practice of PCR including real-time PCR, PCR mutagenesis, and clone construction by PCR; problems in the preparation of large quantities of recombinant proteins in E. coli; site-specific and saturation mutagenesis; the bioinformatics of protein families; and molecular genetic systems used to explore gene expression and protein interactions in bacteria, yeast, *Drosophila*, and mammals.

Semester Credit Hours: 2.0

**Prerequisites:** INTD 5000

**BIOC 5091 Special Topics in Biochemistry**

This course consists of selected topics in specialized areas of biochemistry; current views will be emphasized (e.g., “Quantitative Biochemistry” and “Nuclear Magnetic Resonance Spectroscopy for Biochemists”).

Semester Credit Hours: 1.0–9.0

**BIOC 6015 Metabolic Disorders**

This course will be a basic required course for students pursuing a Ph.D. in the Metabolism and Metabolic Disorders Track in the graduate program in the Department of Biochemistry. 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. The course will be offered in the spring in alternate years beginning in 2008.

Semester Credit Hours: 2.0

**Prerequisites:** INTD 5005

**BIOC 6028 Biophysical Chemistry**

Emphasis of the course will be to familiarize the student with: 1) the quantitative aspects of biochemistry, e.g., biochemical calculations, data and error analysis and statistics; 2) the use of computers in data acquisition, data analysis and fitting of equations to data; and 3) modern biophysical techniques, to give students the opportunity to read and understand recent publications utilizing these methods.

Semester Credit Hours: 3.0

**Prerequisites:** INTD 5005

**BIOC 6035 Biochemistry of Multimolecular Complexes**

This course will cover the assembly and biochemistry of several multimolecular complexes including those of transcription, cell motion, cell permeation, cell signaling, apoptosis, viral assembly and protein assembly-related processes of conformational diseases such as ALS, Huntington, Alzheimer, and Parkinson diseases. The techniques used to obtain information about these multimolecular complexes are also to be covered. The biochemical aspects of these studies will address both simple enzymatic activities and the more complex activities of biological motors.

Semester Credit Hours: 2.0

**Prerequisites:** INTD 5005 and 5006

**CSBL 5007 Methods in Cell Biology**

Through a combination of lectures and demonstrations, the instructors will introduce students to techniques that 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.

Semester Credit Hours: 1.0

CSBL 5011 Gross Anatomy and Human Embryology

This course consists of lectures, conferences, and laboratory work covering normal human developmental and gross anatomy. Lectures on early embryonic development and implantation are presented at the beginning of the course. Lectures and laboratories on the development of the systems are correlated with the presentation and dissection of the gross structure of the adult. Groups of four students dissect a cadaver under supervision of the Cellular & Structural Biology staff. Prosections, demonstration specimens, x-rays, films, and other learning aids supplement the laboratory work. Applied anatomy and malformations are discussed by clinical specialists. Human materials fee: $500. Laboratory fee: $30.
Semester Credit Hours: 7.5

CSBL 5015 History of Anatomy

This course meets for two hours each week during the spring semester and offers a survey of the history of anatomy from the time of the Egyptians and Greeks through Anatomy in America. The course is organized around a biographical approach to this history. Each period begins with an overview of the discoveries and state of anatomical knowledge during the specified period. This is followed by short summaries of some of the important anatomists and their writings of that time, and the period ends with a general discussion. In addition, there is an exhibition of rare books from the Health Science Center’s Special Collections given by the library staff, a presentation on art in anatomy with emphasis on Leonardo da Vinci’s anatomical drawings, and a discussion of the acquisition of human cadavers.
Semester Credit Hours: 2.5

CSBL 5016 Gross, Head and Neck Anatomy

The focus of this course is the structure of the human body, with emphasis on the functional anatomy of the trunk, neck, head, and nervous system. Regional dissection of a human cadaver, by groups of students, is supplemented by individual study of prosections, models, skeletons, and other demonstration materials and is guided by lectures, conferences, and films. The first part of the course, which deals with the anatomy of the thorax and abdomen, presents a general overview of the functional architecture of most major body systems. The emphasis is on principles of structure, to allow development of a holistic understanding of human biology, both normal and pathological. The latter half of the course is devoted to study of the head and neck; greater emphasis will be placed on anatomical relationships with obvious reference to clinical dentistry. Human materials fee: $500. Laboratory fee: $30.
Semester Credit Hours: 6.0

CSBL 5019 Gross Human Anatomy for Graduate Students

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, head and neck, body wall, thorax, abdomen, pelvis and perineum, and the upper and lower limbs. 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. These dissections will be supplemented by the study of prosected specimens, models skeletons, and other demonstration materials. Human materials fee: $500. Laboratory fee: $30. (Note: students may elect to substitute PHYL 5013 Physiology for this course.)
Semester Credit Hours: 6.0
Prerequisites: Graduate standing

CSBL 5023 Development

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 contexts of cell type-specific differentiation and cell-cell interactions during organogenesis.
Semester Credit Hours: 1.0

CSBL 5024 Genomics

This course covers historical aspects of the Genomic project and high throughput methods (microarray, SAGE, proteomics, etc.) to perform global analysis of gene expression; the course also provides an overview of new biological fields such as systems biology, functional genomics, and comparative genomics. The students will have the opportunity to become familiarized with tools, methods, databases, and approaches used to extract biological information from global analyses. Hands-on training on biological databases and classes covering examples of the use of genomics to answer questions related to cancer and diseases is an important part of the course, helping the students to visualize how genomics can be used in their own research projects.
Semester Credit Hours: 1.0

CSBL 5025 Genetics

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.
Semester Credit Hours: 1.0

CSBL 5026 Stem Cell Biology

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’s 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.

**Semester Credit Hours:** 1.0

**CSBL 5077  Scientific Writing**

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 cap-stone 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.

**Semester Credit Hours:** 2.0

**CSBL 5083  Practical Optical Microscopy**

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.

**Semester Credit Hours:** 1.0

**CSBL 5089  Graduate Colloquium**

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. 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.

**Semester Credit Hours:** 2.0

**CSBL 5095  Experimental Design and Data Analysis**

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 range tests, tests of the assumptions of parametric analyses, advanced forms of the analysis of variance, linear regression, and correlation analysis.

**Semester Credit Hours:** 2.0

**CSBL 6020  Concepts in Vertebrate Development**

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.

**Semester Credit Hours:** 2.0

**CSBL 6083  Practical Optical Microscopy**

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.

**Semester Credit Hours:** 1.0

**CSBL 6089  Graduate Colloquium**

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. 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.

**Semester Credit Hours:** 2.0

**CSBL 6095  Experimental Design and Data Analysis**

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 range tests, tests of the assumptions of parametric analyses, advanced forms of the analysis of variance, linear regression, and correlation analysis.

**Semester Credit Hours:** 2.0

**CSBL 6020  Concepts in Vertebrate Development**

This course will employ classical experimental embryology as a background for presenting recent advances in molecular and cellular aspects of vertebrate development. Topics include: gametogenesis and fertilization, cleavage and midblastula transition, gastrulation, neural induction, neural crest migration, CNS patterning, limb development, and inductive events in endodermal differentiation. Emphasis will be placed on mechanisms of morphogenesis and differentiation at the molecular level.

**Semester Credit Hours:** 3.0

**CSBL 6021  Animal Models**

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.

**Semester Credit Hours:** 3.0

**CSBL 6048  Biology of Aging**

Biology of Aging is the core course of the Biology of Aging Track. The course consists of two modules: Molecular and Cellular Homeostasis and Aging and Systems Homeostasis and 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 the Departments of Cellular & Structural Biology, Physiology, Pharmacology, Biochemistry and Medicine will be involved in teaching this course, which will cover the molecular and cellular biology of aging, model systems used for aging studies, age-related changes in organs and tissues, and age-related diseases.

**Semester Credit Hours:** 4.0

**Prerequisites:** required for Biology of Aging Track; elective for others

**CSBL 6064  Genes and Development**

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.

Semester Credit Hours: 4.0

CSBL 6068 Cancer Biology Core I

This course reviews select topics in molecular and cellular biology of importance to molecular oncology. Topics examined include oncogenes, tumor suppressor genes, apoptosis, control of cell cycle regulation, and control of cellular growth and proliferation. The goal of the course is to prepare graduate students to critically evaluate published research in molecular oncology. Required for Cancer Biology Track.

Semester Credit Hours: 2.0

CSBL 6069 Cancer Biology Core II

This course is designed to provide an overview of the molecular alterations identified in the most common cancer types in humans. The general guidelines on recent diagnosis and therapeutic advances in oncology will be presented. In addition, it will offer an overview on special populations affected by cancers or by less frequent but biologically informative cancers and basic concepts related to experimental tools relevant to cancer biology, including mouse models of tumors and molecular profiling. 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 Track.

Semester Credit Hours: 2.0

Prerequisites: Cancer Biology Core I

CSBL 6090 Seminar

Attendance and participation in the regularly scheduled department seminar series is required during each fall and spring semester. During the first spring semester, students are required to write a literature review on a topic of their choice and a research grant proposal. During the second fall semester, students must write and orally defend a mock postdoctoral proposal (qualifying exam). During all subsequent spring semesters, students are required to present a seminar covering their progress in research.

Semester Credit Hours: 1.0

CSBL 6094 Advanced Neuroanatomy

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.

Semester Credit Hours: 2.0

CSBL 6165 Medical Genetics

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.

Semester Credit Hours: 3.0

Prerequisites: A basic background in genetics, cell biology, and biochemistry

INTD 5000 Fundamentals of Biomedical Sciences

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 Multidisciplinary Graduate Program.

Semester Credit Hours: 8.0

Prerequisites: Consent of instructor

INTD 5007 Advanced Cell and Molecular Biology

This course offers students the opportunity to gain in-depth fundamentals of cell and molecular biology necessary to critically read, understand, and evaluate the current research on each of the topics covered. The topics include cell surface receptor-mediated signal transduction, nuclear receptor signaling, mitochondria and apoptosis, stem cell and differentiation, and DNA damage response and cell cycle checkpoints. An important focus of this course is to help students bridge the gap between didactic learning and analytical thinking as a graduate student. The course faculty uses a variety of techniques to introduce students to a critical reading and discussion of the current research literature.

Semester Credit Hours: 3.0

Prerequisites: INTD 5006 or special permission from the instructor

INTD 5008 Laboratory Rotations

This course provides an opportunity for students to participate in research activities in the laboratories of faculty members in different tracks to learn laboratory skills and to gain an introduction to the research fields of faculty members.

Semester Credit Hours: 2.0

INTD 5040 Fundamentals of Neuroscience I: Molecular, Cellular, and Developmental Neuroscience

This course is intended to introduce students to a broad survey of the basics of molecular, cellular and developmental neuros-
INTD 5043  Fundamentals of Neuroscience II: Systems Neuroscience

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.

Semester Credit Hours: 3.0

INTD 5047  Neuroanatomy

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 II 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.

Semester Credit Hours: 2.0

INTD 5067  Introduction to Bioinformatics and Computational Biology

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.

Semester Credit Hours: 2.0

INTD 5091  Special Topics in Biochemistry

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.

Semester Credit Hours: 1.0–4.0

INTD 6002  Ethics in Research

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.

Semester Credit Hours: 0.5

INTD 6033  Cell Signaling Mechanisms

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.

Semester Credit Hours: 2.0

INTD 6041  Basic Science Resident Lecture Series in Neurology

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.

Semester Credit Hours: 1.5

INTD 6043  Structure and Function of Membrane Proteins

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 (e.g. K+, Na+ and Ca++ channels), and the basis of selectivity consistent with high flux rates, gating, and other forms of regulation; Large membrane pores (e.g. gap junctions, VDAC, P2Y, porins, translocons), their selectivity features, regulation, and physiological functions; Membrane transporters (amino acid, neurotransmitter, glucose, aquaporins), their mode of function and regulation; Membrane pumps (proton, ATPases, etc.) and the effects of lipids on membrane protein function; Membrane receptors (GABA, Ach etc.); Membrane fusion events in membrane trafficking.

Semester Credit Hours: 2.0

Prerequisites: INTD 5005 and INTD 5007 (or equivalent)
INTD 6071 Supervised Teaching

There are different options for completing Supervised Teaching, including, but not limited to, participation in the teaching program of 1) first-year graduate, medical, dental or health professions curricula in lecture or small-conference format; 2) graduate, medical, and dental laboratory courses. Faculty in each track will determine the specific Supervised Teaching requirement for students in their tracks. The sub-designations for each track are:
- Biology of Aging (INTD 6071.1-BA)
- Cancer Biology (INTD 6071.2-CA)
- Cell & Molecular Biology (INTD 6071.3-CMB)
- Genetics, Genomics & Development (INTD 6071.4-GGD)
- Membrane Biology & Cell Signaling (INTD 6071.5-MBCS)
- Metabolism & Metabolic Disorders (INTD 6071.6-MMD)
- Microbiology & Immunology (INTD 6071.7-MI)
- Molecular Biophysics & Biochemistry (INTD 6071.8-MBB)
- Molecular, Cellular, & Integrative Physiology (INTD 6071.9-MCIP)
- Neuroscience (INTD 6071.10-NS)
- Pharmacology (INTD 6071.11-PHA)

*Semester Credit Hours: 1.0–9.0*

INTD 6097 Research

This research course is intended for first-year IMGP students only.
- Biology of Aging (INTD 6097 BA)
- Cancer Biology (INTD 6097 CB)
- Cell & Molecular Biology (INTD 6097 CMB)
- Genetics, Genomics & Development (INTD 6097 GGD)
- Membrane Biology & Cell Signaling (INTD 6097 MBCS)
- Metabolism & Metabolic Disorders (INTD 6097 MMD)
- Microbiology & Immunology (INTD 6097 MI)
- Molecular Biophysics & Biochemistry (INTD 6097 MBB)
- Molecular, Cellular, & Integrative Physiology (INTD 6097 MCIP)
- Neuroscience (INTD 6097 NS)
- Pharmacology (INTD 6097 PHA)
- General (INTD 6097 012)

*Semester Credit Hours: 0.5–9.0*

INTD 7099 Dissertation

Registration for at least two terms is required for Ph.D. candidates.

*Semester Credit Hours: 1.0–9.0*

*Prerequisites: Admission to candidacy for the Ph.D. degree*

MICR 5025 Eukaryotic Pathogens

The course will provide students with the opportunity to gain a basic comprehensive understanding of parasitology and mycology. The first part of this course will focus on virulence mechanisms and the host immune response with respect to a variety of parasites that cause major human diseases. The second part of this course will cover several important areas of medical mycology including molecular biology, diagnostic/epidemiology, mating/phenotypic switching, morphology, pathogenesis, and antifungal therapies.

*Semester Credit Hours: 1.0*

MICR 5026 Pathogenic Microbiology

This is an introductory course in microbial pathogenesis focusing on bacterial pathogens that are important in human disease. Students will receive a foundation in the basic concepts and experimental approaches that are crucial for understanding the discipline through directed readings and didactic instruction. Specific concepts, strategies, and mechanisms used by human bacterial pathogens to cause disease will be illustrated.

*Semester Credit Hours: 1.0*

MICR 5027 Immunology

This course will focus on fundamental concepts in immunology with emphasis on experimental strategies for elucidating the cellular and molecular mechanisms underlying immune responses. Lecture topics will illustrate important concepts in innate immunity, cytokine signaling, antigen recognition and presentation, the genetics of immune receptors and the major histocompatibility complex, immunity to infection, and immunopathology (e.g., hypersensitivity, autoimmunity, immunodeficiency, etc.).

*Semester Credit Hours: 1.0*

MICR 5028 Virology

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.

*Semester Credit Hours: 1.0*

MICR 5029 Building Scientific Thinking Skills

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/quotes 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.

**Semester Credit Hours:** 2.0

**MICR 5030 Microbiology and Immunology**

Track Journal Clubs

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.

**Semester Credit Hours:** 0.5

**MICR 5041 Introduction to Virology**

Topics include basic nonmedical general virology with emphasis on molecular and cellular biology of animal viruses: physical and chemical properties, molecular mechanisms and biology of multiplication, effects on host cells, genetics, and interferon.

**Semester Credit Hours:** 2.0

**Prerequisites:** General Biology, General or Medical Microbiology, General Biochemistry, and consent of instructor

**MICR 5051 Introduction to Immunology**

This course is a study of immune responses with emphasis on experimental strategies for elucidating cellular and molecular mechanisms. Three phases of study: (1) immunochemistry and molecular biology of antibodies, lymphocyte receptors, and products of the major histocompatibility complex; (2) cellular interactions and immuno-regulation; and (3) immunopathologies (hypersensitivity, autoimmunity, immunodeficiency, transplantation rejection, and tumor immunology).

**Semester Credit Hours:** 2.0

**Prerequisites:** consent of instructor, courses in General Biology and Genetics recommended

**MICR 5090 Acquiring Presentation Skills**

This course is designed to prepare the student for giving a scientific lecture or seminar. Students present at least one lecture per academic year. Each student is coached and evaluated by faculty members in terms of both effective public speaking and critically analyzing scientific data. In addition, the seminars are videotaped. Students are required to attend all seminars.

**Semester Credit Hours:** 1.0

**MICR 6022 Advanced Microbial Physiology**

This course consists of readings and conferences. The course includes current concepts and experimental studies in microbial structure-function relationships and regulatory mechanisms.

**Semester Credit Hours:** 2.0

**Prerequisites:** Microbial Physiology and consent of instructor

**MICR 6024 Advanced Microbial Genetics**

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.

**Semester Credit Hours:** 1.0–4.0

**Prerequisites:** Microbial Genetics and consent of instructor

**MICR 6052 Advanced Immunobiology**

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.

**Semester Credit Hours:** 2.0

**Prerequisites:** Introduction to Immunology or consent of instructor

**MICR 5092 Special Problems in Microbiology**

This course provides an opportunity for the student to engage in a special research project or to develop proficiency in the use of certain laboratory methods.

**Semester Credit Hours:** 1.0–9.0

**Prerequisites:** consent of instructor

**MICR 5091 Current Topics in Microbiology and Immunology**

Students will be given an opportunity to gain in-depth understanding of selected topics in microbiology and immunology through a combination of library research and discussion with faculty.

**Semester Credit Hours:** 3.0

**Prerequisites:** consent of instructor

**PHAR 5013 Principles of Pharmacology**

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 ligand-gated 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.

**Semester Credit Hours:** 3.0

**PHAR 5020 Basics of Research Design**

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.

**Semester Credit Hours:** 1.5

**PHAR 5090 Seminar**

This course consists of presentation and discussion of recent advances and research by staff, students, and outside scientists.

**Semester Credit Hours:** 1.0–9.0

**PHAR 5091 Pharmacology Micro-electives**

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.
PHYL 5045  Mammalian Physiology
The course explores the physiological mechanisms by which the cardiovascular system carries out its principle functions. 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 course, but are only required to take three out of the four modules (PHYL 5041, 5042, 5043, and 5044).
Semester Credit Hours: 4.0

PHYL 6071  Supervised Teaching
Each student is expected to participate in the teaching program of the Department of Physiology for a minimum of one semester; the student earns one semester hour of credit per semester of teaching.
Semester Credit Hours: 1.0

PHYL 5080  Experiments in Physiology I
This experimental course is designed to provide practical demonstrations in basic recombinant DNA techniques and to illustrate how the application of these techniques helps in advancing our current understanding of cellular physiology.
Semester Credit Hours: 1.0

PHYL 5081  Experiments in Physiology II
This course includes laboratory exercises in cardiovascular and respiratory physiology, as well as autonomic pharmacology, and is integrated with PHYL 5045.
Semester Credit Hours: 1.0

PHYL 6090  Seminar
The course is comprised of research presentations by Physiology graduate students. This course is required of all students each semester.
Semester Credit Hours: 1.0

PHYL 6091  Selected Topics of Physiology
Students must take a least two courses selected from among the offerings in:

- PHYL 6091-01 Cardiovascular
- PHYL 6091-03 Cell Biology in Neural Science
- PHYL 6091-04 Endocrine and Metabolism
- PHYL 6091-05 Molecular Physiology
- PHYL 6091-07 Ion Channels in Disease

Courses that may be substituted for one of these selections:

- INTD 5040 - Fundamentals of Neuroscience I: Molecular, Cellular, and Developmental Neuroscience
- INTD 5043 - Fundamentals of Neuroscience II: Systems Neuroscience
- CSBL 6048 - Biology 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.
Semester Credit Hours: 2.0

^Top
Biochemistry

Courses

All prospective students seeking Ph.D. training in Biochemistry must apply for admission to the Integrated Multidisciplinary Graduate Program (IMGP), which is coordinated by the Graduate School of Biomedical Sciences. Biochemistry faculty members actively participate in all elements of the IMGP. Two of the IMGP tracks, Metabolism & Metabolic Disorders and the Molecular Biophysics & Biochemistry, are administratively coordinated by the Department of Biochemistry’s Committee on Graduate Studies. Students are not actively recruited to the M.S. program in Biochemistry, but admission is handled on a case-by-case basis. Applicants to the M.S. program should apply directly to the Department of Biochemistry, not the IMGP.

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, including the Molecular Biophysics & Biochemistry track and the Metabolism & Metabolic Disorders track, 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 IMGP tracks, e.g., Biology of Aging; Cell & Molecular Biology, Membrane Biology & Cell Signaling, and Neuroscience, to the extent that these courses would complement their chosen research specialty.

Independent research experiences are available in most areas of contemporary biochemistry and molecular biology including: protein structure and function, signaling pathways, metabolic regulation, membrane assembly, control of gene expression, mapping of eukaryotic genomes, assembly of viruses, and the mechanisms of hormone action. The basic research conducted in the Department of Biochemistry is complemented by faculty participation in nearly all of the IMGP tracks as well as collaborative research programs with faculty members in other basic science and clinical departments at the Health Science Center.

Research Activities

Directions pursued by faculty in the Biochemistry program cover a wide range of biochemical problems. Support for these research efforts is provided by research grants from both federal and private funding agencies. Facilities are available within the Department of Biochemistry to study of myriad of biochemical problems using modern experimental approaches. The department is equipped with a wide variety of state-of-the-art instrumentation that is housed in Core Institutional Facilities, including: the Bioinformatics Core Facility, the Center for Analytical Ultracentrifugation, the Center for Biomolecular NMR Spectroscopy, the Center for Fluorescence Microscopy and Cellular Imaging, the Center for Surface Plasmon Resonance, the Institutional Mass Spectrometry Laboratory, the UTHSCSA Center for Macromolecular Interactions, and X-ray Crystallography Core Laboratory.

Requirements for Admission

Admission to either of the IMGP tracks within the Department of Biochemistry is identical to that described previously for admission to the Integrated Multidisciplinary Graduate Program. It is expected that students who are interested in choosing either the Molecular Biophysics and Biochemistry track, or the Metabolism and Metabolic Disorders track will have successfully completed at least one year’s undergraduate work in biology, organic chemistry, physical chemistry, physics, and mathematics through integral calculus.

Financial Support for Graduate Students

Every effort is made by the Department of Biochemistry to provide financial aid to students enrolled in the graduate program. Financial support during the first year is provided by the IMGP. Financial support starting in the second year is provided through research assistantships from research grants awarded to individual faculty members.

Postgraduate Positions for Program Graduates

Graduates of the Ph.D. program in Biochemistry are expected to be in a favorable position to seek further postdoctoral training and to be in a highly competitive position for academic appointments at state and private institutions or employment in industrial and government laboratories.

Curriculum

Students pursuing the Ph.D. degree will be expected to acquire a comprehensive knowledge of biochemistry, which will be assessed by their performance in course work, their oral defense of an original research proposal at the end of the second year, and faculty evaluation of a formal written Ph.D. dissertation proposal. Although no minor area is required, students are encouraged to diversify their programs with courses offered by other IMGP tracks at the Health Science Center. A dissertation, which represents an original contribution to the field of biochemistry and which is of publishable quality in reputable, scholarly journals, is required of all candidates for the Doctor of Philosophy degree. A minimum of 72 semester credit hours is required in order to obtain the Ph.D. degree. The faculty expects students entering the graduate program in Biochemistry to pursue studies leading to a Ph.D. degree. However, if a student is admitted to the Master of Science degree program, the requirements are less rigorous than those for the Ph.D. degree. These requirements are met by coursework and a research thesis that is defended in an oral examination.

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Core Courses
Introductory graduate level courses cover fundamental information in the basic biological sciences that is required in the education of a modern biomedical scientist. Topics covered in the core Fundamentals of Biomedical Sciences course are organized in a coordinated and non-redundant manner and taught by an interdisciplinary group of faculty.

INTD 5000  Fundamentals of Biomedical Sciences
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 Multidisciplinary Graduate Program.
Semester Credit Hours: 8.0
Prerequisites: Consent of instructor

INTD 5008  Laboratory Rotations
This course provides an opportunity for students to participate in research activities in the laboratories of faculty members in different tracks to learn laboratory skills and to gain an introduction to the research fields of faculty members.
Semester Credit Hours: 2.0

INTD 6002  Ethics in Research
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.
Semester Credit Hours: 0.5

BIOC 0003  Scientific Writing
The course consists of writing a progress report describing research results for the semester. The course is required of all graduate students beginning in the first semester after selection of a supervising professor.
Semester Credit Hours: 1.0

BIOC 6069  Contemporary Biochemistry
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.

Semester Credit Hours: 1.0
Prerequisites: must have passed Advancement to Candidacy Examination

BIOC 6071  Supervised Teaching
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.
Semester Credit Hours: 1.0–9.0

BIOC 6097  Research
This course consists of independent, original research under the direction of a faculty advisor.
Semester Credit Hours: 1.0–9.0

BIOC 6098  Thesis
Registration for least one term is required of M.S. candidates.
Semester Credit Hours: 1.0–9.0
Prerequisites: admission to candidacy for the M.S. degree

BIOC 7099  Dissertation
Registration for at least two terms is required for Ph.D. candidates.
Semester Credit Hours: 1.0–9.0
Prerequisites: admission to candidacy for the Ph.D. degree

Elective Advanced Courses
Eight additional credits of advanced courses are required for the Ph.D. degree. Any of the following courses are approved advanced biochemistry courses. Advanced courses in other IMPG programs may be substituted for one or more of these, but each substitution requires prior approval by the Biochemistry Committee on Graduate Studies.

BIOC 5083  Hydrodynamic Methods
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.
Semester Credit Hours: 2.0

BIOC 5091  Special Topics in Biochemistry
This course consists of selected topics in specialized areas of biochemistry; current views will be emphasized (e.g., “Quantitative Biochemistry” and “Nuclear Magnetic Resonance Spec-
BIOC 6010  Gene Expression
The course covers gene expression focusing on regulation at the levels of transcription, RNA processing, transport and stability, and translation. Proteins and other regulatory molecules involved in these processes will also be covered. Particular emphasis will be placed on transcriptional control mechanisms including: RNA polymerases, chromatin remodeling, methylation and other epigenetic modifications, families of transcription factors including their DNA binding properties, protein-protein interaction domains, trans-activation mechanisms, regulation by ligand binding, phosphorylation and other signaling mechanisms and nuclear-cytoplasmic transport; posttranscriptional mechanisms including: mechanisms of RNA splicing, nuclear-cytoplasmic transport of RNA, RNA localization and targeting, RNA stability; and translational control. Posttranscriptional and translational control mechanisms will highlight the roles of RNA binding proteins and their modifications in these processes.
Semester Credit Hours: 2.0
Prerequisites: INTD 5000

BIOC 6035  Biochemistry of Multimolecular Complexes
This course will cover the assembly and biochemistry of several multimolecular complexes including those of transcription, cell motion, cell permeation, cell signaling, apoptosis, viral assembly and protein assembly-related processes of conformations diseases such as ALS, Huntington, Alzheimer, and Parkinson diseases. The techniques used to obtain information about these multimolecular complexes are also to be covered. The biochemical aspects of these studies will address both simple enzymatic activities and the more complex activities of biological motors.
Semester Credit Hours: 2.0
Prerequisites: INTD 5005 and 5006

INTD 5067  Introduction to Bioinformatics and Computational Biology
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.
Semester Credit Hours: 2.0

INTD 6033  Cell Signaling Mechanisms
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.
Semester Credit Hours: 2.0

Required Advanced Courses

BIOC 5085  Biophysical Methods in Biology
This course is required for all students enrolled in the Molecular Biophysics and Biochemistry track. For all other students, it is an elective course. This 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.
Semester Credit Hours: 2.0
Prerequisites: INTD 5000

BIOC 5087  Molecular Biochemistry
This course is required for all students enrolled in either the Molecular Biophysics and Biochemistry track or Metabolism and Metabolic Disorders tracks. The objective of this course is to provide comprehensive treatment of the exploration of genes and proteins through molecular biological techniques tailored towards experimental biochemistry. Topics to be covered include: basic enzymology; methods of enzyme characterization including kinetics, protein-ligand binding equilibrium studies, the physiological significance of multisite enzymes; the theory and practice of PCR including real-time PCR, PCR mutagenesis, and clone construction by PCR; problems in the preparation of large quantities of recombinant proteins in E. coli; site-specific and saturation mutagenesis; the bioinformatics of protein families; and molecular genetic systems used to explore gene expression and protein interactions in bacteria, yeast, Drosophila, and mammals.
Semester Credit Hours: 2.0
Prerequisites: INTD 5000

BIOC 5091  Special Topics in Biochemistry
This course consists of selected topics in specialized areas of biochemistry; current views will be emphasized (e.g., “Quantitative Biochemistry” and “Nuclear Magnetic Resonance Spectroscopy for Biochemists”).
Semester Credit Hours: 1.0–9.0

BIOC 6015  Metabolic Disorders
This course will be a basic required course for students pursuing a Ph.D. in the Metabolism and Metabolic Disorders Track in the graduate program in the Department of Biochemistry. 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. The course will be offered in the spring in alternate years beginning in 2008.
Semester Credit Hours: 2.0

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Biomedical Engineering

Courses
The Ph.D. in Biomedical Engineering program is jointly offered between The UT Health Science Center San Antonio 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.

*A Master of Science in Biomedical Engineering is available.

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, as well as Ethics in Research, Experimental Design and Data Analysis, Lab Rotation, and Introduction to Clinical Practices. In addition to the basic core curriculum, students are required to take additional coursework in their 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.

Research Activities
Biomedical Engineering research activities are conducted both at the Health Science Center and at UTSA. At the Health Science Center, research activities include measuring and imaging the anatomy, chemistry, and function of the body and the brain using the latest positron emission tomography and other imaging technology. The Research Imaging Center leads international brain mapping research. The Center for Clinical Bioengineering concentrates on research into connective tissues, immunology, and oral health, and promotes the use of biomedical engineering for biomaterials, biomechanics, and tissue engineering research. It houses state-of-the-art analytical tools for materials characterization and provides an interface between academic research and industry.

Research at UTSA occurs at several graduate research laboratories, which include Biomaterials, Biomechanics, Biomedical Imaging, Bioelectronics, Coding, Communication & Control, Intelligent Systems, Digital Systems & Instrumentation, CNC & Robotics, Image Processing, and Structural & Dynamics. Research facilities that support existing programs in the sciences and engineering are housed in the new Biosciences Building and adjacent Science and Engineering Buildings.

Requirements for Admission
The following general minimum requirements are needed for application to the Ph.D. in Biomedical Engineering program:

1. A minimum of a bachelor’s or master’s degree, with emphasis either in engineering, physical science, or biological science from a regionally accredited institution in the United States or proof of an equivalent degree and training at a foreign institution.
2. A minimum grade point average of no lower than B (3.00 in a 4.00 system) in the last 60 hours of undergraduate and/or graduate coursework.
3. A satisfactory score for the combined verbal and quantitative portions of the Graduate Record Examination.
4. A minimum score of 550 on the paper-based Test of English as a Foreign Language (TOEFL) for applicants from countries where English is not the native language.

Financial Support for Graduate Students
Competitive stipends are available to students on an annual basis. Students are required to apply annually for these competitive stipends. Students supported with stipends are required to maintain a satisfactory GPA during the supported year and are also required to fulfill academic duties such as teaching assistant, laboratory assistant, and conducting seminars. Students are also encouraged to seek other financial aid such as the NSF Graduate Research Fellowship (see http://www.nsf.gov for details on application and deadline) and assistance from Biomedical Engineering faculty.

Postgraduate Positions for Program Graduates
Career opportunities for graduates from this program include positions in research institutes, biomedical and medical industries, government laboratories such as NIST and FDA, and academic institutions. For graduates who are interested in applying their biomedical engineering knowledge to patient care, they have the opportunity to pursue a career in medicine and dentistry by applying to the medical and dental schools.

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Curriculum

All students are required to take core courses in the areas of Biomaterials, Biomechanics, Bioelectronics/Imaging, and Biology, as well as Ethics in Research, Experimental Design and Data Analysis, and Introduction to Clinical Practices. In addition to the basic core curriculum, students are required to take additional coursework in their area of specialization. Students have access to the bioengineering and biosciences laboratories at both the Health Science Center and UTSA.

All candidates for the doctoral degree are required to take a core curriculum equivalent to 24.5 hours. In addition, students are required to take 9 hours of coursework that is prescribed by the student’s Supervising Professor or Graduate Advisor. Prescribed electives have to be selected from the list of electives specific to this program (provided below). These courses typically provide a foundation for the student’s dissertation research.

A minimum of 9 semester credit hours of Free Electives are required and may be selected from any course offered at either the Health Science Center or UTSA with the approval of the Program Director, Supervising Professor, and course instructor. Students are encouraged to consider elective courses that not only prepare them with skills in engineering and science, but also with their overall career objectives. Several courses offered in the UTSA College of Business serve as an example:

- MOT 5163 Management of Technology
- MOT 5243 Essentials of Project and Program Management
- MOT 5253 Starting the High-Tech Firm
- MOT 5313 Emerging Technologies
- MOT 5323 Biotechnology Industry

A minimum of 15 hours of Doctoral Dissertation (ORTO 7099), Seminar (ORTO 6090), and Supervised Teaching (ORTO 6071) are also required for the degree. Registration for Seminar (ORTO 6090) is required every fall and spring semester a student is enrolled in the program.

Overall, students must complete a minimum of 81 hours of graduate work as specified above and must maintain an overall grade point average of at least 3.0. The required and selected courses are intended to focus and support the individual’s mastery of her or his particular area of expertise.

The table below summarizes the distribution of hours required for the doctoral degree in Biomedical Engineering.

<table>
<thead>
<tr>
<th>Course Type</th>
<th>SCH Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required (Core courses)</td>
<td>24.5</td>
</tr>
<tr>
<td>Prescribed electives</td>
<td>Minimum of 9.0</td>
</tr>
<tr>
<td>Free electives</td>
<td>Minimum of 9.0</td>
</tr>
<tr>
<td>Other:</td>
<td></td>
</tr>
<tr>
<td>Dissertation/Research, Seminar,</td>
<td>Minimum of 15.0</td>
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<tr>
<td>and Teaching</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Minimum of 81.0</td>
</tr>
</tbody>
</table>

The entire Program of Study must be approved by the student’s Supervising Professor (Dissertation Advisor), the Supervising Committee (Doctoral Dissertation Committee), and COGS/GSC, and then submitted to the Dean of the Graduate School for final approval.

Core Courses - The Health Science Center

CSBL 5019 Gross Human Anatomy for Graduate Students

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, head and neck, body wall, thorax, abdomen, pelvis and perineum, and the upper and lower limbs. 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. These dissections will be supplemented by the study of prostected specimens, models skeletons, and other demonstration materials. Human materials fee: $500. Laboratory fee: $30. (NOTE: students may elect to substitute PHYL 5013 Physiology for this course.)

Semester Credit Hours: 6.0
Prerequisites: Graduate standing

CSBL 5095 Experimental Design and Data Analysis

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 range tests, tests of the assumptions of parametric analyses, advanced forms of the analysis of variance, linear regression, and correlation analysis.

Semester Credit Hours: 2.0

INTD 6002 Ethics in Research

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.

Semester Credit Hours: 0.5

ORTO 6003 Introduction to Clinical Practices

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.

**Semester Credit Hours:** 1.0  
**Prerequisites:** open to Biomedical Engineering graduate students

**ORTO 6004  Biology for Bioengineers**  
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.

**Semester Credit Hours:** 3.0  
**Prerequisites:** permission of the instructor

**ORTO 6090  Seminar**  
Students will have the opportunity to hear presentations from outside speakers, BME faculty, and peers. A grade of “S” for satisfactory or “U” for unsatisfactory will be assigned at the conclusion of each semester.

**Semester Credit Hours:** 1.0  
**Prerequisites:** Graduate (Ph.D.) student standing; required of all students during fall and spring semesters while pursuing doctoral studies

**PHYL 5013  Dental Physiology**  
Lecture instruction in the basic concepts of cell and organ function and in the integrated function of mammalian organ systems is presented. The physiology of the nervous system is included. (Students may elect to substitute CSBL 5019 - Gross Human Anatomy for Graduate Students for this course.)

**Semester Credit Hours:** 6.5

**RADI 5015  Physics of Diagnostic Imaging I**  
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. (Equivalent to BME 6703 at UTSA.)

**Semester Credit Hours:** 3.0  
**Prerequisites:** consent of instructor

**Core Courses - UTSA**

See the **UTSA Catalog** for UTSA official, complete, and up-to-date course descriptions. The Health Science Center is not responsible for UTSA courses.

**BME 6703 Biomedical Image Processing**  
**Semester Credit Hours:** 3.0  
**Prerequisite:** Graduate standing

Digital image fundamentals, Digital image enhancement in the spatial domain, Digital image enhancement in the frequency domain, Optimal image filtration in the frequency domain, Image restoration and order-statistics filters, Morphological image processing, Processing of microarray images, Segmentation and gene-expression calculation, Processing of FISH stacked images, automated analysis of gene copy numbers by fluorescence in situ hybridization, fundamental methods of image reconstruction by projections and their applications in computerized tomography.

**BME 6803 Biomechanics I**  
**Semester Credit Hours:** 3.0  
**Prerequisite:** Permission of the instructor

Fundamentals in applications of engineering mechanics for studying and modeling fluid flow, tissues, organs, and the whole human body.

**BME 6903 Biomaterials**  
**Semester Credit Hours:** 3.0  
**Prerequisite:** Permission of the instructor

Fundamentals in applications of biomaterials science and engineering principles and concepts for repairing, replacing, and protecting human tissues and organs. (cross-listed as ME 6813; formerly offered as ORTO 6001 at the Health Science Center)

**BME 6033 BME Engineering Analysis**  
**Semester Credit Hours:** 3.0  
**Prerequisite:** Graduate standing in engineering or consent of instructor

Advanced methods of applied mathematics, including linear algebra, vector differential calculus, integral theorems, differential equations, and calculus of variations. (NOTE: Formerly offered as EGR 6013. Also, with permission can be replaced with EGR 5093 Special Topics in Engineering Analysis)

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**Prescribed Electives - The Health Science Center**

**INTD 5000  Fundamentals of Biomedical Sciences**  
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 Multidisciplinary Graduate Program.

**Semester Credit Hours:** 8.0  
**Prerequisites:** Consent of instructor

**INTD 5041  Neuroscience - Medical**  
Lectures, conferences, and laboratories deal with study of the anatomy and function of the brain and spinal cord. The course will include presentations of neurological cases and will be taught by an interdisciplinary task force from the Departments of Cellular & Structural Biology, Physiology, Medicine, and Surgery. Laboratory fee: $32. Microscope fee: $48.

**Semester Credit Hours:** 5.0  
**Prerequisites:** consent of instructor

**ORTO 6005  Biomaterials Surface Science**  
This course provides an introduction to surface science as it is applied in the research, development, and design of biomaterial surfaces. Topics include basic concepts of surface science: surface properties, morphological, chemical, and electrical characterization methods, as well as processes and interactions on/with surfaces, including corrosion and protein adhesion.
Applications will emphasize cardiovascular implant issues but the principles are applicable to all biomaterials.

Semester Credit Hours: 3.0
Prerequisites: undergraduate Physical Chemistry; undergraduate Biochemistry Biomaterials Surface Science

PHAR 5013 Principles of Pharmacology
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 ligand-gated 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.
Semester Credit Hours: 3.0

PHYL 6091 Selected Topics of Physiology
Students must take at least two courses selected from among the offerings in:
- PHYL 6091-01 Cardiovascular
- PHYL 6091-03 Cell Biology in Neural Science
- PHYL 6091-04 Endocrine and Metabolism
- PHYL 6091-05 Molecular Physiology
- PHYL 6091-07 Ion Channels in Disease

Courses that may be substituted for one of these selections:
- INTD 5040 - Fundamentals of Neuroscience I: Molecular, Cellular, and Developmental Neuroscience
- INTD 5043 - Fundamentals of Neuroscience II: Systems Neuroscience
- CSBL 6048 - Biology 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.
Semester Credit Hours: 2.0

RADI 6014 Physics of Dental Imaging
This course is a survey of imaging procedures used in modern dentistry with an emphasis on the clinical objectives and physical principles underlying intraoral, panoramic, cephalometric, and digital dental radiography.
Semester Credit Hours: 2.0
Prerequisites: consent of instructor

RADI 6016 Physics of Diagnostic Imaging II
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.
Semester Credit Hours: 3.0
Prerequisites: consent of instructor

RADI 6017 Neuroimaging Methods
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.
Semester Credit Hours: 3.0
Prerequisites: consent of instructor

RADI 6019 Medical Image Processing
This course is an introduction to the basic principles of image processing as applied to digital radiography, computed tomography, ultrasound imaging, and magnetic resonance images.
Semester Credit Hours: 3.0
Prerequisites: RADI 6016

RESD 6102 Biomaterials II
A didactic introduction to dental materials by classification, this course describes the manipulative and technical aspects of each existing material category and relates the basic physical, mechanical, and chemical properties to the desired end use so that intelligent choices may be made as new materials become available.
Semester Credit Hours: 1.0

Prescribed Electives - UTSA
See the UTSA Catalog for UTSA official, complete, and up-to-date course descriptions. The Health Science Center is not responsible for UTSA courses.

BIO 5433 Neurophysiology
(3-0) 3 hours credit
Prerequisite: BIO 3433 or an equivalent
The fundamentals of neurophysiology are presented from the cellular to the systems level.

BIO 5483 Computational Neuroscience
(3-0) 3 hours credit
Prerequisite: BIO 3433 or an equivalent
A non-mathematical approach to the computational functions of the brain, including sensory coding, neural control of movement, and the computational properties of neurons and neuronal networks.

BIO 5503 Sensory Physiology
(3-0) 3 hours credit
Prerequisite: BIO 3433 or consent of instructor
Principles of sensory physiology, including sensory transduction and central processing of sensory information in vertebrate and invertebrate species.

BME 6043 Critical Thinking and Writing for Biomedical Engineering
(3-0) 3 hours credit
Prerequisites: Ph.D. students who are either taking their qualifying exams or have been admitted to candidacy; consent of the instructor and the Graduate Advisor of Record
This course introduces students to grant applications, manuscript writing and enhances their ability to critique research proposals, manuscripts, abstracts, and scientific presentations.
BME 6093 Topics in Biomedical Engineering
(3-0) 3 hours credit
Prerequisites: Ph.D. student standing and consent of instructor and the Graduate Advisor
May be repeated as topics vary.

BME 6203 Physiology for Engineers
3.0 Semester Credit Hours
Prerequisite: permission of the instructor or completion of ORTO 6004
Designed to provide students with essential graduate background for the application and practice of biomedical engineering. The integration of the nervous, skeletal, muscle, cardiovascular, and other systems from the sub-cellular level to the whole-organism level.

BME 6213 Cellular Engineering
(3-0) 3 hours credit
Prerequisite: permission of the instructor or completion of ORTO 6004
Review of cell biology, genetic engineering, protein structure, protein folding and stability, enzyme kinetics, receptor-ligand interactions, cell adhesion and signaling, and stem cell basics.

BME 6223 Transport and Reaction Processes in Biological Systems
(3-0) 3 hours credit
Prerequisite: Permission of the instructor or completion of ORTO 6004
Fundamentals of mass, momentum and energy transport, and reaction kinetics; Applications of these principles to the analysis of cell membrane transport, signal transduction, and cardiovascular, pulmonary and renal physiology; Design of artificial organs, and drug delivery systems.

BME 6303 Computational Oncology and Cancer Treatment Simulations
(3-0) 3 hours credit
Prerequisite: Graduate standing and permission of the instructor
Computational techniques for molecular, cellular, and tissue level simulation in cancer biology will be discussed. Oncoprotein modeling, cancer cell interactions and tumor growth modeling will be covered. Modeling and simulation issues of conventional chemotherapy as well as imaged-guided treatment modalities will be addressed in terms of both diagnosis and prognosis. (Credit cannot be earned for BME 6303 and either BME 6893 or ME 6893 on the same topic.)

BME 6513 Mechanical Behavior of Living Tissues
(3-0) 3 hours credit
Prerequisite: permission of the instructor
Stress strain relationships, viscoelasticity, mechanical properties, and mechanical modeling of collagenous and mineralized human tissues.

BME 6713 Biomedical Signal Processing
(3-0) 3 hours credit
Prerequisite: permission of the instructor
Theory and classification of biological signals such as EEG, EKG, EMG, etc. Data acquisition and analysis procedures for biological signals, including computer applications.

BME 6723 Bioinstrumentations
(3-0) 3 hours credit
Prerequisite: Permission of the instructor
This course will cover fundamental principles of bioinstrumentation used in clinical and research measurements. Topics include: principles of transducer operation, amplifiers and signal processing, recording and display. We will overview specific examples in optical sensors, biological sensors, MRI, ultrasound, pacemakers and defibrillators.

BME 6733 Fundamentals of Microfabrication and Application
(3-0) 3 hours credit
Prerequisite: Permission of the instructor
This course describes the science of miniaturization that is essential for nanotechnology development. Microfabrication techniques for micro-electro-mechanical systems (MEMS), bioMEMS, microfluidics, and nanomaterials and their application in biomedical research will be covered.

BME 6793 Topics in Image and Signal Processing
(3-0) 3 hours credit
Prerequisite: permission of the instructor
May be repeated for credit when topics vary.

BME 6823 Biomechanics II
(3-0) 3 hours credit
Prerequisite: Graduate standing
This course covers the biomechanics of biological tissue deformation and their constitutive equations. Topics may include elasticity, viscoelasticity, deformation, stress analysis, strain measurement, stress and strain in organs, and constitutive equations. Tissues covered may include heart, blood vessels, cartilage, and bone. (Cross-listed as ME 6833.)

BME 6893 Topics in Biomechanics
(3-0) 3 hours credit
Prerequisite: permission of the instructor
May be repeated for credit when topics vary. (Cross-listed as ME 6893.)

BME 6913 Biomaterials II
(3-0) 3 hours credit
Prerequisite: permission of the instructor and completion of BME 5903 or 6903.
Application of biomaterials in medicine and dentistry will be emphasized.

BME 6923 Tissue Engineering
(3-0) 3 hours credit
Prerequisite: Graduate standing
This course is an introduction to the principles and current practice of tissue engineering endeavors. Strategies for choosing and using mammalian cells and scaffold biomaterials as well as select chemical and biophysical stimuli in order to obtain neotissue formation are reviewed in detail. Case studies
are discussed to illustrate successful tissue engineering solutions of clinical problems pertinent to tissue regeneration. (Same as BME 6853).

**BME 6933 Tissue-Biomaterials Interaction**

*(3-0) 3 hours credit*

**Prerequisite: Graduate standing**

This course is an introduction to biocompatibility with special emphasis on the interaction of proteins, cells and tissues with biomaterials. Blood-material interactions are reviewed in detail. Case studies of implants are discussed to illustrate biomaterial selection as a key aspect to successful design of implant materials and prosthetic devices.

**BME 6943 Biomaterials and Cell Signaling**

*(3-0) 3 hours credit*

**Prerequisite: Graduate standing**

Develop current understanding of topics in cell receptors and signaling mechanisms with application for biomaterial design. Focus will emphasize receptor-ligand communication, methods of identification and quantification, and pathways involved for cell to material stress response.

**BME 6953 Biomaterials for Drug Delivery and Pharmacology**

*(3-0) 3 hours credit*

**Prerequisite: Graduate standing**

Provides conceptual understanding of therapeutic agents used to regulate physiological function of cells comprising organ systems with relevance to biomaterials. Interpretation of drug mechanisms at a molecular, cellular and tissue level. Traditional reviews of pharmacodynamics and pharmacokinetics will be addressed with particular application to biomaterial interaction and drug-delivery systems.

**BME 6993 Topics in Biomaterials**

*(3-0) 3 hours credit*

**Prerequisite: permission of the instructor**

May be repeated for credit when topics vary.

**CHE 5263 Advanced Analytical Chemistry**

*(3-0) 3 hours credit*

**Prerequisites: CHE 3224 and 4253 or equivalents**

The physical and chemical principles of modern instrumental techniques used for chemical analysis, with emphasis on absorption, emission, magnetic resonance, and Raman spectroscopy; mass spectrometry; chromatography; electrophoresis; and electrochemical techniques. (Formerly CHE 5163. Credit cannot be earned for both CHE 5263 and CHE 5163.)

**EE 5243 Topics in Systems and Control**

*(3-0) 3 hours credit*

**Prerequisite: EE 5143**

Topics may include the following:

- **Topic 1: Adaptive Systems and Control.** Current methods in adaptive systems and control including stability, convergence, robustness, system identification, recursive parameter estimation, and design of parameterized controllers.
- **Topic 2: Multivariable Control Systems.** Analysis and design of multivariable feedback systems, stability, performance, and robustness. Techniques may include LQG, Youla parameterization, and Nyquist-like methods.
- **Topic 3: Optimal Control.** Optimal and suboptimal techniques for controller design using the principle of optimality, min-max principles, and induced norm minimization.
- **Topic 4: Nonlinear Control Systems.** Nonlinear systems modeling, existence and uniqueness of solutions, phase plane analysis, Lyapunov stability, and advanced nonlinear techniques. May be repeated for credit as topics vary.

**EE 5263 Topics in Digital Signal Processing and Digital Filtering**

*(3-0) 3 hours credit*

**Prerequisite: EE 5163 or consent of instructor**

Topics may include the following:

- **Topic 1: Nonlinear Filters.** Order statistic filters, morphological filters, stack/Boolean filters, and other related topics.
- **Topic 2: Adaptive Filtering.** Adaptive linear combiners, adaptive lattices, adaptive quadratic methods, and other related topics.
- **Topic 3: Applications of DSP.** Remote sensing, biomedical image analysis, underwater acoustics, video compression and processing, and analysis of biological signals.
- **Topic 4: Computer Vision.** Image perception, parallel and sequential edge detection in the visual system, shape from shading, stereo vision, image segmentation by textural perception in humans, chain codes, B-splines, 3-D representations. May be repeated for credit as topics vary.

**EE 5353 Topics in Multimedia Signal Processing**

*(3-0) 3 hours credit*

**Prerequisites: EE 5153 or 5163 or consent of instructor**

Topics may include the following:

- **Topic 1: Multimedia Signal Processing and Secure Communications.** Signal representation systems and their based coders; the basic concepts of digital steganography and cryptography; multimedia data hiding and detection techniques; secure information transmission over mobile channels; the various object recognition techniques; and performance and effectiveness assessment.
- **Topic 2: Digital Image Processing.** Study of binary image processing; histogram and point operations; algebraic and geometric image operations; 2-D digital Fourier transforms; convolution; linear and nonlinear filtering; morphological filters; image enhancement; linear image restoration (deconvolution); digital image coding and compression; and digital image analysis. (Formerly EE 5363. Credit cannot be earned for both EE 5353 Topic 2 and EE 5363.)
- **Topic 3: Computer Vision and Application.** Image perception, edge detection in the visual system, future vectors, image enhancement, shape from shading, image segmentation by textural perception in humans, chain codes, B-splines, and classification (SVM and others).
- **Topic 4: Biomedical Image Processing.** Digital image fundamentals, digital image enhancement in the spatial domain, digital image enhancement in the frequency domain, optimal image filtration in the frequency domain, image restoration and order-statistics filters, morphological image processing, processing of microarray images, segmentation and gene-expression calculation, processing of FISH stacked images,
automated analysis of gene copy numbers by fluorescence in situ hybridization, and fundamental methods of image reconstruction by projections and their applications in computerized tomography. (Same as BME 6703. Credit cannot be earned for both EE 5353 Topic 4 and BME 6703.)


**EE 5463 Artificial Neural Networks**

(3-0) 3 hours credit  
Prerequisite: EE 5163 or consent of instructor  
Study of parallel optimization algorithms using Hopfield networks, perceptrons, backpropagation competitive systems, and other unsupervised techniques.

**ME 5013 Topics in Mechanical Engineering**

(3-0) 3 hours credit  
Prerequisite: Graduate standing in engineering or consent of instructor  
Current topics in Mechanical Engineering. May be repeated for credit as topics vary.

**EE 6343 Advanced Topics in Systems and Control**

(3-0) 3 hours credit  
Prerequisite: consent of Graduate Advisor of Record and Dissertation Director  
Current topics in the control area. May be repeated for credit as topics vary.

**ME 5413 Advanced Solid Mechanics**

(3-0) 3 hours credit  
Prerequisite: ME 3813 or an equivalent  
Variational mechanics, energy methods, elementary viscoelastic/plastic problems, and wave propagation. (Formerly EGR 5543. Credit cannot be earned for both ME 5413 and EGR 5543.)

**ME 5463 Fracture Mechanics**

(3-0) 3 hours credit  
Prerequisites: ME 3243 and 3813 or their equivalents  
Introduction to failure and fracture of engineering materials, Griffith's energy balance, stress intensity and strain energy release rate approaches to brittle fracture, Dugdale and Irwin approaches to ductile fracture. Application to modern engineering materials. (Formerly EGR 5313. Credit cannot be earned for both ME 5463 and EGR 5313.)

**ME 5473 Viscoelasticity**

(3-0) 3 hours credit  
Prerequisite: ME 3813 or an equivalent  
Principle of fading memory, integro-differential constitutive laws, mechanical models, time and temperature superposition, and linear and nonlinear methods. Applications to polymers, composites, and adhesives. (Formerly EGR 5323. Credit cannot be earned for both ME 5473 and EGR 5323.)

**ME 5483 Finite Element Methods**

(3-0) 3 hours credit  
Prerequisite: Graduate standing in engineering or consent of instructor  
Derivation and computer implementation of the finite element method for the solution of boundary value problems.

**ME 5613 Advanced Fluid Mechanics**

(3-0) 3 hours credit  
Prerequisite: ME 3663 or an equivalent  
The mathematical models for fluid-flow simulations at various levels of approximation, basic description techniques, and the nature of flow equations and their boundary conditions.

**ME 5653 Computational Fluid Dynamics**

(3-0) 3 hours credit  
Prerequisite: ME 3663 or an equivalent  
Dynamics of incompressible fluid mechanics viscous flow, Navier-Stokes equations, boundary layer theory, and numerical operations for incompressible fluid flow.

**ME 5743 Composite Materials**

(Formerly EGR 5413. Credit cannot be earned for both ME 5743 and EGR 5413.)
ME 5893 Advanced Topics in Sensors and Actuators
(3-0) 3 hours credit
Prerequisite: ME 5843 or consent of instructor
Explore advanced microfabrication approaches for a variety of sensors, such as magnetic, acoustic, mechanical, radiation, thermal, chemical and biological. Different actuation schemes are also covered (electrostatic, piezoelectric, thermal, magnetic and shape-memory-alloys). (Same as EE 5493. Credit cannot be earned for both ME 5893 and EE 5493 when the topic is the same.)

STA 5103 Applied Statistics
(3-0) 3 hours credit
Prerequisite: STA 3523 or consent of instructor
Simple linear model, noncentral distributions, other graphical displays, correlation, multiple regression, nonlinear regression, one-way analysis of variance, fixed effects model, random effects model, higher-order classifications, mixed model, model selection, analysis of covariance, and regression formulation of classification models.

ORO 6097 Research (equivalent to BME 6953 or 6956 at UTSA)
This course consists of independent, original research under the direction of a faculty advisor.
Semester Credit Hours: 1.0–9.0 Variable

ORO 6098 Thesis
Registration for at least one term is required of M.S. candidates.
Semester Credit Hours: 1.0–9.0
Prerequisites: admission to candidacy for Master of Science degree

ORO 7099 Dissertation (equivalent to BME 7993 or 7996 at UTSA)
Registration for at least two semesters (12 SCH) after they have been admitted to candidacy for the doctoral degree is required for Ph.D. candidates.
Semester Credit Hours: 1.0–9.0
Prerequisites: admission to candidacy for Doctor of Philosophy degree in Biomedical Engineering, and consent of supervising professor, program director, and COGS chair

UTSA
See the UTSA Catalog for UTSA official, complete, and up-to-date course descriptions. The Health Science Center is not responsible for UTSA courses.

BME 6011 Research Seminar
Prerequisites: Ph.D. student standing; required of all students for all semesters
Students will hear presentations from outside speakers, BME faculty, as well as their peers. May be repeated for a maximum credit of 18 hours. The grade report for the course is either “CR” (satisfactory performance) or “NC” (unsatisfactory performance).

BME 6953 or 6956 Doctoral Research
3 or 6 Hours Credit
Prerequisites: Ph.D. student standing and consent of instructor and the Graduate Advisor
May be repeated for a maximum credit of 18 hours.

BME 7993 or 7996 Doctoral Dissertation
3 or 6 Hours Credit
Prerequisite: Consent of the Doctoral Advisor of Record and Dissertation Advisor
Registration for at least two semesters is required for Ph.D. candidates. May be repeated for a maximum credit of 18 hours.

Other (Doctoral Research, Dissertation, Supervised Teaching, and Research Seminar)

The Health Science Center

ORTO 5091 Independent Study
This course will be arranged through BME faculty. Topic and mode of study are to be 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.
Semester Credit Hours: 0.5-3.0
Prerequisites: Graduate student standing and consent of instructor

ORTO 6071 Supervised Teaching
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.
Semester Credit Hours: 1.0
Prerequisites: admitted to candidacy and consent of the supervising professor, program director, and COGS chair

ORTO 6090 Seminar
Students will have the opportunity to hear presentations from outside speakers, BME faculty, and peers. A grade of “S” for satisfactory or “U” for unsatisfactory will be assigned at the conclusion of each semester.
Semester Credit Hours: 1.0
Prerequisites: Graduate (Ph.D.) student standing; required of all students during fall and spring semesters while pursuing doctoral studies
Cellular and Structural Biology

The graduate program in Cellular and Structural Biology provides a rewarding opportunity for students wishing to pursue either the M.S. or Ph.D. for preparation for a fulfilling career in biomedicine. Ph.D. students in Biology of Aging; Cancer Biology; Cell & Molecular Biology; and Genetics, Genomics & Development tracks of the Integrated Multidisciplinary Graduate Program (IMGP) are under the oversight of the Committee on Graduate Studies in Cellular and Structural Biology. Students may also apply for admission to an M.S. degree program in Cellular and Structural Biology.

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, development and reproduction, molecular basis of aging, molecular genetics, neurobiology and endocrinology, stem-cell biology, and the anatomical sciences. The curriculum and research experience is aimed at producing trainees with the technical competence and 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 the graduate faculty. In addition, in-depth instruction is also provided on effective seminar presentation as well as grant and manuscript preparation.

The majority of students in the Cellular and Structural Biology graduate program are seeking the Ph.D. degree. The doctoral program combines course work, seminars, journal clubs, and mentored research experiences. The Ph.D. degree is awarded when the candidate has demonstrated an ability to conduct original and independent research, is knowledgeable in the applicable areas of cell and molecular biology, and has completed a minimum of 72 semester credit hours of coursework. Also offered are three Master’s degree programs; one in the anatomical sciences, one in biotechnology, and the third in orthodontics. In all three, both research and academic skills are emphasized. For all M.S. students, an independent thesis and 30 hours of course work are required. There is considerable flexibility in the program in order to accommodate the needs and interests of the individual students.

Research Activities

The department has strong financial support for its basic research projects and has been consistently ranked among the top cell biology programs for funding from the National Institutes of Health. Additional research support has been derived from grants from the American Cancer Society, Veterans Administration, the Department of Defense, and other private foundations. While most Ph.D. students receive financial support during their tenure in the program, all are encouraged to apply for fellowships and grants; several have been successful in obtaining external funding.

A strength of the graduate program in Cellular and Structural Biology is its wide range of research foci. These include cell biology and cell signaling, developmental biology, cancer biology, aging, molecular immunology, human genetics, animal models, reproductive biology, endocrinology, neurobiology, and the anatomic sciences. State-of-the-art laboratories are equipped for biochemical, cellular, genomic, and recombinant DNA research. In addition, there are core facilities for the generation of stem cells, optical microscopy and imaging, genomics, and quantitative morphological analysis, which benefit all students and faculty in the program.

Many of the graduate faculty are members of the Barshop Institute for Longevity and Aging Studies, the Cancer Therapy and Research Center, and the Greehey Children’s Cancer Research Institute. In addition, the graduate faculty members collaborate extensively with individuals from clinical departments in the dental, medical, and nursing schools. Such interactions are particularly important in facilitating human-oriented and translational research programs. Students have the opportunity to gain teaching experience by assisting with courses offered by the department to graduate, medical, health professions, and dental school students.

Requirements for Admission

The Ph.D. students are admitted to graduate school under the IMGP. M.S. students apply directly to the Department of Cellular and Structural Biology.

For the M.S. program:

Completed applications, including scores on the Graduate Record Examination (GRE) General (Aptitude) Test, certified transcripts of all college work, a letter from the applicant stating her/his objectives in graduate study, and three letters of recommendation must be received before March 15 in order for the applicant to be considered for admission the following August. Early application is strongly recommended.

A GPA score of 3.0 and a competitive score on the GRE Aptitude Test (current average is 1100) and previous research experience are preferred. Applicants must have a bachelor’s degree or an equivalent degree and credit for the following courses:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>Two years as required for science majors</td>
</tr>
<tr>
<td>Chemistry</td>
<td>One year of general inorganic and a course in organic chemistry</td>
</tr>
<tr>
<td>Physics</td>
<td>One year as required for science majors</td>
</tr>
<tr>
<td>Mathematics</td>
<td>At least one semester of calculus</td>
</tr>
</tbody>
</table>

In unusual cases, students who do not meet all of the above requirements may be considered for admission.

Curriculum for M.S. Candidates

The graduate program in Cellular and Structural Biology offers a Master’s Degree in Biomedical Sciences in which a student may follow one of three previously noted basic tracks. The Bio-
technology track is designed for the student who is interested in technical and/or supervisor positions in biotechnology companies, forensic labs, or in academic positions that require extensive knowledge of molecular biology. By comparison, the Anatomy track is geared towards an individual interested in teaching anatomical sciences; both research and educational skills are emphasized. Students in the Orthodontics track have previously received the D.D.S. degree or its equivalent and are enrolled in the postgraduate program in the Department of Orthodontics. They a) complete required course work and laboratory research training, and b) demonstrate their clinical expertise before being awarded the M.S. degree and establishing a private practice or entering academic dentistry.

Curriculum for Ph.D. Candidates
The majority of students in the graduate program are seeking the Ph.D. degree. Four of the IMGP tracks are housed in Cellular and Structural Biology: Biology of Aging; Cancer Biology; Cell & Molecular Biology; and Genetics, Genomics and Development. The program combines coursework, seminars, journal clubs, and mentored research experiences. The student is admitted to candidacy after completing required coursework, passing an oral qualifying exam, and demonstrating proficiency in independent laboratory research. The qualifying examination is based on a grant proposal written by the student and covers general scientific knowledge as well. The Ph.D. degree is awarded when the candidate has demonstrated an ability to conduct original and independent research, is knowledgeable in the general areas of molecular cell biology and her/his specialization, and has completed a minimum of 72 semester credit hours of course work.

The Ph.D. typically requires 4–6 years of training. In the first year of study, Ph.D. students are in the general IMGP program. They must complete the core course, Fundamentals of Biomedical Science (INTD 5000). During this time, they must also complete laboratory rotations and identify a mentor.

All four tracks in the Cellular and Structural Biology program share common curricular elements. The students in our program are required to take Colloquium, a course designed to familiarize them with reading and presenting scientific literature. In addition, all students take a statistics course, Experimental Design and Data Analysis and a scientific writing course. Each track has a required core course in the given area of specialization. Additional required and elective courses are taken to augment the research training. In addition, Ph.D. students are expected to teach one semester in one of the graduate or professional courses offered by the department. The overall program is designed to produce a diverse and talented scientist who will be able to choose among career opportunities in industry, education, or other arenas.

Financial Support of Graduate Students
Currently, students pursuing Ph.D. degrees in the Graduate Program are supported by training grants from the National Institutes of Health, research grants of faculty, and state stipends. The current stipend is $26,000 per year.

Postgraduate Positions of Program Graduates
Graduates have successfully competed for postdoctoral fellowships at prestigious institutions and for positions in top-notch biotech companies, including the National Institutes of Health, Abbott Laboratories, Burroughs-Wellcome, and world-class universities. This has allowed them to successfully obtain rewarding research or teaching positions in either an academic or industrial setting. Others have chosen alternative opportunities, such as patent law, medical school, or dental school.

IMGP Courses
INTD 5000 Fundamentals of Biomedical Sciences
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 Multidisciplinary Graduate Program.
Semester Credit Hours: 8.0
Prerequisites: Consent of instructor

INTD 5008 Laboratory Rotations
This course provides an opportunity for students to participate in research activities in the laboratories of faculty members in different tracks to learn laboratory skills and to gain an introduction to the research fields of faculty members.
Semester Credit Hours: 2.0

INTD 6002 Ethics in Research
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.
Semester Credit Hours: 0.5

Courses Required for All Cellular and Structural Biology Tracks

Cellular & Structural Biology

CSBL 5089 Graduate Colloquium
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.
Semester Credit Hours: 2.0

CSBL 5007 Methods in Cell Biology
Through a combination of lectures and demonstrations, the instructors will introduce students to techniques, which are cur-
CSBL 5095  Experimental Design and Data Analysis

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 range tests, tests of the assumptions of parametric analyses, advanced forms of the analysis of variance, linear regression, and correlation analysis.

Semester Credit Hours: 2.0

CSBL 5077  Scientific Writing

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.

Semester Credit Hours: 2.0

CSBL 6097  Research

Independent, original research under the direction of a faculty advisor.

Semester Credit Hours: 1.0–9.0

CSBL 6071  Supervised Teaching

Participation in the teaching program of the first-year medical, dental or allied health curriculum. Semester hours vary depending on the time spent in teaching.

Semester Credit Hours: 1.0–9.0

CSBL 6090  Seminar

Attendance and participation in the regularly scheduled department seminar series is required during each fall and spring semester. During the first spring semester, students are required to write a literature review on a topic of their choice and a research grant proposal. During the second fall semester, students must write and orally defend a mock postdoctoral proposal (qualifying exam). During all subsequent spring semesters, students are required to present a seminar cover-
CSBL 6069  Cancer Biology Core II
This course is designed to provide an overview of the molecular alterations identified in the most common cancer types in humans. The general guidelines on recent diagnosis and therapeutic advances in oncology will be presented. In addition, it will offer an overview on special populations affected by cancers or by less frequent but biologically informative cancers and basic concepts related to experimental tools relevant to cancer biology, including mouse models of tumors and molecular profiling. 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 Track.
Semester Credit Hours: 4.0
Prerequisites: Cancer Biology Core I

Cell & Molecular Biology
INTD 5007  Advanced Cell and Molecular Biology
This course offers students the opportunity to gain in-depth fundamentals of cell and molecular biology necessary to critically read, understand, and evaluate the current research on each of the topics covered. The topics include cell surface receptor-mediated signal transduction, nuclear receptor signaling, mitochondria and apoptosis, stem cell and differentiation, and DNA damage response and cell cycle checkpoints. An important focus of this course is to help students bridge the gap between didactic learning and analytical thinking as a graduate student. The course faculty uses a variety of techniques to introduce students to a critical reading and discussion of the current research literature.
Semester Credit Hours: 3.0
Prerequisites: INTD 5006 or special permission from the instructor

Genetics, Genomics & Development
CSBL 6064  Genes and Development (also offered as four individual modules CSBL 5023 - Development, CSBL 5024 - Genomics, CSBL 5025 - Genetics, and CSBL 5026 - Stem Cell Biology)
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.
Semester Credit Hours: 4.0

Electives for CSBL Tracks
Any of the Track Core courses:

CSBL 5083  Practical Optical Microscopy
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.
Semester Credit Hours: 1.0

CSBL 6021  Animal Models
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.
Semester Credit Hours: 3.0

CSBL 6165  Medical Genetics
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.
Semester Credit Hours: 3.0
Prerequisites: A basic background in genetics, cell biology, and biochemistry

One of the professional anatomy courses:

CSBL 5031  Histology
This course consists of a series of lectures and laboratory sessions that cover current concepts in cell biology and human histology. Basic information on the structure and function of cells and tissues is presented in the lectures; this is followed by staff-supervised laboratory sessions emphasizing the recognition of cells and the fundamental tissues. Each student is provided with a box of microscopic slides of human tissues. The laboratory sessions are accompanied by microscopic slide
demonstrations and/or television tapes of tissues under study. Supplemental study material such as films, television tapes, and transparent photomicrographics are available upon request through the Audiovisual Department and the Learning Resources Center. The general purpose of this course is to offer the student the opportunity to become acquainted with basic cytology and histology of normal human tissues, thereby developing a firm foundation of knowledge for the understanding of normal and disease processes.  

Semester Credit Hours: 5.0

CSBL 5032 Dental Histology
Through lectures, demonstrations, and laboratory work, students in this course will be given the opportunity to study the microscopic structure of the basic tissues and organs of the human body, followed by details of the embryologic development and microscopic structure of the various organs of the oral cavity. Current concepts in cellular biology are presented during the portion of the course in which they are most relevant. The general purpose of this course is to give students the opportunity to become acquainted with the basic embryology, cytology, and histology of normal human tissues and organs, thereby providing a foundation of knowledge for the understanding of normal activity and disease processes.  

Semester Credit Hours: 5.0

CSBL 6094 Advanced Neuroanatomy
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.
Semester Credit Hours: 2.0

Courses required for all four Cellular and Structural Biology tracks

CSBL 5007 Methods in Cell Biology
Through a combination of lectures and demonstrations, the instructors will introduce students to techniques that 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.
Semester Credit Hours: 1.0

CSBL 5077 Scientific Writing
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.
Semester Credit Hours: 2.0

CSBL 5089 Graduate Colloquium
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.
Semester Credit Hours: 2.0

CSBL 5095 Experimental Design and Data Analysis
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 range tests, tests of the assumptions of parametric analyses, advanced forms of the analysis of variance, linear regression, and correlation analysis.
Semester Credit Hours: 2.0

CSBL 6071 Supervised Teaching
Participation in the teaching program of the first-year medical, dental or allied health curriculum. Semester hours vary depending on the time spent in teaching.
Semester Credit Hours: 1.0–9.0

CSBL 6090 Seminar
Attendance and participation in the regularly scheduled department seminar series is required during each fall and spring semester. During the first spring semester, students are required to write a literature review on a topic of their choice and a research grant proposal. During the second fall semester, students must write and orally defend a mock postdoctoral proposal (qualifying exam). During all subsequent spring semesters, students are required to present a seminar covering their progress in research.
Semester Credit Hours: 1.0

CSBL 6097 Research
Independent, original research under the direction of a faculty advisor.
Semester Credit Hours: 1.0–9.0
CSBL 7099  Dissertation
Registration for at least two terms is required of Ph.D. candidates.
Semester Credit Hours: 0.5–9.0
Prerequisites: admission to candidacy for Doctor of Philosophy degree

Electives
Any of the Track Core courses:

CSBL 5083  Practical Optical Microscopy
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.
Semester Credit Hours: 1.0

CSBL 6021  Animal Models
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.
Semester Credit Hours: 3.0

CSBL 6165  Medical Genetics
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.
Semester Credit Hours: 3.0
Prerequisites: A basic background in genetics, cell biology, and biochemistry

One of the professional anatomy courses:

CSBL 5031  Histology
This course consists of a series of lectures and laboratory sessions that cover current concepts in cell biology and human histology. Basic information on the structure and function of cells and tissues is presented in the lectures; this is followed by staff-supervised laboratory sessions emphasizing the recognition of cells and the fundamental tissues. Each student is provided with a box of microscopic slides of human tissues. The laboratory sessions are accompanied by microscopic slide demonstrations and/or television tapes of tissues under study. Supplemental study material such as films, television tapes, and transparent photomicrographs are available upon request through the Audiovisual Department and the Learning Resources Center. The general purpose of this course is to offer the student the opportunity to become acquainted with basic cytology and histology of normal human tissues, thereby developing a firm foundation of knowledge for the understanding of normal and disease processes. Laboratory fee: $32. Microscope fee: $48.
Semester Credit Hours: 5.0

CSBL 5032  Dental Histology
Through lectures, demonstrations, and laboratory work, students in this course will be given the opportunity to study the microscopic structure of the basic tissues and organs of the human body, followed by details of the embryologic development and microscopic structure of the various organs of the oral cavity. Current concepts in cellular biology are presented during the portion of the course in which they are most relevant. The general purpose of this course is to give students the opportunity to become acquainted with the basic embryology, cytology, and histology of normal human tissues and organs, thereby providing a foundation of knowledge for the understanding of normal activity and disease processes. Lab fee: $32. Microscope fee: $48.
Semester Credit Hours: 5.0

CSBL 6094  Advanced Neuroanatomy
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.
Semester Credit Hours: 2.0

IMGP Courses

INTD 5000  Fundamentals of Biomedical Sciences
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 Multidisciplinary Graduate Program.
Semester Credit Hours: 8.0
Prerequisites: Consent of instructor

INTD 5008  Laboratory Rotations
This course provides an opportunity for students to participate in research activities in the laboratories of faculty members in different tracks to learn laboratory skills and to gain an introduction to the research fields of faculty members.
Semester Credit Hours: 2.0

INTD 6002  Ethics in Research
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
Prerequisites:
Semester Credit Hours: 4.0
Also offered as four individual modules:

**CSBL 5024 Genomics**
This course covers historical aspects of the Genomic project and high throughput methods (microarray, SAGE, proteomics, etc.) to perform global analysis of gene expression; the course also provides an overview of new biological fields such as systems biology, functional genomics, and comparative genomics. The students will have the opportunity to become familiarized with tools, methods, databases, and approaches used to extract biological information from global analyses. Hands-on training on biological databases and classes covering examples of the
use of genomics to answer questions related to cancer and diseases is an important part of the course, helping the students to visualize how genomics can be used in their own research projects.  
*Semester Credit Hours: 1.0*

**CSBL 5025 Genetics**

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.  
*Semester Credit Hours: 1.0*

**CSBL 5026 Stem Cell Biology**

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’s 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.  
*Semester Credit Hours: 1.0*

### Clinical Investigation

The Master of Science Degree Program in Clinical Investigation (MSCI) trains clinicians and health care professionals in the conduct of clinical investigations. Applicants to the Clinical Investigation program must provide proof of a degree in medicine, dentistry, graduate nursing, health professions, or evidence of concurrent enrollment in the Graduate School of Biomedical Sciences. A GRE score is not required. Enrollees in the MSCI Program must complete a mentored research project over two years while participating in a highly integrated set of 10 didactic courses leading to the MSCI degree. The proposed courses are:

- Responsible Conduct of Patient-Oriented Clinical Research
- Research Methodology (3 semesters)
- Biostatistics (3 semesters)
- Integration of Molecular Biology with Clinical Research (1 semester)
- Data Management, Quality Control, and Regulatory Issues
- Scientific Writing
- Health Services Research

Students will have the opportunity to become expert in the design and conduct of outstanding multidisciplinary patient-oriented research studies involving direct interaction with human subjects in culturally diverse settings.

### Courses

**MEDI 5070  Responsible Conduct of Patient-Oriented Clinical Research**

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.  
*Semester Credit Hours: 2.0*  
*Cross-listed/Concurrent INTD 5070*

**MEDI 5071  Patient-Oriented Clinical Research Methods-I**

This interdisciplinary course is the first in a three-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.  
*Semester Credit Hours: 2.0*  
*Cross-listed/Concurrent INTD 5071*

**MEDI 5072  Patient-Oriented Clinical Research Biostatistics-I**

This interdisciplinary course is the first in a three-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.  
*Semester Credit Hours: 2.0*  
*Cross-listed/Concurrent INTD 5072*

**MEDI 5073  Integrating Molecular Biology with Patient-Oriented Clinical Research**

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.
MEDI 5074  Data Management, Quality Control, and Regulatory Issues
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 following for the student’s own mentored research: design of a relational database; a data dictionary, a manual of operations, and quality control procedures; and a budget for a research project
3. introduction to bioinformatics

MEDI 5075  Scientific Communication
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.

MEDI 6060  Patient-Oriented Clinical Research Methods-2
This interdisciplinary course is the second in a three-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 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.

MEDI 6061  Patient-Oriented Clinical Research Biostatistics-2
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.

MEDI 6064  Grantsmanship and Peer Review
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.

MEDI 6065  Health Services Research
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. Critically appraise and interpret published reports of health services research.
4. Discuss current issues in HSR.
5. Incorporate health services concepts, methods, or tools into current research.
MEDI 6067  Genetics and Genetic Epidemiology
This course focuses on concepts and methods used in patient-oriented genetic studies. Delivered in eight two-hour sessions, topics include: (1) Genetic Epidemiologic Studies, (2) Applications of Microarray Technologies, and (3) Pharmacogenetics.

MEDI 6068  Cross-Cultural Adaptation of Research Instruments
This course guides students through the multiple steps necessary to successfully cross-culturally adapt research instruments. Delivered in eight two-hour sessions focuses on how to assure content, semantic, technical, conceptual, and criterion equivalence of individual items and scales.

MEDI 6097  Research
The Research Course is set up for the student to conduct their Mentored Research Project with their faculty advisor. 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 papers and/or a thesis. Students will take three semester credit hours of research during each semester of the Master of Science in Clinical Investigation Degree Program.

INTD 5000  Fundamentals of Biomedical Sciences
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 Multidisciplinary Graduate Program.

INTD 5043  Fundamentals of Neuroscience II: Systems Neuroscience
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.

CSBL 6021  Animal Models
This course is designed for graduate students who need a greater understanding of how to utilize various animal models including C. elegans, drosophila, xenopus laevis oocytes, mouse, rat, naked mole rat, marmoset, and other non-human primates to study aging, human diseases, animal behavior, and various biological problems.
Microbiology & Immunology

Courses

I. Definition of Microbiology and Immunology (MI) Track

The Microbiology and Immunology (MI) Ph.D. track is part of the Health Science Center-wide Integrated Multidisciplinary Graduate Program (IMGP) at UTSA. The MI Ph.D. Track 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.

II. MI Track COGS

The MI Ph.D. track is directed by the track Committee on Graduate Studies (COGS). COGS’s duties include the development and maintenance of curriculum, monitoring student progress, approval selection of Supervising Professors, mediating disputes between students and Supervising Professors, reviewing qualifications for membership on the track Graduate Faculty, and other pertinent policy considerations. Faculty members in the MI track participate in the IMGP student admissions process.

III. MI Track Mentors

The MI Track faculty mentors come from a wide variety of departments and institutions in the San Antonio area, including the Departments of Microbiology and Immunology, Medicine, Pathology, Cell and Structural Biology at the Health Science Center, the Department of Biology at UTSA, the Greehey Children’s Cancer Research Institute, San Antonio Cancer Institute, and Southwest Foundation for Biomedical Research.

IV. MI Track Curriculum

1. Course Work

After finishing the IMGP courses INTD 5000 - Fundamentals of Biomedical Sciences and INTD 5008 - Laboratory Rotations, students who choose to enter the MI track are required to take several MI track-specific courses, including “Core Concepts in Microbiology & Immunology” (4 SCH), “Building Scientific Thinking Skills” (2 SCH) and “Ethics in Scientific Research” (0.5 SCH), and one advanced course (with at least 1 SCH) from any track. Please note that although the 4 SCH track core concept course will be taught in four modules for the convenience of students from other tracks, all students in the MI track are required to take all four modules and it will be graded as a single course.

2. Formation of Temporary Supervising Committee

After a student completes the required rotations and chooses a supervising professor (subject to approval by MI Track COGS), the student may enroll in MI Track Research to begin dissertation research under the supervision of her/his Temporary Supervising Professor. By the end of the summer semester of year 1, each student must form a Temporary Supervising Committee, which assists the student in developing a dissertation research project, meets as required to assess the student’s research progress, and serves as the core of the student’s Qualifying Examination Committee. The committee must consist of the Temporary Supervising Professor and two other members of the Microbiology & Immunology Track Graduate Faculty. Members are selected by the student and her/his supervising professor and must be approved by COGS. Changes in the composition of the Temporary Supervising Committee are allowed at any time but are subject to the approval of COGS. The Temporary Supervising Committee functions until the student’s Dissertation Supervising Committee is formed (usually in the student’s third year). Members of the Temporary Committee may become members of the Dissertation Committee.

3. Advancement to Ph.D. Candidacy

Students can petition COGS for admission to candidacy for the Ph.D. degree only after passing the Qualifying Examination. The petition must be made to the Chair of COGS. The approval of COGS for admission to candidacy is based on criteria, including: (a) successful completion of the Qualifying Examination, (b) a positive evaluation of the student’s potential for independent research and (c) satisfactory performance in formal course work (including the elective advanced course). A student cannot advance to candidacy if he/she is on academic probation. When all of these criteria are met, COGS recommends to the Dean of the Graduate School that the student be admitted to candidacy.

4. Dissertation

After entering into candidacy, a student is to submit to the Chair of COGS a list of at least five individuals to serve as Dissertation Supervising Committee members for the student’s dissertation research. The Dissertation Supervising Committee along with the dissertation proposal must be approved by COGS and the Graduate Faculty Council (GFC). The dissertation proposal is intended to serve as a framework for the dis-
sertation project, not as a rigid, detailed agenda for the student’s research efforts.

When the Dissertation Supervising Committee is satisfied that the research accomplished by the student is of sufficient quality and quantity to constitute a significant contribution to the field, formal permission is granted to the student to write her/his dissertation. If the Dissertation Supervising Committee judges the dissertation to be suitable for defense, the student must submit a Request for Final Oral Examination, with all of the appropriate signatures approving the dissertation and the examination date, to the Dean of the Graduate School of Biomedical Sciences.

A public announcement of the Final Oral Examination is distributed by the Dean of the Graduate School so that all interested persons may attend the public defense. After presenting her/his dissertation research in a departmental seminar, the candidate fields questions from members of the audience who are not on the Dissertation Supervising Committee. Next, the Dissertation Supervising Committee meets with the candidate in a closed-door session to administer an intensive and detailed oral examination of the dissertation and the dissertation research. The committee members then vote on the candidate’s success or failure on the Final Oral Examination. If the student passes the Final Oral Examination, the outcome of the Dissertation Supervising Committee’s deliberations are sent to COGS, and if acceptable, the recommendation to grant the Ph.D. is forwarded to the Graduate Faculty Council.

Required Courses for the Ph.D. Degree

INTD 6002  Ethics in Research
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.
Semester Credit Hours: 0.5

MICR 5003  Core Concepts in Microbiology and Immunology
This course will provide an integrated view of the microbial world and the mammalian immune response. Students will receive a foundation in the basic concepts and experimental approaches that are crucial for understanding core concepts in pathogenic microbiology, virology, parasitology, mycology, and immunology through directed readings and didactic instruction. A special emphasis will be placed on integrating knowledge from each discipline using specific examples to illustrate important concepts in host-pathogen interaction.
Semester Credit Hours: 4.0

MICR 5025  Eukaryotic Pathogens
The course will provide students with the opportunity to gain a basic comprehensive understanding of parasitology and mycology. The first part of this course will focus on virulence mechanisms and the host immune response with respect to a variety of parasites that cause major human diseases. The second part of this course will cover several important areas of medical mycology including molecular biology, diagnostic/epidemiology, mating/phenotypic switching, morphology, pathogenesis, and antifungal therapies.
Semester Credit Hours: 1.0

MICR 5026  Pathogenic Microbiology
This is an introductory course in microbial pathogenesis focusing on bacterial pathogens that are important in human disease. Students will receive a foundation in the basic concepts and experimental approaches that are crucial for understanding the discipline through directed readings and didactic instruction. Specific concepts, strategies, and mechanisms used by human bacterial pathogens to cause disease will be illustrated.
Semester Credit Hours: 1.0

MICR 5027  Immunology
This course will focus on fundamental concepts in immunology with emphasis on experimental strategies for elucidating the cellular and molecular mechanisms underlying immune responses. Lecture topics will illustrate important concepts in innate immunity, cytokine signaling, antigen recognition and presentation, the genetics of immune receptors and the major histocompatibility complex, immunity to infection, and immunopathology (e.g., hypersensitivity, autoimmunity, immunodeficiency, etc.).
Semester Credit Hours: 1.0

MICR 5028  Virology
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.
Semester Credit Hours: 1.0

MICR 5029  Building Scientific Thinking Skills
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.
Semester Credit Hours: 2.0
MICR 5030  Microbiology and Immunology
Track Journal Clubs

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.

Semester Credit Hours: 0.5

MICR 5090  Acquiring Presentation Skills

This course is designed to prepare the student for giving a scientific lecture or seminar. Students present at least one lecture per academic year. Each student is coached and evaluated by faculty members in terms of both effective public speaking and critically analyzing scientific data. In addition, the seminars are videotaped. Students are required to attend all seminars.

Semester Credit Hours: 1.0

MICR 6071  Supervised Teaching

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.

Semester Credit Hours: 1.0–9.0

Prerequisites: consent of chair of department

MICR 6097  Research

Independent, original research under the direction of faculty advisor. May be conducted in bacteriology, virology, mycology, parasitology, and immunology.

Semester Credit Hours: 1.0–9.0

Prerequisites: consent of chair of department

MICR 7099  Dissertation

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.

Semester Credit Hours: 1.0–9.0

Prerequisites: admission to candidacy for the Doctor of Philosophy degree

Electives

MICR 5011  Medical Microbiology

This lectures-only course is designed primarily for medical students; graduate credit will be permitted only under unusual circumstances. Broad coverage of human immunology, virology, bacteriology, mycology and parasitology with emphasis upon problems likely to be encountered in medical practice.

Semester Credit Hours: 5.0

Prerequisites: consent of instructor

MICR 5091  Current Topics in Microbiology and Immunology

Students will be given an opportunity to gain in-depth understanding of selected topics in microbiology and immunology through a combination of library research and discussion with faculty.

Semester Credit Hours: 3.0

Prerequisites: consent of instructor

MICR 5092  Special Problems in Microbiology

The course provides an opportunity for the student to engage in a special research project or to develop proficiency in the use of certain laboratory methods.

Semester Credit Hours: 1.0–9.0

Prerequisites: consent of instructor

MICR 6022  Advanced Microbial Physiology

This course consists of readings and conferences. The course includes current concepts and experimental studies in microbial structure-function relationships and regulatory mechanisms.

Semester Credit Hours: 2.0

Prerequisites: Microbial Physiology and consent of instructor

MICR 6024  Advanced Microbial Genetics

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.

Semester Credit Hours: 1.0–4.0

Prerequisites: Microbial Genetics and consent of instructor

MICR 6026  Advanced Molecular Genetics of Eukaryotic Pathogens

This course will cover the major research methods and techniques used to study human fungal pathogens.

Semester Credit Hours: 2.0

MICR 6043  Advanced Topics in Virology

In-depth study of selected topics in animal virology at the molecular level.

Semester Credit Hours: 2.0

MICR 6050  Advanced Topics in Tumor Immunology

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.

Semester Credit Hours: 1.0

MICR 6052  Advanced Immunobiology

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.

Semester Credit Hours: 2.0

Prerequisites: Introduction to Immunology or consent of instructor

^Top
The program in Molecular Medicine offers a research oriented, interdisciplinary course of study leading to the M.S. and Ph.D. degrees. The faculty is composed of both basic and clinical scientists drawn from the Departments of Molecular Medicine, Biochemistry, Cellular and Structural Biology, Medicine, Surgery, Pathology, and Physiology. The objective of the program is to train future scholars in the use of molecular biological approaches for the investigation of fundamental biomedical questions associated with the diagnosis and treatment of human diseases. Through completion of the program, students will have the opportunity to prepare for careers as independent investigators and teachers in cellular and molecular medicine.

The research interests of the faculty cover many areas of molecular and cell biology, including the molecular genetic basis of cancer and tumorigenesis, mechanisms of cancer metastasis, animal models of disease, transcriptional regulation, development of anticancer drugs, control of mammalian development, bone cell biology in health and disease, mouse genetics, molecular biological basis of aging, DNA repair, genetic recombination, eukaryotic cell-cycle regulation, protein structure, protein degradation, and signal transduction.

The laboratories of the molecular medicine program faculty members are located in The University of Texas Institute of Biotechnology and the Institute for Drug Development in the Texas Research Park, as well as at the main campus of the Health Science Center. State-of-the-art facilities for cellular and molecular biological research and biochemistry are also available, as well as specialized instrumentation required for electron, fluorescence, confocal, and atomic force microscopy; the generation of transgenic and chimeric mice; biomolecular interaction studies; biopolymer synthesis; peptide and nucleic acid sequencing; and protein purification.

Admission Requirements
In addition to the requirements for admission to the Graduate School of Biomedical Sciences, applicants to the molecular medicine program must have received credit for the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Requirement</th>
</tr>
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<tbody>
<tr>
<td>Biology*</td>
<td>Two years as required for science majors</td>
</tr>
<tr>
<td>Biochemistry, Molecular Biology, or Genetics*</td>
<td>One year</td>
</tr>
<tr>
<td>Chemistry*</td>
<td>One year of general inorganic and a course in organic chemistry. Analytical and physical chemistry are recommended.</td>
</tr>
<tr>
<td>Mathematics</td>
<td>One semester of calculus recommended</td>
</tr>
</tbody>
</table>

*Courses should include laboratory experience.

Curriculum
During the first year, students attend core courses in advanced molecular biology, molecular medicine, and laboratory techniques. At the same time, they are introduced to research through a series of rotations in the laboratories of individual faculty members. At the end of the first year, students must pass an oral Comprehensive Examination covering material presented in the first-year classes. Following successful completion of the Comprehensive Examination, each student selects a faculty advisor and begins doctoral research. During their third year in the program, students must pass the Qualifying Examination, which consists of a written dissertation proposal followed by defense of the proposal in an oral examination. Completion of course work, the comprehensive and qualifying examinations, and doctoral research should take four to five years. A minimum of 72 semester credit hours is required to obtain a Ph.D.

Electives*
*The specific optional electives will be determined by the student and her/his faculty mentor.

Required Courses for the Ph.D. Degree

**MMED 6016  Advanced Molecular Cell Biology**
This course is a study of the organization and function of the genome at the molecule level. The topics include: gene structure, transcriptional control, RNA structure and processing, translation, genome replication and repair, the molecular biology of tumors, and the molecular genetics of development. This is a general 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.
Semester Credit Hours: 5.0

**MMED 5001  Molecular Medicine**
This course is designed to integrate the fundamental principles of molecular biology with modern medicine. The topics will include the basics of gene mapping, tactics used in the cloning of genes involved in diseases, the analysis of the structure and function of genes in relation to the characteristics of various diseases, alterations of the genome in disease states, and potential strategies to exploit this knowledge in gene therapy. This course will build upon the basic knowledge presented in Advanced Molecular Biology using specific examples of current and future applications of this new knowledge.
Semester Credit Hours: 3.0

**MMED 6091  Seminars in Molecular Medicine**
Registration every term in residence is required of all Molecular Medicine students.
Semester Credit Hours: 1.0
MMED 5015  Modern Methods in Cell and Molecular Biology
This course is designed to introduce students to the basic experimental techniques used in the study of cell biology, molecular biology, and protein analysis. This is a hands-on laboratory course that utilizes a special student laboratory and specialized equipment.
Semester Credit Hours: 1.0

MMED 5019  Graduate Colloquium in Molecular Medicine
A course designed to provide graduate students with experience in seminar preparation and presentation with an emphasis on critical evaluation of data and delivery of material.
Semester Credit Hours: 1.0

INTD 6002  Ethics in Research
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.
Semester Credit Hours: 0.5

MMED 6071  Supervised Teaching
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.
Semester Credit Hours: 1.0–9.0

MMED 6097  Research
Independent, original research under the direction of faculty advisor.
Semester Credit Hours: 1.0–9.0

MMED 6098  Thesis
Research under the supervision of a mentor to complete the requirements for an M.S. degree. Registration for at least one term is required of M.S. candidates.
Semester Credit Hours: 1.0–9.0

or

MMED 7099  Dissertation
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.
Semester Credit Hours: 1.0–9.0
Pharmacology Track

It is fair to say that pharmacology has touched the lives of just about everyone in the developed world. Drugs comprise the largest arsenal for the treatment of disease by the physician. At some point in their life, virtually everyone has taken a drug for medical purposes. As an experimental discipline, pharmacology is relatively young, having been established in the mid 1800s. Despite its youth, pharmacology has been one of the greatest medical successes of the twentieth century. Although in a short time we have come a long way in understanding drug action, we still have a long way to go to develop drugs that treat disease without adverse effects and improve quality of life.

Of all the basic science specialties, pharmacology is best-positioned as an interdisciplinary and translational discipline. In the broadest sense, pharmacology is the study of how chemical agents, both natural and synthetic (i.e., drugs), affect biological systems. This encompasses investigation of the derivation, chemical properties, physiological and behavioral effects, mechanisms of action, biological transformations, and the therapeutic and non-therapeutic uses of drugs. Pharmacology has evolved as a scientific discipline from one that merely described the overt effects of biologically active chemicals to one that explores the mechanisms, at a molecular level, through which drugs cause biological effects. It is now becoming possible, for example, to understand the specific structural sites on a protein with which a drug interacts to alter the function of that protein, be it an enzyme, receptor, etc. Training in pharmacology, therefore, includes an understanding of various basic biomedical disciplines such as biochemistry, molecular and cellular biology, and physiology. Moreover, a knowledge of pathophysiology is an essential part of training since a key objective of pharmacology is to further the understanding of both the cause and treatment of disease. Methodologies used in pharmacological research range from molecular biological techniques and model cell approaches to whole-animal studies in which electrophysiological, neurochemical, and behavioral techniques are utilized. However, although techniques may overlap with other disciplines, it is the emphasis on drugs that sets pharmacology apart.

Consistent with the interdisciplinary and translational nature of pharmacology, pharmacologists can be found working in a large variety of occupations. In addition to the traditional academic research laboratory in a university setting, pharmacologists are highly desired in industry for drug development research and function as journal editors, scientific consultants, teachers, and as policy advisors and administrators in the government sector.

Please visit our Web site (http://pharmacology.uthscsa.edu) for more information about pharmacology and the wealth of opportunities that a doctoral degree in pharmacology can provide.

Research Activities

The faculty of the Pharmacology Graduate Program is composed of more than 40 scientists from the Pharmacology Department as well as several other departments at the Health Science Center. Research activities in the department are based upon a multidisciplinary approach to many areas of biomedical research with major strengths in the areas of neuropharmacology, molecular pharmacology, aging, metabolic regulation, and cancer pharmacology. Our faculty use approaches that range from the molecular and cellular through electrophysiology and systems to behavior. Because of their expertise with different approaches, many of our faculty collaborate with each other on integrated research projects. This enables our students to receive training in all these areas and gain an appreciation of the effects of drugs at all these levels of analysis. Our goal is not only to train students to become accomplished scientists in a specific area of research but also to become independent, creative, and productive thinkers. Accomplishing this goal has enabled our graduates to move on to rewarding and successful careers in academia, the pharmaceutical industry, and government. We are very excited about recent developments in pharmacology that allow new and challenging means of exploring the biological effects of drugs.

Please visit our Web site (http://pharmacology.uthscsa.edu) to learn about the specific research projects of each of the faculty.

Funding for these research projects comes from grants and contracts awarded to the Health Science Center on the behalf of individual investigators. The majority of the current funding comes from the National Institutes of Health, including grants from the National Institute on Drug Abuse; the National Heart, Lung and Blood Institute; the National Institute of Neurological and Communicative Disorders and Stroke; the National Institute of Mental Health; the National Institute on Alcohol Abuse and Alcoholism; and the National Institute of General Medical Sciences. At present, additional support for research is being provided by the American Heart Association, the Howard Hughes Medical Institute, the Pharmaceutical Manufacturers Association Foundation, various pharmaceutical companies, and the Department of Defense.

Requirements for Admission

Students are admitted into the Integrated Multidisciplinary Graduate Program (IMGP). Please see the requirements for admission to the IMGP for information.
Following admission to the IMGP and completion of the core curriculum, students may choose a mentor in the Pharmacology Track and follow the Pharmacology Curriculum (see below).

Financial Support for Graduate Students
For the first year, financial support is provided by the IMGP. After the first year, students are supported by their mentors. Continued support is based upon maintenance of good academic standing and full-time enrollment in the graduate school.

Postgraduate Positions for Program Graduates
Most graduates of the doctoral program in pharmacology have remained in biomedical research. Recent graduates are engaged in postdoctoral training throughout the United States and those who have completed postdoctoral training hold positions as faculty in medical and dental schools or are employed by pharmaceutical companies, private research foundations, biotechnology firms, and government agencies.

Curriculum
A minimum of 72 semester credit hours is required for the attainment of the Doctor of Philosophy degree. Special emphasis is placed on flexibility in the graduate degree program in Pharmacology so it may relate to the interests, purposes, and needs of individual students. The curriculum is designed to give students a fundamental background in the basic biological sciences through the core curriculum of the IMGP that is followed by selection of specific courses in Pharmacology. Please visit our Web site [http://pharmacology.uthscsa.edu](http://pharmacology.uthscsa.edu) for a complete list of current course offerings. In addition to didactic training, students have the opportunity to obtain significant laboratory research experience, beyond that provided by the IMGP rotations, in the summer semester of the first year.

Upon successful completion of the required coursework, students are required to pass a comprehensive qualifying examination in pharmacology that consists of written (NIH NRSA-style grant application) and oral components. The overall objective of the examination is to determine whether the student has a sufficient basis of knowledge, a command of the scientific method, and originality of thought necessary for advancement to the subsequent phase of mentored, thesis work as a Ph.D. candidate. The written component of the qualifying exam is generally begun in January of the second year and the oral component must be completed by June 30 of the second year.

Following successful completion of the qualifying examination, students are considered for admission to Ph.D. candidacy. Admission to candidacy requires 1) satisfactory completion of all required courses with a cumulative GPA of at least 3.0 in all course work undertaken since matriculation in the program; 2) successful completion of the qualifying examination; and 3) report by the student's chosen supervising professor that the student has clearly demonstrated the potential for productive and independent investigation.

After admission to candidacy for the Ph.D. degree, students develop a dissertation research proposal and conduct research under the direction of their supervising professor and a dissertation supervisory committee. The supervisory committee reviews the student's choice of research for the dissertation and periodically meets to review the student's progress. The basis on which the Ph.D. degree is finally awarded is the candidate's demonstration of acquired skills and knowledge in the selected field of specialization and the ability to do independent research in the area. Upon completion of the dissertation and its acceptance by the supervisory committee, students must pass a Final Oral Examination.

Throughout their tenure, students attend seminars given by internationally renowned guest scientists, Health Science Center faculty members, and student peers. Students have the opportunity to interact with guest speakers during special student luncheons. Students also give brief presentations about their research projects, and discuss and analyze scientific literature in various journal clubs. Travel to meetings of scientific societies to present research progress (an expense allowance is provided) is highly encouraged of junior students and is expected of senior students.

Neuroscience Track
Doctoral study in neuroscience is an incredibly rewarding and exciting undertaking. No other discipline probes the intricate machinery of the nervous system to address such fundamental issues as how we think, move, perceive, learn, and remember. Following traditions established in the early 1950s, when modern efforts to understand the nervous system led to early breakthroughs in the treatment of many neurological and psychiatric disorders, neuroscience research continues to have an enormous clinical impact. Numerous neuroscientists have been recipients of the Nobel Prize over the last century.

Neuroscientists are employed in many different settings, ranging from universities and medical centers to government agencies and private industry. The training students receive, emphasizing analytical thinking and problem solving in a scientific environment, is applicable to numerous disciplines. The pharmaceutical and biotechnology industries hire many neuroscientists for productive and exciting careers developing new therapeutic agents for human betterment. Some go into government, patent law, or the publishing industry. Regardless of the path, you have the opportunity to leave our program equipped with an education, research experience, and way of thinking that will prepare you for a successful future.

All incoming graduate students will take a one-semester core course covering fundamentals of biochemistry, molecular biology, cell biology, physiology, microbiology, and immunology, giving the background necessary for all the advanced studies. After the first semester, students launch into courses specializing in their area of interest. By its very nature, neuroscience overlaps with many other disciplines and tracks within the Graduate School, such as Biochemistry, Aging, Cell Signaling, Metabolic Disorders, Integrated Physiology, and Pharmacology. Many of the elective courses in the neuroscience program are taught jointly with one or more of these other tracks, and
neuroscience students will be exposed to a broad variety of approaches. Students will have the opportunity to prepare to take qualifying exams in the second year of their graduate career, having completed the basic neuroscience curriculum of Molecular, Cellular, and Developmental Neuroscience in the spring semester of the first year, followed by Systems Neuroscience and Neuroanatomy in the fall semester of the second year. As students’ research interests develop, numerous opportunities for advanced electives, journal clubs, and special topics sessions will enhance their education, and both stimulate and challenge them intellectually. These and other enrichment opportunities are available to any entering graduate student. Formal didactic training ends after successfully passing the qualifying exam and advancing to candidacy, at which time the students engage in full-time dissertation laboratory research.

The Graduate Training Program in Neuroscience at the UT Health Science Center San Antonio is an excellent environment, with a history of training successful neuroscientists for productive careers. More than 50 faculty from multiple departments in the Graduate, Medicine, and Dental Schools offer research opportunities that span the gamut from structure of ion channels and receptors, to growth factor signaling, to animal behavioral and cognition. We welcome you to explore our program.

Required Courses for the Ph.D. Degree

PHAR 5013 Principles of Pharmacology
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 ligand-gated 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.

Semester Credit Hours: 3.0
Prerequisites: INTD 5000

INTD 5000 Fundamentals of Biomedical Sciences
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 Multidisciplinary Graduate Program.

Semester Credit Hours: 2.0
Prerequisites: Consent of instructor

INTD 5008 Laboratory Rotations
This course provides an opportunity for students to participate in research activities in the laboratories of faculty members in different tracks to learn laboratory skills and to gain an introduction to the research fields of faculty members.

Semester Credit Hours: 2.0

INTD 6002 Ethics in Research
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.

Semester Credit Hours: 0.5

INTD 6090 Seminar
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.

Semester Credit Hours: 1.0

PHAR 5020 Basics of Research Design
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 get-
PHAR 5092 Special Problems in Pharmacology — Research Practicum

Students will have the opportunity to complete two laboratory rotations in different laboratories by the end of their first year in the graduate program. Laboratory rotation mentors may be selected from the Graduate Faculty of the Pharmacology graduate program who have active research laboratories. Each rotation is a full-semester rotation.

Semester Credit Hours: 1.0–9.0

PHAR 6097 Research

This course is comprised of independent, original research under the direction of a faculty advisor.

Semester Credit Hours: 0.5–9.0

PHAR 6098 Thesis

Registration for at least one term is a Graduate School requirement for all MS candidates.

Semester Credit Hours: 1.0–9.0

PHAR 7099 Dissertation

Registration for at least two terms is a Graduate School requirement for all Ph.D. candidates.

Semester Credit Hours: 1.0–9.0

Prerequisites: admission to candidacy for Doctor of Philosophy degree

Electives - Pharmacology Track

CSBL 6048 Biology of Aging

Biology of Aging is the core course of the Biology of Aging Track. The course consists of two modules: Molecular and Cellular Homeostasis and Aging and Systems Homeostasis and 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 the Departments of Cellular & Structural Biology, Physiology, Pharmacology, Biochemistry and Medicine will be involved in teaching this course, which will cover the molecular and cellular biology of aging, model systems used for aging studies, age-related changes in organs and tissues, and age-related diseases.

Semester Credit Hours: 4.0

Prerequisites: required for Biology of Aging Track; elective for others

INTD 5040 Fundamentals of Neuroscience I: Molecular, Cellular, and Developmental Neuroscience

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.

Semester Credit Hours: 3.0

INTD 5043 Fundamentals of Neuroscience II: Systems Neuroscience

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.

Semester Credit Hours: 3.0

INTD 5047 Neuroanatomy

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 II 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.

Semester Credit Hours: 2.0

INTD 5067 Introduction to Bioinformatics and Computational Biology

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.

Semester Credit Hours: 2.0

INTD 6033 Cell Signaling Mechanisms

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.

Semester Credit Hours: 2.0
INTD 6045  Clinical Practicum in Neuroscience
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.
*Semester Credit Hours: 1.0*

PHAR 5091  Pharmacology Micro-electives
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.

5091.001 New Views on Monoaminergic Neurotransmission: Are Transporters Important?
5091.002 Drug Discovery: Nuts and Bolts
5091.003 Historical Perspectives of Receptor Theory
5091.004 Cell Membrane Microdomains and Signaling
5091.005 Neuropeptide Metabolism
5091.006 Serotonin: From Soup (Transmission) to Nuts (Behavior)
5091.007 Central-Cardio-Respiratory Systems
5091.008 Neural Substrates of Regulatory Behaviors: Peptides and Monoamines
5091.009 Current Issues in Basic Research on Mechanisms of Epilepsy
5091.010 Appetite Control: Adiposity Hormones and Neuropeptides
5091.011 Fundamentals of Behavioral Pharmacology
5091.012 Therapeutics: Autonomic Pharmacology
5091.013 Therapeutics: Cardiovascular-Renal Pharmacology (Prerequisite: PHAR 5091.012)
5091.014 Therapeutics: Central Nervous System Pharmacotherapeutics
5091.015 Therapeutics: Chemotherapy
5091.016 Therapeutics: Endocrine Pharmacology
5091.017 Therapeutics: Pharmacological Management of Pain

*Semester Credit Hours: 0.5–9.0*

PHAR 6020  Molecular and Pharmacological Basis of Therapeutics
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.
*Semester Credit Hours: 2.0*

PHAR 6025  Molecular Pharmacology
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.
*Semester Credit Hours: 2.0*

PHAR 6027  Fundamentals of Neuroethics
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, unconsciousness, and death.
*Semester Credit Hours: 1.0*

PHAR 6071  Supervised Teaching
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 under-
 Required Courses for the Ph.D.
Degree—Neuroscience Track

CSBL 5095  Experimental Design and Data Analysis
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 range tests, tests of the assumptions of parametric analyses, advanced forms of the analysis of variance, linear regression, and correlation analysis.
 Semester Credit Hours: 2.0

INTD 5000  Fundamentals of Biomedical Sciences
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 Multidisciplinary Graduate Program.
 Semester Credit Hours: 8.0
 Prerequisites: Consent of instructor

INTD 5008  Laboratory Rotations
This course provides an opportunity for students to participate in research activities in the laboratories of faculty members in different tracks to learn laboratory skills and to gain an introduction to the research fields of faculty members.
 Semester Credit Hours: 2.0

INTD 5043  Fundamentals of Neuroscience II: Systems Neuroscience
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.
 Semester Credit Hours: 3.0

INTD 5047  Neuroanatomy
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 II 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.
 Semester Credit Hours: 2.0

INTD 5040  Fundamentals of Neuroscience I: Molecular, Cellular, and Developmental Neuroscience
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.
 Semester Credit Hours: 3.0

INTD 6002  Ethics in Research
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.
 Semester Credit Hours: 0.5

INTD 6090  Seminar
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.
 Semester Credit Hours: 1.0

PHAR 5092  Special Problems in Pharmacology — Research Practicum
Students will have the opportunity to complete two laboratory rotations in different laboratories by the end of their first year in the graduate program. Laboratory rotation mentors may be selected from the Graduate Faculty of the Pharmacology graduate program who have active research laboratories. Each rotation is a full-semester rotation.
 Semester Credit Hours: 1.0–9.0
PHAR 6071 Supervised Teaching
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 the performance of their laboratories. Physiology faculty will ensure 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.

Semester Credit Hours: 1.0–9.0
Prerequisites: PHYS 5081

PHAR 6097 Research
Independent, original research under the direction of a faculty advisor.

Semester Credit Hours: 0.5–9.0

PHAR 7099 Dissertation
Registration for at least two terms is a Graduate School requirement for all Ph.D. candidates.

Semester Credit Hours: 1.0–9.0
Prerequisites: admission to candidacy for Doctor of Philosophy degree

Electives - Neuroscience Track

BIOSC 5091 Special Topics in Biochemistry
This course consists of selected topics in specialized areas of biochemistry; current views will be emphasized (e.g., “Quantitative Biochemistry” and “Nuclear Magnetic Resonance Spectroscopy for Biochemists”).

Semester Credit Hours: 1.0–9.0

BIOSC 6010 Gene Expression
The course covers gene expression focusing on regulation at the levels of transcription, RNA processing, transport and stability, and translation. Proteins and other regulatory molecules involved in these processes will also be covered. Particular emphasis will be placed on transcriptional control mechanisms including: RNA polymerases, chromatin remodeling, methylation and other epigenetic modifications, families of transcription factors including their DNA binding properties, protein-protein interaction domains, trans-activation mechanisms, regulation by ligand binding, phosphorylation and other signaling mechanisms and nuclear-cytoplasmic transport; posttranscriptional mechanisms including: mechanisms of RNA splicing, nuclear-cytoplasmic transport of RNA, RNA localization and targeting, RNA stability; and translational control. Post-transcriptional and translational control mechanisms will highlight the roles of RNA binding proteins and their modifications in these processes.

Semester Credit Hours: 2.0
Prerequisites: INTD 5000

BIOSC 6033 Cellular Signaling Mechanisms
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.

Semester Credit Hours: 2.0

BIOSC 6043 Structure and Function of Membrane Proteins
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 (e.g. K+, Na+, and Ca++ channels), and the basis of selectivity consistent with high flux rates, gating, and other forms of regulation; large membrane pores (e.g. gap junctions, VDAC, P2Y, porins, translocons), their selectivity features, regulation, and physiological functions; membrane transporters (amino acid, neurotransmitter, glucose, aquaporins), their mode of function and regulation; membrane pumps (proton, ATPases, etc.) and the effects of lipids on membrane protein function; membrane receptors (GABA, Ach, etc.); membrane fusion events in membrane trafficking.

Semester Credit Hours: 2.0

CSBL 6020 Concepts in Vertebrate Development
This course will employ classical experimental embryology as a background for presenting recent advances in molecular and cellular aspects of vertebrate development. Topics include: gametogenesis and fertilization, cleavage and midblastula transition, gastrulation, neural induction, neural crest migration, CNS patterning, limb development, and inductive events in endodermal differentiation. Emphasis will be placed on mechanisms of morphogenesis and differentiation at the molecular level.

Semester Credit Hours: 3.0

CSBL 6021 Animal Models
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.

Semester Credit Hours: 3.0

CSBL 6048 Biology of Aging
Biology of Aging is the core course of the Biology of Aging Track. The course consists of two modules: Molecular and Cellular Homeostasis and Aging and Systems Homeostasis and 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 the Departments of Cellular & Structural Biology, Physiology, Pharmacology, Biochemistry and Medicine 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.

Semester Credit Hours: 4.0
Prerequisites: required for Biology of Aging Track; elective for others

CSBL 6064 Genes and Development

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 cyto- genetics, 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.

Semester Credit Hours: 4.0

INTD 6041 Basic Science Resident Lecture Series in Neurology

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.

Semester Credit Hours: 1.5

INTD 6045 Clinical Practicum in Neuroscience

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.

Semester Credit Hours: 1.0

PHAR 5013 Principles of Pharmacology

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 ligand-gated 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.

Semester Credit Hours: 3.0

PHAR 5020 Basics of Research Design

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.

Semester Credit Hours: 1.5

PHAR 5091 Pharmacology Micro-electives

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.

5091.001 New Views on Monoaminergic Neurotransmission: Are Transporters Important?
5091.002 Drug Discovery: Nuts and Bolts
5091.003 Historical Perspectives of Receptor Theory
5091.004 Cell Membrane Microdomains and Signaling
5091.005 Neuropeptide Metabolism
5091.006 Serotonin: From Soup (Transmission) to Nuts (Behavior)
5091.007 Central-Cardio-Respiratory Systems
5091.008 Neural Substrates of Regulatory Behaviors: Peptides and Monoamines
5091.009 Current Issues in Basic Research on Mechanisms of Epilepsy
5091.010 Appetite Control: Adiposity Hormones and Neuropeptides
5091.011 Fundamentals of Behavioral Pharmacology
5091.012 Therapeutics: Autonomic Pharmacology
**PHAR 6025  Molecular Pharmacology**

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.

*Semester Credit Hours: 2.0*

**PHAR 6027  Fundamentals of Neuroethics**

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 ethical 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, unconsciousness, and death.

*Semester Credit Hours: 2.0*

**PHYL 5045  Mammalian Physiology**

The course explores the physiological mechanisms by which the cardiovascular system carries out its principle functions. 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 course, but are only required to take three out of the four modules (PHYL 5041, 5042, 5043, and 5044).

*Semester Credit Hours: 4.0*

**PHYL 6091  Selected Topics of Physiology**

Students must take a least two courses selected from among the offerings in:

- PHYL 6091-01 Cardiovascular
- PHYL 6091-03 Cell Biology in Neural Science
- PHYL 6091-04 Endocrine and Metabolism
- PHYL 6091-05 Molecular Physiology
- PHYL 6091-07 Ion Channels in Disease

Courses that may be substituted for one of these selections:

- INTD 5040 - Fundamentals of Neuroscience I: Molecular, Cellular, and Developmental Neuroscience
- INTD 5043 - Fundamentals of Neuroscience II: Systems Neuroscience
- CSBL 6048 - Biology 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.*

*Semester Credit Hours: 3.0*

**RADI 6024  Radiological Anatomy and Physiology**

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.

*Semester Credit Hours: 3.0*
Pharmacy – Joint Pharm.D.

The Doctor of Pharmacy (Pharm.D.) program provides students the opportunity to acquire the education and training required to provide comprehensive pharmaceutical care services in a variety of practice environments. A select number of students may participate in the Joint Pharm.D. Program, administered by The UT Austin College of Pharmacy and The UT Health Science Center San Antonio, after successfully completing two years of professional coursework in Pharmacy on the UT Austin campus. During the third professional year on the Health Science Center campus, the student has the opportunity to increase her/his knowledge and comprehension of pathophysiology, applied pharmacokinetics, pharmacoeconomics, patient assessment techniques, and pharmacotherapy. The emphasis on problem-based instruction provides students the opportunity to improve their skills in retrieving and interpreting drug and biomedical information as well as integrating and applying previously acquired knowledge to new situations. The fourth professional year consists of seven 6-week clerkships that are conducted in a variety of acute care and ambulatory care facilities throughout the region.

The Dean of The UT Austin College of Pharmacy is responsible for administration of the joint Pharm.D. Program. In addition, several committees within the College of Pharmacy help support the day-to-day operation of the program. The Deans of the Health Science Center Graduate School of Biomedical Sciences, the Health Science Center School of Medicine, and The UT Austin College of Pharmacy collaborate on the development of Joint Program policies and procedures. Faculty of The University of Texas College of Pharmacy Pharmacotherapy Division also hold appointments in the School of Medicine at The UT Health Science Center San Antonio. The Pharmacotherapy Division Head reports jointly to the Dean of the College of Pharmacy, and reports as a center director to the Dean, Health Science Center School of Medicine.

Requirements for Admission
Admission to the College of Pharmacy is contingent on and separate from admission to The University of Texas at Austin. In addition to completing all prepharmacy course requirements, each applicant must make a satisfactory score on the PCAT exam. Additional measures of scholarly accomplishments and academic potential may be evidenced by grade point average, letters of recommendation, extramural service activities, and oral and written communication skills. Preference is given to applicants who are legal residents of Texas.

The Joint Pharm.D. degree is conferred on the basis of successful completion of all academic credits and the joint nature of the degree is recognized on the diploma of the graduate. Eligibility to graduate is certified by the Health Science Center Graduate Dean and the Dean, College of Pharmacy, UT Austin.

All professional degree programs in Pharmacy are accredited by the Accreditation Council on Pharmaceutical Education, a specialized accrediting agency recognized by the Secretary of Education, United States Department of Education. The last site visit and accreditation review was conducted in February 2004 and the College of Pharmacy received the maximum, six-year accreditation of its degree programs. The Council may be contacted at 312-644-3575 or through its Web site at http://www.ACPE-accred.org.

Additional Information
The University of Texas at Austin Undergraduate Catalog contains detailed information about the Pharm.D. program and the College of Pharmacy. Further information may be obtained from the College’s Web page (http://www.utexas.edu/pharmacy) or by writing:

Assistant Dean for Admissions
College of Pharmacy
The University of Texas at Austin
1 University Station, A1900
Austin, TX 78712-0120
Physiology

Physiology is the study of the structure, 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 in the Integrated Multidisciplinary Graduate Program (IMGP). In this program, all incoming students have a common entry point. Within the first year, students select one of eleven research tracks based on their specific interests. The Department of Physiology administers the Molecular, Cellular, and Integrative Physiology (MCIP) track and the Membrane Biology and Cell Signaling (MBCS) track.

A Master of Science degree program designed specifically for K–12 teacher is also offered through Physiology. Classes are held in the evenings during the school year. See the M.S. Degree Program for K–12 Teachers section below for more details.

Molecular, Cellular and Integrative Physiology (MCIP) Track

The track in Molecular, Cellular, and Integrative Physiology (MCIP) attracts graduate students with diverse training and backgrounds, including chemistry, biology, physics and engineering, who are interested in basic biomedical research at the molecular, cellular or integrative level. By understanding how the molecules, cells and organs of the body interact to achieve normal biological function, researchers in the MCIP track seek to gain fundamental insight into the mechanisms of disease. The MCIP track consists of collaborative faculty with wide-ranging interests including ion channels, synaptic transmission and neuroscience, cardiac and vascular physiology, aging and metabolism whose combined expertise provides an environment that promotes the translation of research discoveries from the "bench to the bedside”.

Membrane Biology and Cellular Signaling Track (MBCS) Track

The Membrane Biology and Cell Signaling (MBCS) graduate track provides state-of-the-art training in understanding and investigating intracellular and intercellular signaling mechanisms, and membrane proteins, including channels, transporters, receptors and cell adhesion molecules. This track emphasizes integrating biochemical, molecular, cellular, and physiological approaches and thinking to define pathways of cell signaling and function, and their relationship ultimately to understanding the cellular and molecular mechanisms of human disease.

M.S. Degree Program for K–12 Teachers

Physiology offers a specific program of study for primary and secondary science teachers, which leads to a Master of Science Degree in Physiology. Applicants must have earned a Bachelor’s degree from an accredited institution or provide proof of an equivalent degree from a foreign institution.

The M.S. Degree Program in Physiology for K–12 teachers requires enrollment in both fall and spring semesters of two consecutive school years plus the summer semester between the two school years. Enrollment will be for 6 hours of credit each semester. All courses during the school year are in the evening. Completion of 30 credit hours and all course requirements is required for the M.S. Degree.

Curriculum Objectives

- Increase understanding of the molecular, cellular, and integrative mechanisms of human bodily functions.
- Train in the methodologies of physiological research.

Study Activities and Environment

By accepting a small class size of 8–12 students and encouraging close working relationships among students and faculty, the program uses the following activities for learning physiology:

- Reading, classroom lectures, and discussions about the mechanisms of bodily function.
- Training in laboratory skills necessary for physiological research.

For more information about our department and graduate program please visit our Web site at: http://physiology.uthscsa.edu.

Required Courses for the MCIP Track

CSBL 5095   Experimental Design and Data Analysis

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 range tests, tests of the assumptions of parametric analyses, advanced forms of the analysis of variance, linear regression, and correlation analysis.  

**Semester Credit Hours:** 2.0

or

**PATH 5021 Biostatistics**

An introduction to Biostatistics, emphasis is upon application of statistical methods to biological problems. Topics include descriptive statistics, probability, hypothesis testing, and estimation.  

**Semester Credit Hours:** 3.0

**INTD 5000 Fundamentals of Biomedical Sciences**

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 Multidisciplinary Graduate Program.  

**Semester Credit Hours:** 8.0  
**Prerequisites:** Consent of instructor

**INTD 5008 Laboratory Rotations**

This course provides an opportunity for students to participate in research activities in the laboratories of faculty members in different tracks to learn laboratory skills and to gain an introduction to the research fields of faculty members.  

**Semester Credit Hours:** 2.0

**INTD 6002 Ethics in Research**

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.  

**Semester Credit Hours:** 0.5

**PHYL 5041 Excitable Membranes**

This course addresses fundamental mechanisms of cell excitability in neurons and other excitable tissues. The format is a combination of lectures, readings/discussions, laboratory demonstrations, and simulation software (where available). Examples of the latter include software to simulate the resting membrane potential, action potentials, and synaptic events. The module will emphasize contemporary issues in the scientific literature as well as translational science where dysfunction in channels and synapses underlie common disorders such as Alzheimer’s Disease, Myasthenia Gravis, Cystic Fibrosis, Long QT Syndrome, and Epilepsy to name just a few.  

**Semester Credit Hours:** 4.0

**PHYL 5042 Cardiovascular Physiology**

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.  

**Semester Credit Hours:** 1.0

**PHYL 5043 Respiratory and Renal Physiology**

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.  

**Semester Credit Hours:** 1.0

**PHYL 5044 Endocrinology/Metabolism and Gastrointestinal Physiology**

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.  

**Semester Credit Hours:** 1.0

**PHYL 5045 Mammalian Physiology**

The course explores the physiological mechanisms by which the cardiovascular system carries out its principle functions. 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 course, but are only required to take three out of the four modules (PHYL 5041, 5042, 5043, and 5044).  

**Semester Credit Hours:** 4.0

**PHYL 6071 Supervised Teaching**

Each student is expected to participate in the teaching program of the Department of Physiology for a minimum of one semester; the student earns one semester hour of credit per semester of teaching.  

**Semester Credit Hours:** 1.0

**PHYL 6090 Seminar**

The course is comprised of research presentations by Physiology graduate students. This course is required of all students each semester.  

**Semester Credit Hours:** 1.0

**PHYL 6091 Selected Topics of Physiology**

Students must take at least two courses selected from among the offerings in:  
- PHYL 6091-01 Cardiovascular...
• PHYL 6091-03 Cell Biology in Neural Science
• PHYL 6091-04 Endocrine and Metabolism
• PHYL 6091-05 Molecular Physiology
• PHYL 6091-07 Ion Channels in Disease

Courses that may be substituted for one of these selections:
• INTD 5040 - Fundamentals of Neuroscience I: Molecular, Cellular, and Developmental Neuroscience
• INTD 5043 - Fundamentals of Neuroscience II: Systems Neuroscience
• CSBL 6048 - Biology 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.

Semester Credit Hours: 2.0

PHYL 6097 Research
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:
• Biology of Aging (INTD 6097.1-BA)
• Cancer Biology (INTD 6097.2-CA)
• Cell & Molecular Biology (INTD 6097.3-CMB)
• Genetics, Genomics & Development (INTD 6097.4-GGD)
• Membrane Biology & Cell Signaling (INTD 6097.5-MBCS)
• Metabolism & Metabolic Disorders (INTD 6097.6-MMD)
• Microbiology & Immunology (INTD 6097.7-MI)
• Molecular Biophysics & Biochemistry (INTD 6097.8-MBB)
• Molecular, Cellular, & Integrative Physiology (INTD 6097.9-MCIP)
• Neuroscience (INTD 6097.10-NS)
• Pharmacology (INTD 6097.11-PHA)

Semester Credit Hours: 1.0–9.0

PHYL 7099 Dissertation
Registration for at least two terms is required for Ph.D. candidates.

Semester Credit Hours: 1.0–9.0

Prerequisites: admission to candidacy for the Ph.D. degree

Required Courses for the MBCS Track

CSBL 5095 Exp Design/Data Analysis
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 range tests, tests of the assumptions of parametric analyses, advanced forms of the analysis of variance, linear regression, and correlation analysis.

Semester Credit Hours: 2.0

or

PATH 5021 Biostatistics
An introduction to Biostatistics, emphasis is upon application of statistical methods to biological problems. Topics include descriptive statistics, probability, hypothesis testing, and estimation.

Semester Credit Hours: 3.0

INTD 5000 Fundamentals of Biomedical Sciences
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 Multidisciplinary Graduate Program.

Semester Credit Hours: 8.0

Prerequisites: Consent of instructor

INTD 5008 Laboratory Rotations
This course provides an opportunity for students to participate in research activities in the laboratories of faculty members in different tracks to learn laboratory skills and to gain an introduction to the research fields of faculty members.

Semester Credit Hours: 2.0

INTD 6002 Ethics in Research
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.

Semester Credit Hours: 0.5

INTD 6033 Cell Signaling Mechanisms
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.

Semester Credit Hours: 2.0

INTD 6043 Structure and Function of Membrane Proteins
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 (e.g. K+, Na+ and Ca++ channels), and the basis of selectivity consistent with high flux rates, gating, and other forms of regulation; Large membrane pores (e.g. gap junctions, VDAC, P2Y, pores, translocons), their selectivity features, regulation, and physiological functions; Membrane transporters (amino acid, neurotransmitter, glucose, aquaporins), their mode of function and regulation; Membrane pumps (proton, ATPases, etc.) and the effects of lipids on membrane protein function; Membrane
receptors (GABA, Ach etc.); Membrane fusion events in membrane trafficking.

Semester Credit Hours: 2.0
Prerequisites: INTD 5005 and INTD 5007 (or equivalent)

**PHYL 5045  Mammalian Physiology**

The course explores the physiological mechanisms by which the cardiovascular system carries out its principle functions. 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 course, but are only required to take three out of the four modules (PHYL 5041, 5042, 5043, and 5044).

**Three out of four modules - PHYL 5041, 5042, 5043, and 5044:**

- **PHYL 5041  Excitable Membranes**
  
  This course addresses fundamental mechanisms of cell excitability in neurons and other excitable tissues. The format is a combination of lectures, readings/discussions, laboratory demonstrations, and simulation software (where available). Examples of the latter include software to simulate the resting membrane potential, action potentials, and synaptic events. The module will emphasize contemporary issues in the scientific literature as well as translational science where dysfunction in channels and synapses underlie common disorders such as Alzheimer’s Disease, Myasthenia Gravis, Cystic Fibrosis, Long QT Syndrome, and Epilepsy to name just a few.
  
  *Semester Credit Hours: 1.0*

- **PHYL 5042  Cardiovascular Physiology**
  
  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.
  
  *Semester Credit Hours: 1.0*

- **PHYL 5043  Respiratory and Renal Physiology**
  
  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 discussion sessions.
  
  *Semester Credit Hours: 1.0*

- **PHYL 5044  Endocrinology/Metabolism and Gastrointestinal Physiology**

  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.

  *Semester Credit Hours: 1.0*

**PHYL 6071  Supervised Teaching**

Each student is expected to participate in the teaching program of the Department of Physiology for a minimum of one semester; the student earns one semester hour of credit per semester of teaching.

*Semester Credit Hours: 1.0*

**PHYL 6090  Seminar**

The course is comprised of research presentations by Physiology graduate students. This course is required of all students each semester.

*Semester Credit Hours: 1.0*

**PHYL 6091  Selected Topics of Physiology**

Students must take at least two courses selected from among the offerings in:

- **PHYL 6091-01 Cardiovascular**
- **PHYL 6091-03 Cell Biology in Neural Science**
- **PHYL 6091-04 Endocrine and Metabolism**
- **PHYL 6091-05 Molecular Physiology**
- **PHYL 6091-07 Ion Channels in Disease**

Courses that may be substituted for one of these selections:

- **INTD 5040 - Fundamentals of Neuroscience I: Molecular, Cellular, and Developmental Neuroscience**
- **INTD 5043 - Fundamentals of Neuroscience II: Systems Neuroscience**
- **CSBL 6048 - Biology 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.

*Semester Credit Hours: 2.0*

**PHYL 6097  Research**

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:

- **Biology of Aging (INTD 6097.1-BA)**
- **Cancer Biology (INTD 6097.2-CA)**
- **Cell & Molecular Biology (INTD 6097.3-CMB)**
- **Genetics, Genomics & Development (INTD 6097.4-GGD)**
- **Membrane Biology & Cell Signaling (INTD 6097.5-MBCS)**
- **Metabolism & Metabolic Disorders (INTD 6097.6-MMD)**
- **Microbiology & Immunology (INTD 6097.7-MI)**
- **Molecular Biophysics & Biochemistry (INTD 6097.8-MBB)**
- **Molecular, Cellular, & Integrative Physiology (INTD 6097.9-MCIP)**
- **Neuroscience (INTD 6097.10-NS)**
- **Pharmacology (INTD 6097.11-PHA)**
M.S. Degree Program for K–12 Teachers

Physiology offers a specific program of study for primary and secondary science teachers that leads to a Master of Science Degree in Physiology. Applicants must have earned a Bachelor’s degree from an accredited institution or provide proof of an equivalent degree from a foreign institution.

The M.S. Degree Program in Physiology for K–12 teachers requires enrollment in both fall and spring semesters of two consecutive school years plus the summer semester between the two school years. Enrollment will be for 6 hours of credit each semester. All courses during the school year are in the evening. Completion of 30 credit hours and all course requirements are required for the M.S. Degree.

Curriculum Objectives

- Increase understanding of the molecular, cellular, and integrative mechanisms of human bodily functions.
- Train in the methodologies of physiological research.

Study Activities and Environment

By accepting a small class size of 8–12 students and encouraging close working relationships among students and faculty, the program uses the following activities for learning physiology:

- Reading, classroom lectures, and discussions about the mechanisms of bodily function.
- Training in laboratory skills necessary for physiological research.

PHYL 5011 Discovery of Physiological Principles I

The course includes discussion of historic discoveries and ethical research issues in physiology, development of laboratory skills, analysis of laboratory demonstrations, and participation in laboratory experiments in areas covered in Cell Structure and Function.

Semester Credit Hours: 2.0
Prerequisites: concurrent enrollment in PHYL 5021

PHYL 5014 Discovery of Physiological Principles II

This course includes discussion of historic discoveries and ethical research issues in physiology, development of laboratory skills, analysis of laboratory demonstrations and participation in laboratory experiments in areas covered in Organ System Physiology I.

Semester Credit Hours: 2.0
Prerequisites: concurrent enrollment in PHYL 5024
Radiological Sciences

Course descriptions

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 degrees offered are: (1) Ph.D. or Master of Science degree in Medical Physics, (2) Ph.D. degree specializing in Radiation Biology, or (3) Master of Science degree specializing in Medical Health Physics.

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 her/his career goals.

Research Activities

The research program in Radiological Sciences acts as a bridge between basic sciences and the application of such knowledge in the diagnostic and therapeutic processes of medicine. Exceptional facilities are available in the areas of nuclear magnetic resonance imaging, computer image analysis, nuclear medicine imaging, x-ray imaging, gamma-ray irradiation, microwave irradiation, and chemical analysis of contrast agents. Ongoing research programs cover a wide range of modern imaging, irradiation effects, and radiation applications. These programs are supported by grants from federal and private agencies. Extensive facilities are available to aid in the study of a wide range of radiation interaction problems in biological materials.

Requirements for Admission

In addition to meeting the general requirements for admission to the Graduate School of Biomedical Sciences, applicants to the program in Radiological Sciences must have obtained a baccalaureate degree in natural science or engineering. A baccalaureate degree in some 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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology:</td>
<td>Two semesters of general biology (two years for Radiation Biophysics, Human Imaging, and Neuroscience Imaging)</td>
</tr>
<tr>
<td>Chemistry:</td>
<td>Two semesters of general chemistry (through biochemistry for Radiation Biophysics, Human Imaging, and Neuroscience Imaging)</td>
</tr>
<tr>
<td>Physics:</td>
<td>One year of general physics*</td>
</tr>
<tr>
<td>Mathematics:</td>
<td>Two semesters of calculus</td>
</tr>
<tr>
<td>Computer</td>
<td>Introduction to Computer Science (one semester)</td>
</tr>
</tbody>
</table>

Additional Prerequisites for Medical Physics Track Applicants

Students entering the medical physics track of the graduate 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 course work equivalent to a minor in physics.

1. Math: Four semesters of Calculus including differential equations. Students shall indicate courses providing experiences with linear algebra and Fourier analysis.
2. Physics: BA in Physics or appropriate science or engineering that includes at least an upper-level course in electricity and magnetism plus two additional upper-level courses such as modern physics, classical mechanics, introductory quantum mechanics, or thermodynamics.

Although students may be admitted with deficiencies that can be eliminated by successfully completing approved courses at other institutions, all deficiencies must be removed before admission to candidacy for a degree.

Financial Support for Graduate Students

Financial support for students is provided through teaching and graduate assistantships that are awarded on a competitive basis.

Curriculum

The Master of Science degree requires a minimum of 30 semester credit hours of graduate work. For the Ph.D. degree, 42 semester credit hours are required above the minimum of 30 required for admission to candidacy. Students are expected to successfully complete the required courses in addition to a selection of advanced courses. Required courses and any electives will be determined for each student, in consultation with her/his graduate advisor, as an educational plan is designed to meet specific career goals.

Master of Science degree candidates must complete required courses, pass a qualifying examination, formulate an original research proposal, and carry out the research and defense of a thesis. The Ph.D. student is eligible for admission to candidacy after completing required coursework, passing a qualifying examination, and demonstrating proficiency as an independent researcher. Following admission to candidacy, the student must complete an original research project and orally defend a dissertation. The Ph.D. degree is awarded when the candidate has demonstrated competence in conducting original and independent research in the general area of radiological sciences. The Medical Physics track includes curricula in Diagnostic Physics, in which the students’ studies emphasize medical imaging physics and technologies or Radiation Thera-
Required Courses for the Ph.D. Degree

INTD 5000  Fundamentals of Biomedical Sciences
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 Multidisciplinary Graduate Program.
Semester Credit Hours: 8.0
Prerequisites: Consent of instructor

RADI 5007  Statistics in the Radiological Sciences
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 have the opportunity to learn the theory behind these methods and apply them to actual and simulated problems in Radiological Sciences.
Semester Credit Hours: 1.0

RADI 5025  Basic Radiation Biology
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.
Semester Credit Hours: 1.5–3.0
Prerequisites: Consent of instructor

RADI 5090  Seminars in Radiological Sciences
Each student is required to register a minimum of two terms if following an M.S. degree plan or four terms if following a Ph.D. plan. Seminars will review current findings in the field.
Semester Credit Hours: 1.0–9.0

RADI 6024  Radiological Anatomy and Physiology
This course will provide students with an opportunity to learn anatomy, physiology, and commonly used medical terminology as it relates to radiologic imaging. Anatomical 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.
Semester Credit Hours: 3.0

RADI 6071  Supervised Teaching
This course is a presentation of lectures and supervised teaching under the direction of faculty.
Semester Credit Hours: 1.0–9.0

RADI 6097  Research
This course is supervised research under the guidance of a faculty member.
Semester Credit Hours: 1.0–9.0

RADI 6098  - Thesis
Registration for at least two terms is required for M.S. candidates.
Semester Credit Hours: 1.0–9.0
Prerequisites: admission to candidacy for the Master of Science degree

RADI 7099  Dissertation
Registration for at least one term is required for Ph.D. candidates.
Semester Credit Hours: 0.5–9.0
Electives

INTD 5005  Core Course I: Biochemistry
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.
Semester Credit Hours: 2.0
Prerequisites: consent of instructor

INTD 5006  Principles of Cellular and Molecular Biology
Students in the Orthodontics MS program in Cellular and Structural Biology, and other programs as appropriate, must take this course for needed background and training in cellular and molecular biology, which they previously obtained by enrollment in Core II: Molecular Biology and Core III: Cell Biology courses. Students must attend appropriate lectures (see list of lecture topics) in the INTD 5000 - Fundamentals of Biomedical Sciences course. No separate scheduling is required for this course.
Semester Credit Hours: 4.0
Prerequisites: consent of instructor

INTD 5046  Mind & Brain: Metanalysis in Human Brain Mapping
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 metanalysis of a set of studies using similar tasks.
Semester Credit Hours: 2.5

RADI 0001  Object-Oriented MRI Pulse Sequence Programming
A course designed to teach students to design and implement a large programming project in the C-language. The programming homework assignments are designed so that students can integrate them as components of their global project. Students are encouraged to select their project topic, but emphasis is on Diagnostic and Therapy Physics applications.
Semester Credit Hours: 3.0

RADI 5001  Basic Radiation Safety in the Laboratory
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.
Semester Credit Hours: 1.0

RADI 5005  Fundamentals of Radiation Dosimetry
This course is a detailed study of the fundamentals of radiation dosimetry in general rather than dealing only with its application in medical and health physics. Coverage includes charged particle and photon interactions with matter, the relationship between interactions and absorbed dose, cavity theory, ion chamber design and theory, and calibration techniques using ion chambers.
Semester Credit Hours: 3.0

RADI 5010  Medical Biophysics
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.
Semester Credit Hours: 3.0

RADI 5011  Radiation and Nuclear Physics
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.
Semester Credit Hours: 3.0

RADI 5018  Physics Measurements in Imaging
This is a laboratory course focusing on performance of measurements used in quality assurance (QA), system characterization, and acceptance testing of medical imagers.
Semester Credit Hours: 2.0
Prerequisites: concurrent enrollment in RADI 5015

RADI 5020  Principles of Health Physics I
This course covers the basic principles of protection dealing with the major forms of ionizing radiation.
Semester Credit Hours: 3.0

RADI 5030  Neuroscience Imaging Laboratory
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.
Semester Credit Hours: 1.0

RADI 5050  Human Neuroelectrophysiology
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.
Semester Credit Hours: 3.0
Prerequisites: BIO 4813 (or PSY 4183 and PSY 3103) and BIO 3433, or consent of instructor

RADI 6012  Physics of Nuclear Medicine
This course is a study of physical principles of planar, SPECT, and PET radionuclide imaging; instrument theory; dosimetry; computer uses; and safety considerations.
Semester Credit Hours: 3.0
Prerequisites: RADI 5011
RADI 6014 Physics of Dental Imaging
This course is a survey of imaging procedures used in modern dentistry with an emphasis on the clinical objectives and physical principles underlying intraoral, panoramic, cephalometric, and digital dental radiography.
Semester Credit Hours: 2.0
Prerequisites: consent of instructor

RADI 6016 Physics of Diagnostic Imaging II
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.
Semester Credit Hours: 3.0
Prerequisites: consent of instructor

RADI 6017 Neuroimaging Methods
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.
Semester Credit Hours: 3.0
Prerequisites: consent of instructor

RADI 6018 Foundations of Neuroscience Imaging
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.
Semester Credit Hours: 3.0

RADI 6019 Medical Image Processing
This course is an introduction to the basic principles of image processing as applied to digital radiography, computed tomography, ultrasound imaging, and magnetic resonance images.
Semester Credit Hours: 3.0
Prerequisites: RADI 6016

RADI 6020 Advanced Topics in Cognitive Neuroscience
This course will explore several advanced topics in cognitive neuroscience. It includes exhaustives study of a brain function in normals and in disease states. Brain functions include but are not limited to sensation, perception, action, language, motion, and cognition.
Semester Credit Hours: 3.0

RADI 6023 Clinical Medical Physics Laboratory
This course offers the opportunity for medical physics students to work directly with professional medical physicists in a clinical setting.
Semester Credit Hours: 1.0–9.0 Variable

RADI 6028 Advanced Molecular Radiobiology
This course assesses the types of molecular damage that occurs after radiation exposure of cells, and the methods used to detect such damage.
Semester Credit Hours: 3.0
Prerequisites: RADI 5025

RADI 6030 Physics of Radiotherapy
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.
Semester Credit Hours: 3.0

RADI 6031 Physics Measurements in Radiotherapy
Performance of measurements on radiation therapy equipment used to determine therapy treatment parameters is the opportunity for study in this course.
Semester Credit Hours: 3.0

RADI 6033 Advanced Radiotherapy Physics
This course includes the coverage of advanced radiation therapy special topics: intensity modulated radiation therapy, advanced brachytherapy, and radiation therapy shielding.
Semester Credit Hours: 3.0

RADI 6035 Physics Measurements in Radiotherapy II
In this course students will have the opportunity to further gain 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.
Semester Credit Hours: 3.0
Prerequisites: RADI 5005, 6030, and 6031

RADI 6042 Non-ionizing Radiation Biology
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.
Semester Credit Hours: 1.0–9.0

RADI 6049 Introduction to Magnetic Resonance
This course presents the basics of the practice of magnetic resonance as the experimentalist or clinician first meets them.

^Top
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.

Semester Credit Hours: 2.0

RADI 6050 Magnetic Resonance Imaging
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.

Semester Credit Hours: 2.0
Prerequisites: RADI 6049

RADI 6051 Statistical Parametric Mapping
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.

Semester Credit Hours: 3.0

RADI 6060 Biophotonics and Optical Imaging
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. The course grade will be based on one exam given during the course, and a final term paper on a topic chosen by the student and approved by the instructors.

Semester Credit Hours: 3.0

RADI 6062 Cognitive Neuroscience
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: (a) become highly familiar with the structure of the human nervous system; (b) become conversant about the physical basis and limitations of neuroimaging techniques; (c) 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 (d) understand how psychological theory and neural theory come together to form the foundation of cognitive neuroscience.

Semester Credit Hours: 3.0

RADI 6091 Special Topics
This course covers topics of special interest that may include emerging and new modalities in radiological sciences relating to x-ray, nuclear, or magnetic imaging.

Semester Credit Hours: 1.0–9.0

RADI 7005 Treatment Planning Techniques in Radiation Therapy
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.

Semester Credit Hours: 3.0

RADI 7010 Motor Learning and Brain Imaging
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.

Semester Credit Hours: 3.0
Coordinate Graduate Courses

The following courses are offered to provide computational and statistical background pertinent to the design and interpretation of experimental research projects.

PATH 5021  Biostatistics
An introduction to Biostatistics, emphasis is upon application of statistical methods to biological problems. Topics include descriptive statistics, probability, hypothesis testing, and estimation.
Semester Credit Hours: 3.0

PATH 5025  Individual Study in Biometry
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.
Semester Credit Hours: 1.0–9.0

CLINICAL LABORATORY SCIENCES
The Master of Science degree in Clinical Laboratory Sciences (described in the School of Health Professions section of this Catalog) is administered by the Graduate School. Students in the program follow procedures and policies of the Graduate School of Biomedical Sciences.

DENTISTRY
Master’s degree programs in Dental Diagnostic Science, Endodontics, Periodontics, and Prosthodontics (described in the Dental School section of this Catalog) are administered by the Graduate School. Students in these programs follow procedures and policies of the Graduate School of Biomedical Sciences.

DENTAL HYGIENE
The Master of Dental Hygiene program (described in the School of Health Professions section of this Catalog) is administered by the Graduate School. Students in the program follow procedures and policies of the Graduate School of Biomedical Sciences.

NURSING
Graduate programs leading to the Master of Science in Nursing and the Doctor of Philosophy degrees (described in the Graduate Program in Nursing section of this Catalog) are administered by the Graduate School. Students in these programs follow procedures and policies of the Graduate School of Biomedical Sciences.

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## Graduate School Academic Calendar 2009–10

### Fall 2009

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday, May 01, 2009</td>
<td>Web Regular Registration Begins</td>
<td>Degree-Seeking Students</td>
</tr>
<tr>
<td>Tuesday, June 30, 2009</td>
<td>Web Regular Registration Ends</td>
<td>Degree-Seeking Students</td>
</tr>
<tr>
<td>Wednesday, July 01, 2009</td>
<td>Web Add/Drop/Late Registration Begins</td>
<td>Degree-Seeking Students</td>
</tr>
<tr>
<td>Tuesday, August 18, 2009</td>
<td>Web Add/Drop/Late Registration Ends</td>
<td>Degree-Seeking Students</td>
</tr>
<tr>
<td>Wed.–Fri., August 19–21, 2009</td>
<td>Orientation</td>
<td>New Students</td>
</tr>
<tr>
<td>Monday, August 24, 2009</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>All</td>
</tr>
<tr>
<td>Monday, September 07, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Wednesday, September 09, 2009</td>
<td>Census Date</td>
<td>All</td>
</tr>
<tr>
<td>Thursday, November 26, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Friday, November 27, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Friday, December 18, 2009</td>
<td>Term Ends</td>
<td>All</td>
</tr>
<tr>
<td>Friday, December 18, 2009</td>
<td>Final Grades Due</td>
<td>Graduating Students</td>
</tr>
<tr>
<td>Saturday, December 19, 2009</td>
<td>Graduation (No Ceremony)</td>
<td>Graduating Students</td>
</tr>
<tr>
<td>Wednesday, December 23, 2009</td>
<td>Final Grades Due</td>
<td>Continuing Students</td>
</tr>
<tr>
<td>Thursday, December 24, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Friday, December 25, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Monday, December 28, 2009</td>
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</tr>
<tr>
<td>Tuesday, December 29, 2009</td>
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<td>Wednesday, December 30, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
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<tr>
<td>Thursday, December 31, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Friday, January 01, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
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</tbody>
</table>

### Spring 2010

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday, November 01, 2009</td>
<td>Web Regular Registration Begins</td>
<td>Degree-Seeking Students</td>
</tr>
<tr>
<td>Monday, November 30, 2009</td>
<td>Web Regular Registration Ends</td>
<td>Degree-Seeking Students</td>
</tr>
<tr>
<td>Tuesday, December 01, 2009</td>
<td>Web Add/Drop/Late Registration Begins</td>
<td>Degree-Seeking Students</td>
</tr>
<tr>
<td>Tuesday, January 05, 2010</td>
<td>Web Add/Drop/Late Registration Ends</td>
<td>Degree-Seeking Students</td>
</tr>
<tr>
<td>Wed.–Fri., January 06–08, 2010</td>
<td>Orientation</td>
<td>New Students</td>
</tr>
<tr>
<td>Monday, January 11, 2010</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>All</td>
</tr>
<tr>
<td>Monday, January 18, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Wednesday, January 27, 2010</td>
<td>Census Date</td>
<td>All</td>
</tr>
<tr>
<td>Monday, February 15, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Monday, March 15, 2010</td>
<td>Spring Break Begins</td>
<td>All</td>
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<tr>
<td>Friday, March 19, 2010</td>
<td>Spring Break Ends</td>
<td>All</td>
</tr>
<tr>
<td>Date</td>
<td>Event</td>
<td>Group</td>
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<tr>
<td>-----------------------------</td>
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</tr>
<tr>
<td>Friday, April 23, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Wednesday, May 12, 2010</td>
<td>Term Ends</td>
<td>All</td>
</tr>
<tr>
<td>Wednesday, May 19, 2010</td>
<td>Final Grades Due</td>
<td>All</td>
</tr>
<tr>
<td>Friday, May 21, 2010</td>
<td>Tentative Graduation Ceremony</td>
<td>Graduating Students</td>
</tr>
</tbody>
</table>

**Summer 2010**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>Thursday, April 01, 2010</td>
<td>Web Regular Registration Begins</td>
<td>Degree-Seeking Students</td>
</tr>
<tr>
<td>Friday, April 30, 2010</td>
<td>Web Regular Registration Ends</td>
<td>Degree-Seeking Students</td>
</tr>
<tr>
<td>Saturday, May 01, 2010</td>
<td>Web Add/Drop/Late Registration Begins</td>
<td>Degree-Seeking Students</td>
</tr>
<tr>
<td>Thursday, May 20, 2010</td>
<td>Web Add/Drop/Late Registration Ends</td>
<td>Degree-Seeking Students</td>
</tr>
<tr>
<td>Mon.–Tue., May 24–25, 2010</td>
<td>Orientation</td>
<td>New Students</td>
</tr>
<tr>
<td>Wednesday, May 26, 2010</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>All</td>
</tr>
<tr>
<td>Monday, May 31, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Monday, June 07, 2010</td>
<td>Census Date</td>
<td>All</td>
</tr>
<tr>
<td>Friday, August 13, 2010</td>
<td>Term Ends</td>
<td>All</td>
</tr>
<tr>
<td>Friday, August 20, 2010</td>
<td>Final Grades Due</td>
<td>All</td>
</tr>
<tr>
<td>Saturday, August 21, 2010</td>
<td>Graduation (No Ceremony)</td>
<td>Graduating Students</td>
</tr>
</tbody>
</table>
School of Health Professions

Students are responsible for all information contained in this Catalog up to and including their school’s section.

- Educational Programs
- General Policies and Regulations
- Academic Calendar
- Departments and Programs

The School of Health Professions is a dynamic center of learning, service, and research for those interested in being a part of the challenging health care industry. The vision of the faculty members in the School of Health Professions states that, “we inspire and empower people to create healthier communities.”

The School of Health Professions educates future allied health professionals who will serve the people of Texas and the nation. The words “allied health” stand for the largest group of health care providers in the United States. According to the American Medical Association, there are 52 verifiable allied health disciplines. This diversity is inclusive and creates a large, powerful group of allied health professionals. Collectively, allied health professionals are over 3-million-people strong and constitute more than 60 percent of the entire health care workforce. In Texas, there are more than 270,000 allied health professionals.

The diversity of professions within “allied health” makes the term difficult to define. For the School of Health Professions, we describe allied health professionals as those who are involved in the identification, evaluation, treatment, and prevention of diseases, injuries, and conditions, while educating the public on prevention, wellness, and self-management for healthful lifestyles. Here at the School of Health Professions we provide educational programs in:

- Clinical Laboratory Sciences
- Deaf Education and Hearing Science
- Dental Hygiene
- Dental Laboratory Sciences
- Dietetics and Nutrition
- Emergency Health Sciences
- Occupational Therapy
- Physical Therapy
- Physician Assistant Studies
- Respiratory Care

We continually monitor the state’s requirements for allied health professionals and adapt our programs to meet emerging needs of new allied health professionals. Feel free to contact us if you are interested in a professional program that we do not offer currently, and we can refer you to the nearest program.

Allied health education takes place in many different educational institutions, including community colleges, four-year colleges and universities, comprehensive universities, hospitals, and health science centers. Each institution has educational programs that reflect the overall mission of that learning environment. Here at the Health Science Center, we do much more than prepare health care professionals to enter their chosen field — we aim to prepare professionals who will be the leaders, educators, and scholars in their disciplines. We provide the level of education that is not always available at other colleges and universities. Our 30-year history provides a strong foundation for faculty and students to expand beyond the expected.

For further information about School of Health Professions departments and educational programs, use the following telephone numbers and Web site addresses.

<table>
<thead>
<tr>
<th>Health Professions Welcome Center</th>
<th>(210) 567-8744</th>
<th>Toll free: (866) 802-6288</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-mail: <a href="mailto:SHPwelcome@uthscsa.edu">SHPwelcome@uthscsa.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Web: <a href="http://SHPwelcome.uthscsa.edu">http://SHPwelcome.uthscsa.edu</a></td>
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</tr>
<tr>
<td>(210) 567-8569</td>
<td></td>
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</tbody>
</table>

Clinical Laboratory Sciences

http://www.uthscsa.edu/shp/cls/ | (210) 567-8860 |

Dean’s Office

http://www.uthscsa.edu/shp/dean/index.asp | (210) 567-8800 |

Deaf Education and Hearing Science

http://www.uthscsa.edu/shp/dehs/index.asp | (210) 567-8881 |

Dental Hygiene

http://www.uthscsa.edu/shp/dh/ | (210) 567-8820 |

Dental Laboratory Sciences

http://www.uthscsa.edu/shp/dls/ | (210) 567-3056 |

Dietetics and Nutrition

http://www.uthscsa.edu/shp/diet/index.asp | (956) 523-7461 |

Emergency Health Sciences

http://www.uthscsa.edu/shp/ehs/ | (210) 567-8760 |

Occupational Therapy

http://www.uthscsa.edu/shp/ot/ | (210) 567-8881 |

Physical Therapy

http://www.uthscsa.edu/shp/pt/ | (210) 567-8750 |

Physician Assistant Studies

http://www.uthscsa.edu/shp/pa/ | (210) 567-8810 |

Respiratory Care

http://www.uthscsa.edu/shp/rc/ | (210) 567-8850 |

^TOP / SHP Programs
Educational Programs

All certificate and degree programs offered through the School of Health Professions combine Texas Core Curriculum and/or prerequisite courses in biological, physical, and social/behavioral sciences taken at regionally accredited colleges or universities. Specific prerequisites vary by program and may be found in each department’s section of this Catalog.

Undergraduate Certificate Programs

Department of Emergency Health Sciences — Certificate programs in EMT-Basic and EMT-Paramedic are offered through the Department of Emergency Health Sciences. The EMT-Basic program consists of 6 semester credit hours, and the EMT-Paramedic program consists of 33 semester credit hours. Students who successfully complete the certificate programs are eligible to take state or national certification examinations.

Degree and Post-Baccalaureate Certificate Programs

Department of Clinical Laboratory Sciences — Several post-baccalaureate certificate and degree options in clinical laboratory sciences and related fields are offered. The Bachelor of Science in Clinical Laboratory Sciences (CLS) is available at the Health Science Center and through a joint degree program with The University of Texas at San Antonio (UTSA). For further information about the joint degree program, see the Clinical Laboratory Sciences section of this Catalog and the Undergraduate Catalog of UTSA.

Two tracks are available in the CLS bachelor’s degree program: General and Pre-medical. The tracks differ in science, mathematics, and other prerequisites; the professional phase coursework is the same. The General track consists of a minimum of 130.5 semester credit hours, including 69 semester credit hours of core curriculum and program prerequisites and 63.5 semester credit hours in professional phase courses completed at the Health Science Center. The Pre-medical track consists of a minimum of 141.5 semester credit hours, including 81 semester credit hours in core curriculum and program prerequisites and 60.5 semester credit hours in professional phase courses completed at the Health Science Center. Core curriculum and program prerequisites must be completed at another regionally accredited college or university.

The CLS post-baccalaureate certificate program is open to students who already hold a bachelor’s degree from a regionally accredited college or university. Science requirements for the certificate not completed as part of the bachelor’s degree may be completed as part of the post-baccalaureate certificate curriculum. The curriculum requires approximately 18 to 24 months to complete, and consists of 63.5 semester credit hours completed at the Health Science Center. Graduates of the CLS bachelor’s degree and post-baccalaureate certificate programs are eligible to take the national certification examinations given by the National Credentialing Agency for Medical Laboratory Personnel or the American Society for Clinical Pathology.

The Bachelor of Science in Cytogenetics program consists of a minimum of 120.5 semester credit hours, including 80 semester credit hours of core curriculum and program prerequisites completed at another accredited college or university, and 40.5 semester credit hours in cytogenetics courses completed at the Health Science Center. The Health Science Center phase of the program consists of approximately 12 months of full-time study. A Post-Baccalaureate Certificate in Cytogenetics program is available for students who have already completed a bachelor’s degree in natural science (biology, microbiology, medical technology, etc.) or a physical science (chemistry, physics, etc.). Health Science Center coursework is the same for both programs. The program consists of 40.5 semester credit hours completed at the Health Science Center. Graduates of the bachelor’s degree and certificate programs are eligible to take the Clinical Laboratory Specialists in Cytogenetics examination given by the National Credentialing Agency for Medical Laboratory Personnel.

Categorical certificate programs in a subdiscipline of clinical laboratory sciences are open to students who hold a bachelor’s degree in biology, chemistry, or another closely related field. Categorical certificates are available in microbiology, clinical chemistry, immunohematology, and hematology. Curricula for these programs may be completed in 12 to 18 months, and consist of the following:

<table>
<thead>
<tr>
<th></th>
<th>Prerequisites</th>
<th>CLS Coursework</th>
<th>Total</th>
</tr>
</thead>
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<tr>
<td>Microbiology</td>
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<tr>
<td>Clinical Chemistry</td>
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<td>57.0</td>
</tr>
<tr>
<td>Immunohematology</td>
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<td>28.0</td>
<td>59.0</td>
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<tr>
<td>Hematology</td>
<td>31.0</td>
<td>24.0</td>
<td>55.0</td>
</tr>
</tbody>
</table>

The Master of Science in Clinical Laboratory Sciences is a graduate degree program administered by the Graduate School of Biomedical Sciences (GSBS). The program offers tracks in forensic/analytic toxicology and immunohematology. Both tracks require a common core of graduate courses, clinical practicums, electives, and completion of a project. The results of the project must be submitted as a publication-quality paper or alternatively as a thesis. All coursework is completed at the Health Science Center, except for a maximum of 6 semester credit hours of transfer courses. Students in the program follow policies and procedures of the GSBS. For further information, see the Graduate School of Biomedical Sciences section of this Catalog.

Deaf Education and Hearing Science — The Master of Deaf Education and Hearing Science degree program is open to students who have completed a bachelor’s degree in education or a related field. The program consists of 36 semester credit hours completed in six semesters. Graduates of the program are eligible to take the Texas Examinations of Educator Standards (TEES) given by the State Board for Educator Certification and may apply for certification as a teacher of the deaf and hard of hearing through the Council of Education of the Deaf.

Department of Dental Hygiene — Degree requirements for the entry-level Bachelor of Science in Dental Hygiene in-
include Texas Core Curriculum and program prerequisites and two years of dental hygiene courses. The program consists of a minimum of 123 semester credit hours, including 60 semester credit hours of core curriculum and program prerequisites and 63 semester credit hours of dental hygiene courses completed at the Health Science Center. Core curriculum and program prerequisites must be completed at another regionally accredited college or university before matriculating into the entry-level bachelor’s degree program.

The Bachelor of Science in Dental Hygiene degree completion program is open to graduates of the Health Science Center dental hygiene certificate program (previously offered), graduates of other entry-level dental hygiene programs in Texas, and U.S. Registered dental hygienists who are not graduates of the Health Science Center certificate program. The program consists of a minimum of 123 semester credit hours, including 93 semester credit hours of Texas Core Curriculum, program prerequisites, and previous dental hygiene courses, and 30 semester credit hours of dental hygiene courses completed at the Health Science Center. Core curriculum and program prerequisites must be completed at another regionally accredited college or university before matriculating into the bachelor’s degree completion program.

The Master of Science in Dental Hygiene is a graduate degree program administered by the Graduate School of Biomedical Sciences (GSBS). The program consists of 36 semester credit hours, including thesis. All coursework is completed at the Health Science Center, except for a maximum of 6 semester credit hours of transfer courses. Students in the program follow procedures and policies of the GSBS. For further information, see the Graduate School of Biomedical Sciences section of this Catalog.

Department of Dental Laboratory Sciences — The Advanced Certificate in Dental Laboratory Science is offered through the Department of Dental Laboratory Sciences. The certificate consists of 20 semester credit hours selected from one of three tracks: (1) Theory and Practice, (2) Laboratory Operations, and (3) Advanced Technology Applications. Admission requirements vary for the three tracks; see the Department of Dental Laboratory Sciences.

The Bachelor of Science in Dental Laboratory Sciences is designed for individuals with backgrounds in either dental technology or science (i.e., basic sciences, computer science, or engineering). Dental technicians gain education and experience in advanced techniques, laboratory management, business and training skills, and professional communications. Scientists utilize their scientific knowledge and skills in dental laboratory applications such as advanced technologies, research, and sales. The program requires a minimum of 120 semester credit hours, including Texas Core Curriculum program prerequisites coursework in dental laboratory sciences at the Health Science Center. The Bachelor of Science program includes four tracks:

1. Theory and Practice Track – 90 hours of Texas Core Curriculum and program prerequisites, and 30 hours of dental laboratory sciences courses
2. Laboratory Operations Track – 90 hours of Texas Core Curriculum and program prerequisites, and 30 hours of dental laboratory sciences courses
3. Advanced Technology Applications Track – 72 hours of Texas Core Curriculum and program prerequisites and 48 hours of dental laboratory sciences courses
4. Pre-dental Track - 90 hours of Texas Core Curriculum and program prerequisites, and 30 hours of dental laboratory sciences courses

Dietetics and Nutrition - The Coordinated Program in Dietetics (CPD) is designed to meet the academic and supervised practice requirements set forth by the Commission on Accreditation for Dietetics Education (CADE) of the American Dietetic Association (ADA). With its concentration in Health Promotion/Disease Prevention and Treatment, the mission of the CPD is to prepare entry-level dietitians who positively impact the nutritional status and health of individuals and the community, particularly those living in South Texas, through a solid academic education, service, and scholarship.

The pre-professional phase of the program consists of 150 semester credit hours, including 67 semester credit hours of Texas Core Curriculum requirements and program prerequisites and 83 semester credit hours of dietetics courses taken at the Health Science Center. Core curriculum and program prerequisites must be taken at an accredited college or university. The dietetics coursework includes a minimum of 1200 contact hours of practicum and service-learning experiences at clinical affiliates throughout South Texas. The CPD leads to a Bachelor of Science in Nutrition and Dietetics and a Master of Dietetics Studies. Graduates of the CPD are eligible to take the Commission on Dietetics Registration (CDR) national examination to become a Registered Dietitian (RD).

Department of Emergency Health Sciences — The Bachelor of Science in Emergency Health Sciences program is designed for certified paramedics who wish to extend their education in the areas of pre-hospital emergency medical technology, emergency medical care, administration, teaching, or advanced level practice. The program consists of 124 semester credit hours, including 72 semester credit hours of Texas core curriculum and emergency health sciences certificates prerequisites (EMT-Basic and EMT-Paramedic Certificates) and 52 semester credit hours of advanced courses completed at the Health Science Center. Core curriculum courses must be completed at another regionally accredited college or university. Emergency health sciences certificate prerequisites may be completed at any accredited college or university.

Department of Occupational Therapy — The Master of Occupational Therapy (MOT) program is an entry-level professional degree program that consists of a minimum of 185 semester credit hours, including 78 semester credit hours of Texas core curriculum and program prerequisite courses and 106 semester credit hours of occupational therapy courses completed at the Health Science Center. Students who have already completed a bachelor’s degree at a Texas public col-

^TOP/ SHP Programs
lege or university may request that core curriculum requirements be waived. The program includes 20 semester credit hours (6 months) of full-time clinical fieldwork. Graduates of the MOT program are eligible to take the Occupational Therapist Registered OTR certification examination given by the National Board for Certification in Occupational Therapy, Inc.

A BS-to-MOT Advanced Transfer option is open for registered occupational therapists that hold a bachelor’s degree. Students who select the option complete 30 semester credit hours at the Health Science Center on a full-time or part-time basis.

Department of Physical Therapy — The Doctor of Physical Therapy program (DPT) consists of 186.0 semester credit hours including Texas core curriculum and program prerequisites (86 semester credit hours) and physical therapy coursework (101 semester credit hours). The physical therapy curriculum begins in the fall semester and is completed over 7 semesters (30 months) including 30 weeks of full-time clinical affiliations and a four-week specialty clinical internship. Graduates 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. A license to practice physical therapy in Texas is contingent on successful completion of these examinations.

Department of Physician Assistant Studies — The Master of Physician Assistant Studies is an entry-level professional degree program that consists of 214.5 semester credit hours, including 90 semester credit hours of core curriculum and program prerequisite courses and 124 semester credit hours of physician assistant courses completed at the Health Science Center. Students who have already completed a bachelor’s degree at a Texas public college or university may request that core curriculum requirements be waived. The professional phase is a 33-month program that includes 21 months of coursework at the Health Science Center and other academic facilities in San Antonio, and 12 months of supervised clinical practice at various settings in South Texas. Graduates of the program are eligible to take the Physician Assistant National Certifying Exam given by the National Commission on Certification of Physician Assistants.

Department of Respiratory Care — The Bachelor of Science in Respiratory Care consists of a minimum of 124.5 semester credit hours, including 53 semester credit hours of core curriculum and program prerequisite courses and 71.5 semester credit hours of respiratory care courses completed at the Health Science Center. The two-year professional phase of the program at the Health Science Center includes more than 1000 hours of in-hospital clinical practice. Graduates are eligible to take the Certification Examination for Entry Level Respiratory Therapists (CRT) and the Registry Examination for Advanced Respiratory Therapists (RRT) given by the National Board for Registry Care.

Bachelor of Science in Health Care Sciences

Students entering the Master of Occupational Therapy, Master of Physical Therapy, and Master of Physician Assistant Studies programs will receive a Bachelor of Science in Health Care Sciences (BS HCS) after successful completion of all program prerequisites, completion of the Texas Core Curriculum, and successful completion of the required program curriculum. Students in these programs who do not wish to receive the BS HCS must submit a “Request for Waiver of State Required Prerequisites” to the Registrar upon entry to the program, and no later than the census day of their first term in the program. The BS HCS will be awarded with the Master's degree at the completion of the Master's program.

A student who withdraws from the Master’s degree program may be awarded the BS HCS on the first published graduation date following withdrawal if (1) the student successfully completed the required curriculum for the bachelor’s degree program, and (2) the faculty certify the student to receive the degree.

Regional Campus

The School of Health Professions offers degree programs in Laredo as part of the Regional Campus: Bachelor of Science in Nutrition and Dietetics, Master of Dietetic Studies, and Master of Physician Assistant Studies. Coursework is provided by distance learning, Web-supported courses, and local faculty. Educational partnerships with Laredo Community College and Texas A&M International University allow students to complete core curriculum and program prerequisite courses in preparation for admission to the professional curriculum. Laredo area hospitals and health agencies provide excellent sites for clinical education.

The Master of Physician Assistant Studies program selects six students each year to be in a Laredo cohort. Applicants must meet the same requirements for selection as candidates for the San Antonio program and are selected during the regular application period. Laredo cohort students reside and attend classes in Laredo for the first three semesters of the program. Students then go to the Health Science Center campus in San Antonio for two semesters, and return to Laredo for the Supervised Clinical Practice year. Most supervised clinical practice rotations are provided in the Laredo area; some rotations may be at other locations in South Texas.

Students in the Coordinated Program in Dietetics at the Regional Campus Extension take all dietetic courses at the Regional Campus. Clinical experiences are arranged in the Laredo region and other areas of South Texas.

For further information about the Regional Campus programs, contact the Health Professions Welcome Center at (210) 567-8744 or (866) 802-6288 (toll free).
General Policies and Regulations

Academic Advising
Students in Health Professions programs are assigned a faculty advisor for the purpose of aiding the student's progress in the program. The faculty advisor may address the student's academic and professional issues and may meet with students on a periodic basis. It is the student's responsibility to meet with the advisor when difficulties are encountered. Further information about the department's policies and practices regarding faculty advisors are provided in the department's section of this Catalog.

Academic Integrity
Students in the School of Health Professions are expected to be above reproach in all professional and academic activities. Policies on scholastic dishonesty will be strictly enforced; students who fail to conform to standards of academic integrity and scholastic honesty are subject to disciplinary actions. Scholastic dishonesty includes cheating on examinations or assignments, plagiarism, fabricating data or results, presenting another person's work as one's own without giving proper credit or citation, falsifying data or results, etc. For further information on procedures in regard to academic integrity, see procedures and regulations governing "Student Conduct and Discipline" in this Catalog.

Accreditation
All educational programs in the School of Health Professions are accredited by their respective accrediting bodies. Information about accreditation status and the accrediting body are presented in each department's section of this Catalog.

Advancement, Probation, and Dismissal
Decisions about advancement, probation, and dismissal may be made on the basis of academic performance and/or professional behaviors. Academic standards for advancement in the certificate or degree program are determined by each department's Committee on Allied Health Studies (CAHS). Failure to meet the standards may result in the student's being placed on probation or dismissed from the program.

Students who do not adhere to professional behavior standards may be dismissed from the certificate or degree program. General standards for professional behavior are provided under "Professional Conduct" later in this section. Other standards and policies may be set by the CAHS. In addition, professional behavior and ethics standards from professional organizations may be applied.

When the CAHS determines that a student's violation of professional behavior standards or ethics does not merit dismissal, the student may be placed on probation. While on probation, the student is expected to exhibit specified professional behaviors in order to continue in the program. Expectations are defined in writing by the CAHS on a case-by-case basis, depending on the specific behaviors the student must correct. Should there be further violations of standards, the student may be subject to immediate review and possible dismissal from the program. Policies and procedures regarding probation, dismissal, and student appeals may be found in the sections "General Regulations and Requirements" and "Grades, Promotion, and Advancement."

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.

Appeal Procedures

Purpose of Appeals Procedures — The purpose of academic appeals is to provide students with an objective hearing of wide-range issues related to the student's professional education. The appeal procedures below provide opportunities for students to request a review of recommendations and decisions made by the department's Committee on Allied Health Studies (CAHS), submit information not previously available to the CAHS, or suggest alternative remedies. Students in Master of Science degree programs follow appeal processes for the Graduate School of Biomedical Sciences.

These procedures apply to circumstances and events related to the student's education program, including academic issues, professional conduct or judgment, or ethical behavior. Policies and procedures for scholastic dishonesty or other non-academic disciplinary matters differ from these procedures and are addressed in procedures and regulations governing "Student Conduct and Discipline" in this Catalog. Established school or program policies themselves cannot be appealed.

Appeal of Grades or Evaluations
The procedures below are followed for appeal of academic matters including grades or other evaluations awarded for a course, assignment, project, examination, clinical procedure, clinical rotations, or other program-related performance.

Meeting with the Instructor — Before initiating an appeal, the student must contact the course instructor to discuss the academic matter or grade within five business days of the occurrence. Occurrence is the notification of a student's grade or performance evaluation.

Step 1 Appeal to the Department Chair — If the matter is not resolved with the faculty member, the student may appeal in writing to the Department Chair within five business days following the meeting with the instructor. The written appeal should include:

a. name of the student
b. nature of the occurrence
c. date of the occurrence
d. name of the instructor(s) involved
e. summary of the student's meeting with the instructor, including date, time, and outcomes
f. student's rationale for the appeal
Step 2 Meeting with the Department Chair — Within five business days after submitting the written appeal to the Department Chair, the student will be responsible for setting an appointment with the Department Chair to discuss the appeal. This meeting should occur as soon as feasible. The Department Chair’s responsibilities include:

- investigating the facts and examining the evidence
- meeting with the instructor(s) and student to clarify areas of dispute
- mediating a mutually-acceptable resolution, if possible
- documenting in writing actions taken to seek resolution

The Department Chair will notify the student and faculty member in writing of her/his decision within five business days following the final meeting with concerned parties.

Step 3 Appeal to the Dean — If mutually acceptable resolution is not achieved, or if the student wishes to appeal the Department Chair’s decision, the student may submit a written request to the Dean to review the merits of the student’s appeal. The request must be submitted within five business days of the Department Chair’s notice. The Dean will review the student’s appeal and the information and may solicit other information deemed appropriate for resolving the matter. The Dean will inform the student and the Department Chair in writing of the Dean’s decision within five business days following the final meeting with concerned parties. The decision of the Dean will be final and may not be appealed. The President may review the appeal process.

*Timeframes in the appeal procedures are recommended intervals and may be modified as a result of weekends, holidays, vacation periods, and other circumstances.*

**Dean** may refer to the Dean or another person designated by the Dean, e.g., the Associate Dean.

**TOP / SHP Programs**

Appeal of Program-Related Penalties

At times, the Committee on Allied Health Studies (CAHS) may judge that it is in the best interests of the student, patients, education program, or public to recommend that penalties be assessed against a student. Such penalties may include probation, suspension, dismissal, repeat of course(s), or other penalties deemed appropriate under the circumstances. Reasons for penalties may include a variety of factors, e.g., poor academic performance, violations of professional standards of conduct, poor professional judgment, failure to demonstrate ethical behavior, etc. The following procedures are followed for appeal of program-related penalties.

Step 1 Initial Decision and Notification — The student will have been identified as performing below expectations in the education program, and the CAHS assesses one or more penalties. It is recommended that the CAHS provide opportunity for the student to provide information related to the matter before the decision is made about penalties. If the proposed penalty is dismissal, the CAHS is required to provide the student an opportunity for a personal hearing before the decision is reached. Minutes of the meeting in which the decision was made will summarize the allegations, facts, and rationale for the CAHS’s decision. The Department Chair will notify the student in writing of the CAHS’s decision and the rationale, and inform the student about appeal procedures. Copies of the CAHS meeting minutes and the notification to the student will be sent to the Dean. If the student does not appeal the decision, the penalty becomes effective five business days after receipt of the Department Chair’s notification.

Step 2 Appeal to the Dean — The student may appeal the CAHS’s decision by submitting a written request to the Dean within five business days of receipt of the Department Chair’s notification. The written appeal should include:

- date
- student’s name
- specific reasons that the penalty assessed by the CAHS is deemed inappropriate, e.g., extenuating circumstances affecting the student’s performance or behavior that the CAHS was unaware of at the time of the decision, misapplication of department policy or procedure, etc.

Step 3 Hearing Before the Student Appeal/Grievance Committee — The Dean will convene the Student Appeal/Grievance Committee (SAGC) to hear the student’s appeal. The SAGC may seek further information; conduct additional investigation; and may approve, reject, or modify the CAHS’s decision. (See “Review by the Student Appeal/Grievance Committee,” below.) The Dean will notify the student and Department Chair in writing of the decision within five business days of the decision. The decision by the SAGC will be final and may not be appealed. The Dean and/or the President may review the appeal process.

Review by the Student Appeal/Grievance Committee

Students in the School of Health Professions are afforded the opportunity to appeal program-related penalties to the Student Appeal/Grievance Committee (SAGC). The SAGC is appointed annually by the Dean and consists of at least one faculty representative from each department.

**Hearing Officer and Hearing Panel** — When the Dean receives an appeal from a student, the Dean convenes the SAGC and appoints a Hearing Officer from the committee. The Hearing Officer is the spokesperson for the SAGC and is responsible for:

1. Selecting a hearing panel of at least five SAGC members to hear the appeal on behalf of the SAGC.
2. Informing the student, hearing panel, Dean, and other interested parties of the date and location of the appeal hearing at least ten business days before the hearing.

3. Conducting the hearing in a fair, unbiased manner.

4. Recording the testimony at the hearing in audio or video format. The hearing panel’s deliberation following testimony is not recorded.

5. Providing the Dean with a written summary of the hearing and the hearing panel’s decisions.

6. Maintaining a file of all evidence accumulated in the appeal process.

7. Providing all materials related to the appeal to the Dean following the final disposition of the appeal.

Appeal Hearing Participants — The appeal hearing provides for an objective hearing of all facts related to the appeal and should include not only the student, but also a spokesperson for the Committee on Allied Health Studies (CAHS). The hearing is “closed” and confidential. Only individuals personally involved in the hearing are permitted to attend and participate, including hearing panel members, the student, witnesses, and counsel, if desired.

Witnesses — If called, witnesses give only their testimony; witnesses may not be present in the hearing before or after their testimony is given. If the student wishes to call witnesses, the student must inform the Hearing Officer of the names of the witnesses and a brief written summary of their relevant testimony at least five business days before the hearing. Likewise, if the CAHS representative wishes to call witnesses, the CAHS representative must inform the Hearing Officer of witnesses’ names and a brief written summary of their relevant testimony at least five business days before the hearing. The Hearing Officer must inform each party of the witnesses that the other party plans to call at least three days before the hearing.

Procedures During the Hearing

Only those individuals who have an interest in the appeal may attend and participate in the appeal hearing. Generally, these individuals are: hearing officer, hearing panel, student, student’s witnesses, student’s counsel, CAHS representative, CAHS’s witnesses, and university’s counsel. Witnesses may be present only during their testimony and questioning.

1. The Hearing Officer reviews the purposes of the hearing and procedures to be followed, and clarifies the data-gathering and decision-making functions of the hearing panel. The Hearing Officer reads the student’s appeal submitted to the Dean. Only the concerns of the student presented in the written appeal are discussed during the hearing.

2. The student presents the issues and rationale for the appeal. The hearing panel may question the student. The student and CAHS representative may question each other, at the discretion of the Hearing Officer.

3. The Hearing Officer will call witnesses as desired by the student and the CAHS, and the hearing panel may question the witnesses. The student and the CAHS representative may question the witnesses at the discretion of the Hearing Officer.

4. Counsel of choice, if requested by the student, may be present to protect the civil rights of the student. The hearing is not intended to be adversarial in the sense of a court trial and, therefore, witnesses are not “cross examined” as in a legal context. At all times, it is the prerogative of the Hearing Officer to carefully and discretely monitor and control the extent and degree of questioning and terminate it as her/his judgment dictates.

5. When all testimony has been provided, all individuals except the Hearing Officer and hearing panel leave the hearing room. The hearing panel discusses the matters and may request additional information as deemed appropriate and necessary. Although it is desirable to conclude appeals expeditiously, the hearing panel may use as much time as necessary to assess thoroughly and evaluate the situation. Following careful review of all information, the hearing panel makes a decision about the student’s appeal.

6. The Hearing Officer notifies the Dean of the hearing panel’s decision within five business days of its final meeting on the appeal.

7. The Dean notifies the student and the Department Chair in writing of the hearing panel’s decision within five business days of the decision.

Application and Admission

Information about admission requirements is provided in the Applicant Viewbook of the School of Health Professions and Viewbook inserts for each program.

All programs, except for the EMT/Basic and EMT/Paramedic certificate programs, require that prerequisite coursework be successfully completed at another regionally accredited college or university before admission. Programs that award a Bachelor of Science or Bachelor of Science in Health Care Sciences degree require applicants to complete the Texas Core Curriculum in addition to other program prerequisites at another regionally accredited college or university.

Applicants to Master of Science degree programs in Clinical Laboratory Sciences or Dental Hygiene follow application procedures under the Graduate School of Biomedical Sciences section of this Catalog.

Applicants from countries where English is not a native language are required to submit scores on the Test of English as a Foreign Language (TOEFL). A minimum score of 560 on the paper-based test or 68 on the Internet-based test is required.

Attendance in Class and Clinic

Attendance requirements for classes, laboratories, and clinic periods are the option and prerogative of the course instructor. Attendance policies may be found in the department’s student manual or handbook, the course syllabus, and the policies should be announced by the instructor at the first class meeting.
Unexcused absences in courses in which attendance is required may be considered sufficient cause for failure. Excused absences may be granted by the instructor in such cases as illness or personal emergency and are considered on an individual basis; verification of the reason for the absence may be required. It is the student’s responsibility to make arrangements to make up work that is missed due to absences.

Auditing Courses

Permission to audit courses in the School of Health Professions is sometimes granted. Auditing conveys only the privilege of observing and excludes handing in papers or taking part in class discussion, laboratory experiences, or fieldwork. No grade is given and no credit is recorded. Students must obtain permission to audit a course from the instructor and the Department Chair of the program in which they are enrolled.

Background Checks

All students offered admission to Health Professions certificate and degree programs must pass a background check. An offer of admission will not be final until the completion of the background check(s) with results deemed favorable. Students must pay costs for the background check. Information on how to order and pay for the background check is included in the offer of admission letter.

CLEP (College Level Examination Program)

Course credit for specified general education and elective prerequisites may be accepted without a letter grade in School of Health Professions professional certificate and degree programs if a student earns a satisfactory score on College Level Examination Program (CLEP) examinations.

Conditions and Limitations

- Applicants and students are responsible for requesting that official CLEP scores be sent by The College Board to the Registrar.
- CLEP credit awarded by another institution is acceptable if scores are consistent with the minimum scores listed in the tables below. Notation of CLEP credit 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

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<tr>
<th>Prerequisite Course</th>
<th>CLEP Examination</th>
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<td>Chemistry (Lecture)</td>
<td>Chemistry</td>
<td>50/46</td>
<td>3</td>
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<td>College Algebra, or Higher</td>
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<td>Trigonometry</td>
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<td>Information Systems and Computer Applications</td>
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<td>Human Growth and Dev.</td>
<td>50/45</td>
<td>3</td>
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<td>Economics</td>
<td>Prin. of Macroeconomics</td>
<td>50/44</td>
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</tr>
<tr>
<td></td>
<td>Prin. of Microeconomics</td>
<td>50/41</td>
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</tr>
<tr>
<td>English</td>
<td>English Literature</td>
<td>50/46</td>
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<tr>
<td></td>
<td>Freshman College Composition</td>
<td>50/44</td>
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</tr>
<tr>
<td></td>
<td>American Literature</td>
<td>50/46</td>
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<tr>
<td></td>
<td>Analyzing and Interpreting Lit.</td>
<td>50/47</td>
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<tr>
<td>English Composition</td>
<td>English Composition</td>
<td>50/420</td>
<td>3</td>
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<tr>
<td>General Biology (Lecture &amp; Lab)</td>
<td>Biology</td>
<td>50/46</td>
<td>5</td>
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<tr>
<td>Introduction to Business Admin.</td>
<td>Principles of Management</td>
<td>50/46</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Psychology</td>
<td>Introductory Psychology</td>
<td>50/47</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Sociology</td>
<td>Introductory Sociology</td>
<td>50/47</td>
<td>3</td>
</tr>
<tr>
<td>Marketing</td>
<td>Principles of Marketing</td>
<td>50/50</td>
<td>3</td>
</tr>
<tr>
<td>United States Government</td>
<td>American Government</td>
<td>50/47</td>
<td>3</td>
</tr>
<tr>
<td>United States History</td>
<td>U.S. History I</td>
<td>50/47</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>U.S. History II</td>
<td>50/46</td>
<td>3</td>
</tr>
</tbody>
</table>

*Minimum scores listed are recommended by American Council on Education standard-setting panels for the paper-and-pencil version of the CLEP administered before July 1, 2001.
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 UT Health Science Center at San Antonio transcript.

**Core Curriculum**

Students receiving their first baccalaureate degree from The UT Health Science Center at San Antonio must successfully complete the Texas Core Curriculum requirements. Detailed information about the Health Science Center Core Curriculum is provided in this Catalog.

**Credit by Examination**

Students in some Health Professions certificate or degree programs may attempt to earn credit by examination for designated courses. Credit by examination will not be given for credit-bearing courses that the student previously passed or 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 Registrar.

Credit by examination satisfies degree requirements in the same way as credit earned by passing a course. Credit earned by examination will be based on the score obtained.

### Core Curriculum Requirements and Program Prerequisites
**That May Be Satisfied by DANTES Examinations**

<table>
<thead>
<tr>
<th>Core Curriculum Course</th>
<th>DANTES Examination</th>
<th>Minimum Score</th>
<th>Maximum Credit Granted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>Principles of Financial Accounting</td>
<td>49</td>
<td>3</td>
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<tr>
<td>Principles of Accounting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Law</td>
<td>Business Law II</td>
<td>52</td>
<td>3</td>
</tr>
<tr>
<td>College Algebra, or higher</td>
<td>Fundamentals of College Algebra</td>
<td>47</td>
<td>3</td>
</tr>
<tr>
<td>Communication</td>
<td>Technical Writing</td>
<td>46</td>
<td>3</td>
</tr>
<tr>
<td>Computer Literacy</td>
<td>Introduction to Computing</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>Computer Literacy</td>
<td>Management Information Systems</td>
<td>46</td>
<td>3</td>
</tr>
<tr>
<td>Developmental Psychology</td>
<td>Lifespan Developmental Psychology</td>
<td>46</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>Note: Many DANTES examinations may satisfy credits for electives.</td>
<td>Varies</td>
<td></td>
</tr>
<tr>
<td>Humanities &amp; Visual and Performing Arts</td>
<td>Art of the Western World</td>
<td>48</td>
<td>3</td>
</tr>
<tr>
<td>Humanities &amp; Visual and Performing Arts</td>
<td>Human/Cultural Geography</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Humanities &amp; Visual and Performing Arts</td>
<td>Ethics in America</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Humanities &amp; Visual and Performing Arts</td>
<td>Introduction to World Religions</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Introduction to Business Administration</td>
<td>Introduction to Business</td>
<td>46</td>
<td>3</td>
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<tr>
<td>Management Science</td>
<td>Human Resource Management</td>
<td>48</td>
<td>3</td>
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<tr>
<td>Management Science</td>
<td>Principles of Supervision</td>
<td>46</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (Algebra and Statistics)</td>
<td>Fundamentals of College Algebra</td>
<td>47</td>
<td>6</td>
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<tr>
<td>Mathematics (Algebra and Statistics)</td>
<td>Principles of Statistics</td>
<td>48</td>
<td></td>
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<tr>
<td>Natural Sciences</td>
<td>Astronomy</td>
<td>48</td>
<td>9</td>
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<tr>
<td>Natural Sciences</td>
<td>Environment and Humanity: The Race to Save the Planet</td>
<td>46</td>
<td></td>
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<tr>
<td>Natural Sciences</td>
<td>Principles of Physical Science I</td>
<td>47</td>
<td></td>
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<tr>
<td>Natural Sciences</td>
<td>Physical Geology</td>
<td>46</td>
<td></td>
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<tr>
<td>Social and Behavioral Sciences</td>
<td>Lifespan Developmental Psychology</td>
<td>46</td>
<td>3</td>
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<tr>
<td>Social and Behavioral Sciences</td>
<td>General Anthropology</td>
<td>47</td>
<td></td>
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<tr>
<td>Social and Behavioral Sciences</td>
<td>Organizational Behavior</td>
<td>48</td>
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<tr>
<td>Social and Behavioral Sciences</td>
<td>Introduction to Law Enforcement</td>
<td>45</td>
<td></td>
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<tr>
<td>Social and Behavioral Sciences</td>
<td>Criminal Justice</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>Social and Behavioral Sciences</td>
<td>Fundamentals of Counseling</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Speech</td>
<td>Principles of Public Speaking</td>
<td>47</td>
<td>3</td>
</tr>
</tbody>
</table>

1Minimum scores are based on American Council on Education (ACE) recommendations.
2Three semester credit hours per DANTES examination may be awarded.
3Many DANTES examinations may satisfy credits for electives. Each program that includes electives in program prerequisites will designate which DANTES examinations may or may not be used for elective credit and maximum number of semester credit hours that may be awarded. Minimum scores for awarding elective credit will be determined by the application of ACE recommendations.
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 examination according to criteria set by the department that administers it. Credit by examination is reported to the Registrar only when the student requests that the department report to the Registrar that the examination was passed. At the department’s request, the 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.

The student’s official transcript does not reflect unsuccessful attempts to earn credit by examination. If a student fails a test for credit by examination, the student may earn credit for the course only by enrolling and taking the course.

All tests administered for credit by examination require the payment of a fee, determined by the department and the Registrar. Fees must be paid before the test is administered. Fees vary, depending on the nature of the test, time required for administration, and other factors.

DANTES (Defense Activity for Non-Traditional Education Support)

Course credit for specified core curriculum requirements and program prerequisites may be accepted without a letter grade in 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) examinations. (See table.)

Conditions and Limitations

- Applicants and students are responsible for requesting that official DANTES scores be sent by DANTES to the registrar.
- DANTES credit awarded by another institution is acceptable if scores are consistent with the minimum scores listed in the tables below. 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.

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. Grade point averages for Clinical Laboratory Science students who are enrolled concurrently at The University of Texas at San Antonio are calculated as a combination GPA.

Dropping Courses

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. If a student is enrolled in only one course and wishes to drop that course, the student must withdraw from the School of Health Professions or apply for a leave of absence. With the approval of the instructor, a student may drop a course at any time before the last official class day in any semester, and a grade of W will be assigned. A grade of W is not used in calculating the grade point average.

In accordance with Texas Education Code 51.907, undergraduate students may not drop more than six courses. See “Adding/Dropping Courses” under “General Academic Policies” in this Catalog for further information.

Essential Functions

Most 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. These statements may include cognitive, psychomotor, and affective dimensions. For further information, contact the department office.

Grades and Grade Point Average

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.

Although a grade of D may be earned in a required Health Professions course, certain courses in the curriculum must be completed with a grade of C or higher in order for the student to progress in the program. Those courses in which a D is not an acceptable grade are specified in each program description.

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

The symbol I (incomplete) may be recorded for a student who has not completed course assignments at the conclusion of the course. 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.

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.

Course Drop/Withdrawal

From the beginning of the third week to the end of the eleventh week of classes (or first week to the seventh week for summer term), a student may withdraw from a course and receive a W (Withdraw) on her or his transcript. Students who wish to withdraw must meet with their faculty advisor and the course instructor, fill out the course withdrawal form, and obtain necessary signatures.

Between the end of the eleventh week (or the end of the seventh week for summer term) and the last day of class before finals, students who wish to withdraw from a course must petition the Committee on Allied Health Studies (CAHS) through a written request to the course instructor. The petition must state why the student is unable to continue in the course. Acceptable reasons for withdrawal do not include dissatisfaction with the instructor or course or with the expected grade or performance. The CAHS will approve or deny the request. If approved, the student will receive a W on her or his transcript. If the request is denied, the instructor will assign a final grade in accordance with the criteria that is applied to other students in the course.

The instructor may recommend to the Department Chair that a student be administratively dropped from a course when the instructor can show that circumstances warrant such action. The Dean must approve this request. If approved, a grade of W will be assigned.

Graduation with Honors

Honors designations are awarded to students graduating from the baccalaureate programs based upon the following scale:

- *Magna Cum Laude* — Cumulative GPA of 3.50–3.74
- *Summa Cum Laude* — Cumulative GPA of 3.75–4.0

Graduates of the certificate programs in Dental Hygiene and Dental Laboratory Sciences with a cumulative GPA of 3.5 or better will be awarded the certificate “With Honors.”

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. 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.

International Applicants

International applicants who have completed all or part of their college-level education at schools outside the United States must:

- Submit their foreign transcripts for a course-by-course descriptive evaluation through a university-approved evaluation service, and
- Submit their scores on the Test of English as a Foreign Language (TOEFL)

Required minimum scores on the TOEFL are 560 for the paper test or 68 for the Internet-based test.

Official copies of the transcript evaluation and TOEFL score must be submitted directly to the Registrar from the service provider.

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 for up to a year. The request must be made in writing to the Department Chair. On recommendation from the department’s Committee on Allied Health Studies (CAHS), 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 if 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 CAHS. Specific procedures for requesting a leave of absence may be established by each department within the above guidelines. Consult the department’s section of this Catalog for details.

Professional Conduct

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 student peers, patients, faculty, and staff, and 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.

The basic guide for professional conduct is found below. In addition, students are responsible for knowing and adhering to the following regulations and guidelines on professional conduct and discipline:

- Health Science Center’s procedures and regulations governing “Student Conduct and Discipline,” found in this Catalog
- Rules and Regulations, The University of Texas System Board of Regents
- Additional guides for professional conduct may be issued by Health Professions departments or professional organizations. Copies may be available through the departmental office.
Guide for Professional Conduct

Professionalism relates to the intellectual, ethical, behavioral, and attitudinal attributes necessary to perform as a health care provider. Examples of professional behavior are given below, but are not limited to these examples. The student will be expected to:

1. Demonstrate sound judgment commensurate with the level of training and experience.
2. Serve all patients without discrimination.
3. Recognize and respect the role and competencies of other professionals and cooperate with them to provide effective health care.
4. Exhibit concern primarily for the patient’s welfare rather than for a grade.
5. Exhibit an attitude of respect, concern, and cooperativeness toward peers, staff, and faculty.
6. Hold in confidence the details of professional services rendered and the confidences of any patient.
7. Achieve the highest degree of honesty and integrity by communicating and behaving in an honest, ethical manner.
8. Accept responsibility for own work and results; demonstrate willingness to accept suggestions for improvement.
9. Maintain physical, mental, and emotional composure in all situations.
10. Abide by the regulations and policies of the program and clinical training sites.
11. Practice personal grooming and hygiene.
12. Practice appropriate safety and aseptic techniques.
13. Provide the patient with relevant information to enable the patient to participate in making decisions regarding her/his condition, prognosis, and treatment options.
14. Refuse to participate in or conceal any unlawful, incompetent, or unethical practice.

Readmission

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 Committee on Allied Health Studies (CAHS). Whether readmission will be considered at the entry level or an advanced level will be determined on an individual basis. All such requests will be considered by the Allied Health Faculty Council and, according to the recommendation of the Council, will be approved or disapproved by the Dean.

Special 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, or special, student. In general, a special 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 special student may be granted by the Dean, Associate Dean, or Department Chair. Special students will be enrolled only if space is available.

Students seeking “special student” status must receive approval for registration each semester by the Dean, Associate Dean, or Department Chair and the instructor of each course; must 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 special students are the same as those for regular students. All grades received as a special 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.

Withdrawal

Permission for withdrawal from a certificate or degree program in the School of Health Professions may be granted by the Dean or Associate Dean upon the concurrence of the CAHS. The student who wishes to withdraw must complete the Administrative Clearance Form, 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 will arrange for an exit interview with the Associate Dean.

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.

An application for readmission by a student who has previously withdrawn from a certificate or degree program is subject to the same requirements, procedures, and acceptance considerations that apply to first-time applicants.
## Health Professions Academic Calendar 2009–10

### Fall 2009

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday, May 1, 2009</td>
<td>Web Regular Registration Begins</td>
<td>All</td>
</tr>
<tr>
<td>Tuesday, June 30, 2009</td>
<td>Web Regular Registration Ends</td>
<td>All</td>
</tr>
<tr>
<td>Wednesday, July 1, 2009</td>
<td>Web Add/Drop/Late Registration Begins</td>
<td>All (excluding PA Year 2)</td>
</tr>
<tr>
<td>Monday, July 6, 2009</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>PA Year 2</td>
</tr>
<tr>
<td>Tuesday, July 21, 2009</td>
<td>Census Date</td>
<td>PA Year 2</td>
</tr>
<tr>
<td>Tuesday, July 28, 2009</td>
<td>Web Add/Drop/Late Registration Ends</td>
<td>PT Year 3</td>
</tr>
<tr>
<td>Monday, August 3, 2009</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>PT Year 3</td>
</tr>
<tr>
<td>Tuesday, August 18, 2009</td>
<td>Census Date</td>
<td>PT Year 3</td>
</tr>
<tr>
<td>Tuesday, August 18, 2009</td>
<td>Web Add/Drop/Late Registration Ends</td>
<td>All (excluding PA Year 2 &amp; PT Year 3)</td>
</tr>
<tr>
<td>Wed.–Fri., August 19–21, 2009</td>
<td>Orientation</td>
<td>New Students</td>
</tr>
<tr>
<td>Monday, August 24, 2009</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>All Other HP Students</td>
</tr>
<tr>
<td>Monday, September 7, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Wednesday, September 9, 2009</td>
<td>Census Date</td>
<td>All Other HP Students</td>
</tr>
<tr>
<td>Monday, September 28, 2009</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>OT Year 3</td>
</tr>
<tr>
<td>Wednesday, October 7, 2009</td>
<td>Census Date</td>
<td>OT Year 3</td>
</tr>
<tr>
<td>Thursday, November 26, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
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<tr>
<td>Friday, November 27, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Friday, December 11, 2009</td>
<td>Term Ends</td>
<td>PA Year 2</td>
</tr>
<tr>
<td>Wednesday, December 16, 2009</td>
<td>Term Ends</td>
<td>All Other HP Students</td>
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<tr>
<td>Friday, December 18, 2009</td>
<td>Term Ends</td>
<td>PA Year 3 &amp; OT Year 3</td>
</tr>
<tr>
<td>Friday, December 18, 2009</td>
<td>Final Grades Due</td>
<td>Graduating Students</td>
</tr>
<tr>
<td>Saturday, December 19, 2009</td>
<td>Graduation (No Ceremony)</td>
<td>Graduating Students</td>
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<tr>
<td>Wednesday, December 23, 2009</td>
<td>Final Grades Due</td>
<td>All Continuing Students</td>
</tr>
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<td>Thursday, December 24, 2009</td>
<td>Tentative University Holiday</td>
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<td>Friday, December 25, 2009</td>
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<td>All</td>
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<tr>
<td>Monday, December 28, 2009</td>
<td>Tentative University Holiday</td>
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<tr>
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</tr>
<tr>
<td>Friday, January 1, 2010</td>
<td>Tentative University Holiday</td>
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</tbody>
</table>

### Spring 2010

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Group</th>
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</thead>
<tbody>
<tr>
<td>Sunday, November 1, 2009</td>
<td>Web Regular Registration Begins</td>
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<tr>
<td>Monday, November 30, 2009</td>
<td>Web Regular Registration Ends</td>
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</tr>
<tr>
<td>Tuesday, December 1, 2009</td>
<td>Web Add/Drop/Late Registration Begins</td>
<td>All</td>
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<tr>
<td>Monday, December 28, 2009</td>
<td>Web Add/Drop/Late Registration Ends</td>
<td>PA Year 3 &amp; OT Year 3</td>
</tr>
<tr>
<td>Monday, January 4, 2010</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>PA Year 3 &amp; OT Year 3</td>
</tr>
<tr>
<td>Tuesday, January 5, 2010</td>
<td>Web Add/Drop/Late Registration Ends</td>
<td>All (excluding PA Year 3 &amp; OT Year 3)</td>
</tr>
<tr>
<td>Wed.–Fri., January 6–8, 2010</td>
<td>Orientation</td>
<td>New Students</td>
</tr>
<tr>
<td>Monday, January 11, 2010</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>All Other HP Students</td>
</tr>
<tr>
<td>Tuesday, January 12, 2010</td>
<td>Census Date</td>
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<td>Monday, January 18, 2010</td>
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<td>Tuesday, January 26, 2010</td>
<td>Census Date</td>
<td>PA Year 2</td>
</tr>
<tr>
<td>Date</td>
<td>Event</td>
<td>Group</td>
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<tr>
<td>Wednesday, January 27, 2010</td>
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<tr>
<td>Monday, February 15, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Monday, March 15, 2010</td>
<td>Spring Break Begins</td>
<td>All</td>
</tr>
<tr>
<td>Friday, March 19, 2010</td>
<td>Spring Break Ends</td>
<td>All</td>
</tr>
<tr>
<td>Friday, March 26, 2010</td>
<td>Term Ends</td>
<td>OT Year 3</td>
</tr>
<tr>
<td>Friday, April 2, 2010</td>
<td>Final Grades Due</td>
<td>OT Year 3</td>
</tr>
<tr>
<td>Friday, April 23, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Friday, May 7, 2010</td>
<td>Term Ends</td>
<td>PA Year 2</td>
</tr>
<tr>
<td>Wednesday, May 12, 2010</td>
<td>Term Ends</td>
<td>All Other HP Students</td>
</tr>
<tr>
<td>Wednesday, May 19, 2010</td>
<td>Final Grades Due</td>
<td>All (excluding PA Year 3)</td>
</tr>
<tr>
<td>Friday, May 21, 2010</td>
<td>Term Ends</td>
<td>PA Year 3</td>
</tr>
<tr>
<td>Friday, May 21, 2010</td>
<td>Final Grades Due</td>
<td>PA Year 3</td>
</tr>
<tr>
<td>Sunday, May 23, 2010</td>
<td>Tentative Graduation Ceremony</td>
<td>Graduating Students</td>
</tr>
</tbody>
</table>

**Summer 2010**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday, April 1, 2010</td>
<td>Web Regular Registration Begins</td>
<td>All</td>
</tr>
<tr>
<td>Friday, April 30, 2010</td>
<td>Web Regular Registration Ends</td>
<td>All</td>
</tr>
<tr>
<td>Saturday, May 1, 2010</td>
<td>Web Add/Drop/Late Registration Begins</td>
<td>All</td>
</tr>
<tr>
<td>Tuesday, May 18, 2010</td>
<td>Web Add/Drop/Late Registration Ends</td>
<td>All</td>
</tr>
<tr>
<td>Monday, May 24, 2010</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>PA Year 1 &amp; PT Year 2</td>
</tr>
<tr>
<td>Mon.–Tue., May 24–25, 2010</td>
<td>Orientation</td>
<td>New Students</td>
</tr>
<tr>
<td>Wednesday, May 26, 2010</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>All Other HP Students</td>
</tr>
<tr>
<td>Thursday, May 27, 2010</td>
<td>Census Date</td>
<td>PA Year 1</td>
</tr>
<tr>
<td>Monday, May 31, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Tuesday, June 1, 2010</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>PA Year 2</td>
</tr>
<tr>
<td>Wednesday, June 2, 2010</td>
<td>Census Date</td>
<td>PT Year 2</td>
</tr>
<tr>
<td>Monday, June 7, 2010</td>
<td>Census Date</td>
<td>All Other HP Students</td>
</tr>
<tr>
<td>Thursday, June 10, 2010</td>
<td>Census Date</td>
<td>PA Year 2</td>
</tr>
<tr>
<td>Thursday, July 1, 2010</td>
<td>Term Ends</td>
<td>PA Year 1</td>
</tr>
<tr>
<td>Thursday, July 8, 2010</td>
<td>Final Grades Due</td>
<td>PA Year 1</td>
</tr>
<tr>
<td>Wednesday, July 28, 2010</td>
<td>Term Ends</td>
<td>PT Year 2</td>
</tr>
<tr>
<td>Friday, August 6, 2010</td>
<td>Final Grades Due</td>
<td>PT Year 2</td>
</tr>
<tr>
<td>Friday, August 13, 2010</td>
<td>Term Ends</td>
<td>All Other HP Students</td>
</tr>
<tr>
<td>Friday, August 20, 2010</td>
<td>Term Ends</td>
<td>PA Year 2</td>
</tr>
<tr>
<td>Friday, August 20, 2010</td>
<td>Final Grades Due</td>
<td>Graduating Students</td>
</tr>
<tr>
<td>Saturday, August 21, 2010</td>
<td>Graduation (No Ceremony)</td>
<td>Graduating Students</td>
</tr>
<tr>
<td>Friday, August 27, 2010</td>
<td>Final Grades Due</td>
<td>All Other Continuing Students</td>
</tr>
</tbody>
</table>

^TOP
Clinical Laboratory Sciences Program

Clinical laboratory sciences (CLS) is the study and practice of diagnostic medicine. Degree programs in two medical laboratory disciplines can be pursued at the Health Science Center: Clinical Laboratory Science and Cytogenetics. Clinical laboratory scientists are laboratory practitioners who analyze blood, urine, tissue, or other body specimens to provide critical, objective data for disease diagnosis, treatment planning, and preventative health care. Cytogenetic technologists study the morphology and behavior of chromosomes and assist the physician in correlating chromosome anomalies to the individual's medical condition.

The Department of Clinical Laboratory Sciences offers both undergraduate and graduate degree programs and post-baccalaureate certificate programs in the two areas of study described above (see the table below). Programs in Clinical Laboratory Sciences and Cytogenetics are accredited by The National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 8410 West Bryn Mawr Avenue, Suite 670, Chicago, IL 60631-3415, (773) 714-8880; email info@naacls.org.

Graduates of the bachelor's degree program may find employment opportunities in hospital laboratories as well as private, reference, research, industrial, biotechnology, veterinary, public health, and pharmaceutical laboratories. With advanced education and experience, graduates have additional career options, including research, teaching, and management.

Bachelor of Science in Clinical Laboratory Sciences

The Bachelor of Science in Clinical Laboratory Sciences degree program is an integrated four-year program that combines core curriculum, basic science, and level one clinical laboratory

| Degree and Certificate Programs in the Department of Clinical Laboratory Sciences |
|---------------------------------|----------------|----------------|-------------------------------|----------------|
| Department                      | Bachelor of Science | Post-Baccalaureate Certificate | Post-Baccalaureate Categorical Certificate | Master of Science |
| Clinical Laboratory Science     | √                | √                    | √                             | √               |
| Cytogenetics                   | √                | √                    |                               |                 |

1Post-baccalaureate Categorical Certificate options include microbiology, clinical chemistry, immunohematology, and hematology.

2Master of Science degree tracks include forensic/analytical toxicology and immunohematology.
sciences courses throughout the first three years. The fourth year of the program comprises level two clinical laboratory courses and clinical practicums. Students may choose from two tracks in the bachelor’s degree program: general clinical laboratory sciences and premedical.

Core curriculum and program prerequisite courses for the bachelor’s degree may be taken at any regionally accredited community college or university; the upper-level science courses to include biochemistry must be taken at a four-year university. Generally, all professional clinical laboratory science courses are taken at the Health Science Center.

**Joint Health Science Center/UTSA Bachelor of Science in Clinical Laboratory Sciences Degree**

Students pursuing the Bachelor of Science in Clinical Laboratory Science may earn their degree from the Health Science Center or through a joint degree program from both the Health Science Center and The University of Texas at San Antonio (UTSA). Students interested in the joint degree must apply to UTSA for admission, complete a minimum of 25% of degree hours at UTSA, and complete UTSA core curriculum requirements in addition to the science prerequisites and Health Science Center clinical laboratory sciences courses. UTSA students may enroll as early as the freshman year to determine their interest and aptitude in clinical laboratory sciences as a career.

**Post-baccalaureate Certificate in Clinical Laboratory Sciences**

The post-baccalaureate certificate program is designed for students who hold a bachelor’s degree. The curriculum includes 63.5 semester hours of professional clinical laboratory sciences coursework. Science requirements not completed as part of the bachelor’s degree program may be taken as part of the certificate curriculum. The curriculum requires approximately 18–24 months, depending on when the student enters the program. Certificate students may begin classes in the fall or spring semester.

**Post-baccalaureate Categorical Certificates**

Categorical certificate programs in a subdiscipline of clinical laboratory sciences are open to students who hold a bachelor’s degree in biology, chemistry, or another closely related field. Categorical certificates are available in microbiology, clinical chemistry, immunohematology, and hematology. Curricula for these programs may be completed in 12 to 18 months, and consist of the following:

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>CLS Coursework</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microbiology</td>
<td>35.0</td>
<td>31.0</td>
</tr>
<tr>
<td>Clinical Chemistry</td>
<td>28.0</td>
<td>29.0</td>
</tr>
<tr>
<td>Immunohematology</td>
<td>31.0</td>
<td>28.0</td>
</tr>
<tr>
<td>Hematology</td>
<td>31.0</td>
<td>24.0</td>
</tr>
</tbody>
</table>

**Advanced Standing Program for CLT/MLT Professionals**

The advanced standing program is designed for the clinical laboratory technician (CLT)/medical laboratory technician (MLT) who has completed a CLT/MLT program accredited by NAACLS, earned an associate degree, and who is certified as a CLT by the National Credentialing Agency (NCA) or MLT by the American Society for Clinical Pathology (ASCP). Students must apply and be accepted into the Bachelor of Science degree program at the Health Science Center. Core curriculum and program prerequisite courses must be completed before advancing to the senior year. Advanced professional clinical laboratory sciences courses may be offered by the Health Science Center via distance learning. Students who successfully complete the advanced standing program will receive a Bachelor of Science in Clinical Laboratory Sciences from the Health Science Center.

**Master of Science in Clinical Laboratory Sciences**

The Master of Science in Clinical Laboratory Sciences program is designed for students who hold a bachelor’s degree in clinical laboratory sciences, biology, chemistry, or other related discipline from an accredited institution in the United States. The program offers tracks in forensic/analytic toxicology and immunohematology. Both tracks require a common core of graduate courses, clinical practicums, electives, and the completion of a project. The results of the project must be submitted as a publication-quality paper or alternatively as a thesis. The minimum number of semester credit hours for graduation is 38.5 for the forensic/analytic toxicology track and 39.5 for the immunohematology track. Research opportunities in specialized laboratories are available at the Health Science Center and throughout Texas.

**Bachelor of Science in Cytogenetics**

The Bachelor of Science in Cytogenetics program consists of a minimum of 120 semester credit hours, including 84 semester credit hours of core curriculum and program prerequisites completed at another accredited college or university, and 36 semester credit hours in cytogenetics courses completed at the Health Science Center.

**Post-Baccalaureate Certificate in Cytogenetics**

The post-baccalaureate certificate program in Cytogenetics is available for students who have already completed a bachelor’s degree in natural science (biology, microbiology, medical technology, etc.) or a physical science (chemistry, physics, etc.). Health Science Center coursework is the same for both the bachelor of science and post-baccalaureate certificate programs. The program consists of 40.5 semester credit hours completed at the Health Science Center. Graduates of the bachelor’s degree and post-baccalaureate certificate program are eligible to take the Clinical Laboratory Specialists in Cytogenet-
Most didactic courses are offered one time per year. Students receive scheduling priority for clinical coursework. Part-time enrollment is possible, but full-time students receive scheduling priority for clinical coursework. Most didactic courses are offered one time per year.

Application and Admission

Applications for admission to the Clinical Laboratory Sciences and Cytogenetics programs may be completed at https://www.applytexas.org/adappc/commonapp.WBX. Detailed information about application and admission is available in the School of Health Professions Applicant Viewbook, and from the Health Professions Welcome Center or (866) 802-6288 (toll-free) or (210) 567-8744. Application materials for the CLS program, application fee, official transcripts, and supporting documents must be submitted to the Registrar by June 1 for fall admission or by October 1 for spring admission. Application materials for the cytogenetics programs must be submitted by July 1 for fall admission.

Applicants who are enrolled in college courses at the time of application should submit an official transcript showing courses in progress. An updated transcript should be submitted upon completion of the courses. Conditional admission may be granted contingent on satisfactory completion of the courses in progress.

Admission Factors

The following factors are considered for selecting students for all Clinical Laboratory Sciences and Cytogenetics programs:

- Academic achievement
- Prerequisite coursework completed
- Work experience, non-health sciences related
- Work experience in the health sciences
- Texas resident status
- Race/ethnicity
- Bilingual ability
- Volunteer activities
- Leadership positions held
- Prior experience in the clinical laboratory
- Community service
- Recommendations by references
- Communication skills
- Motivation for a career in clinical laboratory sciences
- Interpersonal skills
- Maturity
- Knowledge of the profession

Bachelor of Science in Clinical Laboratory Sciences (General and Premedical Tracks)

Admission Requirements

- Completion of at least 50 semester credit hours of core curriculum and program prerequisite courses (total of 67 semester credit hours of core curriculum and program prerequisite courses required for the degree; see program prerequisites below)
- Overall grade point average (GPA) of 2.5 (on a 4-point scale)
- Two reference forms completed by former instructors (preferably science instructors)
- Test of English as a Foreign Language (TOEFL) – International applicants only: minimum scores 560 (paper) or 68 (Internet-based)
- Official transcripts sent from each college and university attended

Program Prerequisites

Students are not required to complete all math and science requirements before being admitted to the Bachelor of Science in Clinical Laboratory Sciences program. Science and math requirements may be taken concurrently with Clinical Laboratory Science courses. Applicants without a baccalaureate degree must complete the Texas Core Curriculum that consists of 42 semester credit hours. Some courses that satisfy core curriculum requirements may also be used to satisfy program prerequisites. Applicants are encouraged to seek advisement from the Health Professions Welcome Center about program prerequisites that may fulfill the Health Science Center’s core curriculum requirements.

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemistry (upper division)</td>
<td>3.0</td>
</tr>
<tr>
<td>Biology I and Laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>Biology II</td>
<td>3.0</td>
</tr>
<tr>
<td>General Chemistry I and Laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>General Chemistry II and Laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>General Physiology or Human Physiology (upper division)</td>
<td>3.0</td>
</tr>
<tr>
<td>Genetics</td>
<td>3.0</td>
</tr>
<tr>
<td>Genetics Laboratory (recommended)</td>
<td>(2.0)</td>
</tr>
<tr>
<td>Introduction to Clinical Laboratory Sciences*</td>
<td>(2.0)</td>
</tr>
<tr>
<td>Microbiology and Laboratory</td>
<td>5.0</td>
</tr>
<tr>
<td>Organic Chemistry and Laboratory</td>
<td>5.0</td>
</tr>
<tr>
<td>Science Requirements Total</td>
<td>34.0</td>
</tr>
</tbody>
</table>

Additional Requirements for General Clinical Laboratory Sciences Track

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precalculus</td>
<td>3.0</td>
</tr>
<tr>
<td>Statistics</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Additional Requirements for Pre-medical Track

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus I</td>
<td>4.0</td>
</tr>
<tr>
<td>Organic Chemistry II and Laboratory</td>
<td>5.0</td>
</tr>
<tr>
<td>Physics I and Laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>Physics II and Laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>Statistics</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Program Prerequisites with The University of Texas at San Antonio (UTSA) Equivalents

This information is provided for students pursuing the Health Science Center/UTSA joint degree program. Students at other institutions should consult their college/university catalogs for
equivalent courses. Joint degree students must successfully complete UTSA’s core curriculum. Consult the UTSA Catalog for further information. Students are not required to complete all math and science requirements before being admitted to the Clinical Laboratory Sciences program; science and math requirements may be taken concurrently with Clinical Laboratory Science courses.

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLSC 2000 Introduction to Clinical Laboratory Sciences or BIO 1882 Introduction</td>
<td>(2.0)</td>
</tr>
<tr>
<td>to Health Professions (UTSA)</td>
<td></td>
</tr>
<tr>
<td>BIO 1404, Biosciences I and Laboratory</td>
<td>6.0</td>
</tr>
<tr>
<td>BIO 1413 Biosciences II</td>
<td>3.0</td>
</tr>
<tr>
<td>BIO 2313 Genetics</td>
<td>3.0</td>
</tr>
<tr>
<td>BIO 2322 Genetics Laboratory (recommended)</td>
<td>(2.0)</td>
</tr>
<tr>
<td>BIO 3153 Physiology of Human Systems or BIO 3413 General Physiology</td>
<td>3.0</td>
</tr>
<tr>
<td>AHS 3463 Human Physiology</td>
<td>3.0</td>
</tr>
<tr>
<td>BIO 3513 Biochemistry</td>
<td>3.0</td>
</tr>
<tr>
<td>BIO 3713, 3722 Microbiology and Laboratory</td>
<td>5.0</td>
</tr>
<tr>
<td>CHE 1103, 1122 General Chemistry I and Laboratory</td>
<td>5.0</td>
</tr>
<tr>
<td>CHE 1113, 1132 General Chemistry II and Laboratory</td>
<td>5.0</td>
</tr>
<tr>
<td>CHE 2604, 2612 Organic Chemistry and Laboratory</td>
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<tr>
<td>Science Requirements Total</td>
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</table>

Additional Prerequisites for General Track with The University of Texas at San Antonio (UTSA) Equivalents

<table>
<thead>
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<th>Course Description</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>MAT 1093 Precalculus</td>
<td>3.0</td>
</tr>
<tr>
<td>STA 1053 Statistics</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Additional Requirements for Pre-medical Track with The University of Texas at San Antonio (UTSA) Equivalents

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 2623, 2632 Organic Chemistry II</td>
<td>5.0</td>
</tr>
<tr>
<td>MAT 1214 Calculus I</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY 1603, 1611 Physics I and Lab</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY 1623, 1631 Physics II and Lab</td>
<td>4.0</td>
</tr>
<tr>
<td>STA 1053 Statistics</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Post-Baccalaureate Certificate in Clinical Laboratory Sciences

Admission Requirements

- Completion of a bachelor’s degree in biology, chemistry, or other closely related field
- Completion of program prerequisites, below
- Overall grade point average (GPA) of 2.5 (on a 4-point scale)
- Two reference forms completed by former instructors (preferably science instructors)
- Test of English as a Foreign Language (TOEFL) – International applicants only: minimum scores 560 (paper) or 68 (Internet-based)
- Official transcripts sent from each college and university attended

Program Prerequisites

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemistry (upper division)</td>
<td>3.0</td>
</tr>
<tr>
<td>Biology I and Laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>Biology II</td>
<td>3.0</td>
</tr>
<tr>
<td>General Chemistry I and Laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>General Chemistry II and Laboratory</td>
<td>3.0</td>
</tr>
<tr>
<td>General Physiology or Human Physiology (upper division)</td>
<td>3.0</td>
</tr>
<tr>
<td>Genetics</td>
<td>3.0</td>
</tr>
<tr>
<td>Genetics Laboratory (recommended)</td>
<td>(2.0)</td>
</tr>
<tr>
<td>Introduction to Clinical Laboratory Sciences*</td>
<td>(2.0)</td>
</tr>
<tr>
<td>Microbiology and Laboratory</td>
<td>5.0</td>
</tr>
<tr>
<td>Organic Chemistry and Laboratory</td>
<td>5.0</td>
</tr>
<tr>
<td>Precalculus</td>
<td>3.0</td>
</tr>
<tr>
<td>Statistics</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Science Requirements Total 40.0

*Introduction to Clinical Laboratory Sciences may be fulfilled by successfully completing CLSC 2000 (see Course Descriptions).

Post-Baccalaureate Categorical Certificates in Clinical Laboratory Sciences

Admission Requirements

- Bachelor’s degree in biology, chemistry, or other closely related field
- Completion of program prerequisites listed below, with a grade of C or better
- Minimum cumulative grade point average (GPA) of 2.5 (on a 4-point scale)
- Two reference forms completed by former instructors (preferably science instructors)
- Test of English as a Foreign Language (TOEFL) – International applicants only: minimum scores 560 (paper) or 68 (Internet-based)
- Official transcripts sent from each college and university attended

Prerequisites for the Microbiology Categorical Certificate:

35 semester credit hours of biological sciences from the
courses listed below, which may be taken concurrently with courses from the Microbiology Categorical Certificate program, with approval from the faculty advisor:

- Biochemistry
- Genetics
- General Chemistry I with laboratory
- General Chemistry II with laboratory
- Microbiology with laboratory for biology/microbiology majors
- Organic Chemistry I with laboratory
- Physiology
- Precalculus
- Statistics
- Immunology (upper division or CLSC 3065)

Prerequisites for the Clinical Chemistry Categorical Certificate: 28 semester credit hours of biology and chemistry, from the courses listed below, which may be taken concurrently with courses from the Clinical Chemistry Categorical Certificate program, with approval from the faculty advisor:

- Chemistry (at least 16 semester credit hours in chemistry including General Chemistry I with laboratory, General Chemistry II with laboratory, Organic Chemistry I with laboratory, Biochemistry)
- Human Physiology
- Immunology (upper division or CLSC 3065)
- Precalculus
- Statistics

Prerequisites for the Immunohematology Categorical Certificate: 31 semester credit hours of biology and chemistry, from the courses listed below, which may be taken concurrently with courses from the Immunohematology Categorical Certificate program, with approval from the faculty advisor:

- Biochemistry
- General Chemistry I with laboratory
- General Chemistry II with laboratory
- Genetics
- Immunology (upper division or CLSC 3065)
- Organic Chemistry I with laboratory
- Physiology
- Precalculus
- Statistics

Prerequisites for the Hematology Categorical Certificate: 31 semester credit hours of biology and chemistry, from the courses listed below, which may be taken concurrently with courses from the Immunohematology Categorical Certificate program, with approval from the faculty advisor:

- Biochemistry
- General Chemistry I with laboratory
- General Chemistry II with laboratory
- Genetics
- Immunology (upper division or CLSC 3065)
- Organic Chemistry I with laboratory
- Physiology
- Precalculus
- Statistics

Master of Science in Clinical Laboratory Sciences – Immunohematology Track and Forensic/Analytical Toxicology Track

Admission Requirements

- Bachelor's degree in clinical laboratory science (medical technology), biology, chemistry, or other related discipline from an accredited institution in the United States
- Minimum undergraduate grade point average (GPA) of 3.0 (on a 4.0 point scale)
- Graduate Record Examination; scores must not be older than 5 years
- Prerequisite courses for the chosen track
- Test of English as a Foreign Language (TOEFL) – International applicants only: minimum scores 560 (paper) or 68 (Internet-based)
- Two reference forms (forms available online from Student Services)

Prerequisites - Immunohematology Track

In addition to the admission requirements for a Master of Science degree, applicants to the Immunohematology Track must be certified as a Clinical Laboratory Science (CLS) or Immunohematologist (CLS/I) by NCA, or as a medical technologist (MT) or blood bank technologist (BB) by ASCP. Foreign certification is not recognized as equivalent. A minimum of one-year post-baccalaureate clinical experience acceptable to the medical director of the Specialist in Blood Banking program is required. In addition, the following prerequisites are required for the Immunohematology Track.

<table>
<thead>
<tr>
<th>Biological Science:</th>
<th>16.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Must include one semester of immunology and one semester of microbiology</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemistry:</th>
<th>16.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Must include one semester of organic chemistry or biochemistry</td>
<td></td>
</tr>
</tbody>
</table>

| Mathematics (Precalculus or higher) | 3.0 |
| Statistics | 3.0 |

Prerequisites - Forensic/Analytical Toxicology Track

In addition to the admission requirements for the Master of Science degree, the following prerequisites are required for the Forensic/Analytical Toxicology Track.

| Biochemistry | 4.0 |
| Biology, including Physiology | 8.0 |
| Calculus | 3.0 |
| General Chemistry I with laboratory | 4.0 |
| General Chemistry II with laboratory | 4.0 |
Cytogenetics

Bachelor of Science in Clinical Laboratory Sciences – Cytogenetics Track, and Post-Baccalaureate Certificate in Cytogenetics

- Minimum of 80 semester credit hours in core curriculum, science, and math program prerequisite courses (for bachelor’s degree program applicants) or bachelor’s degree in biology, chemistry, or closely related science (for post-baccalaureate certificate program applicants)

- Completion of program prerequisites with a grade of C or better (all applicants); see prerequisites below

- Minimum cumulative grade point average (GPA) of 2.5 (on a 4-point scale)

- Completion of Texas Core Curriculum with a grade of C or better (42 semester credit hours – for bachelor’s degree program applicants only); some program prerequisites will satisfy core curriculum requirements

- Two reference forms completed by former instructors (preferably science instructors)

- Test of English as a Foreign Language (TOEFL) – International applicants only: minimum scores 560 (paper) or 68 (Internet-based)

- Official transcripts sent from each college and university attended

Program Prerequisites for Cytogenetics Programs

Applicants without a baccalaureate degree must complete the Texas Core Curriculum that consists of 42 semester credit hours. Information about the Health Science Center’s core curriculum is provided in this Catalog. Some program prerequisites may also satisfy core curriculum requirements. Applicants are encouraged to seek advisement from the Health Professions Welcome Center about program prerequisites that may fulfill the Health Science Center’s core curriculum requirements.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immunology (highly recommended)</td>
<td>3.0</td>
</tr>
<tr>
<td>Instrumental Analysis or Clinical Chemistry</td>
<td>3.0</td>
</tr>
<tr>
<td>Organic Chemistry I with laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>Organic Chemistry II with laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>Physics I with laboratory (highly recommended)</td>
<td>3.0</td>
</tr>
<tr>
<td>Physics II with laboratory (highly recommended)</td>
<td>3.0</td>
</tr>
<tr>
<td>Statistics (highly recommended)</td>
<td>3.0</td>
</tr>
<tr>
<td>Demonstrated computer literacy</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry Prerequisites from the following:</td>
<td></td>
</tr>
<tr>
<td>General Chemistry with laboratory</td>
<td></td>
</tr>
<tr>
<td>Organic Chemistry I with laboratory</td>
<td></td>
</tr>
<tr>
<td>Organic Chemistry II with laboratory or</td>
<td></td>
</tr>
<tr>
<td>Biochemistry with laboratory</td>
<td></td>
</tr>
</tbody>
</table>

| Program Prerequisite Total                  | 42.0         |
| Core Curriculum and/or other elective courses | 38.0        |
| Core Curriculum and Program Prerequisite Total | 80.0        |

* Introduction to Clinical Laboratory Sciences may be taken concurrently with program courses.

** The Texas Core Curriculum consists of 42 semester credit hours, and some program prerequisites may satisfy core curriculum requirements. Completion of the Texas Core Curriculum is required for applicants to the Bachelor of Science degree program only; Post-baccalaureate certificate applicants are not required to complete the Texas Core Curriculum.

General Policies and Information

Advancement, Probation, and Dismissal

Advancement requires that the student complete scheduled program requirements each semester with a minimum grade of C in all basic science and clinical laboratory science courses. Grades of D or F must be remediated before the student may begin clinical practicums during the senior year. Failure to remediate these grades to C or better after repeating the course will result in the student’s forfeiting her/his position in the program. If there is not sufficient time for grades to be remediated before clinical practicums are scheduled to begin, the practicums may be postponed.

A student will be placed on probation if the student fails to meet specified requirements and/or conditions imposed at the time of her/his acceptance. A student who earns a D or F will be placed on probation until the grade is remediated. Should remediation require that the student retake the course when it is offered the following year, graduation will be delayed. A second D or F in a CLS course will result in review and probable dismissal. A student receiving a combination of two Ds or Fs in senior course work will be dismissed from the program.

Advancement to the Senior Year

A student must have no grade lower than a C in required science and clinical laboratory sciences courses to begin the senior year and begin clinical practicums. In addition, the student must file an Intent to Enroll in Clinical Practicum form, available from the department office, with the program office at least one semester before practicums begin. At this time the
student's file will be reviewed for advancement, and a letter will be sent to the student indicating results of the review.

Students who are ready for clinical practicums are randomly 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**

Students must be advised each semester before permission is given to enroll in professional courses. For students in the Bachelor of Science in Clinical Laboratory Sciences program, sequencing and completion of specific courses are important if all lower-division coursework is to be completed during the freshman and sophomore years.

Students who complete lower-division coursework at another college or university are urged to seek advise about coursework that will fulfill program requirements well in advance of applying to the Health Science Center. Students attending UTSA should choose Clinical Laboratory Sciences as their major and follow the UTSA curriculum for the major.

**Applicant Wait List**

In the event that all student positions in Clinical Laboratory Sciences programs are filled for a given semester (fall or spring), qualified applicants may be accepted and placed on a wait list. Applicants on the wait list will be ranked on overall grade point average and U.S. citizenship. If a position does not become available that semester, the applicant's acceptance to a Clinical Laboratory Sciences program will be deferred to the next semester (spring or fall). These applicants will have priority standing for positions in the next entering class.

**Attendance**

Students are expected to be prompt and attend scheduled lectures and laboratories. If a student is unable to attend class, he/she should call the Department office to advise faculty of the absence. No make-up tests are given except under unusual circumstances. If the student is unable to attend clinical practicum or will be late, the program faculty and laboratory supervisor must be notified each day the student is out.

**Certification**

Students who successfully complete a certificate or degree in Clinical Laboratory Sciences or Cytogenetics are eligible to take the national certification examinations given by the [National Credentialing Agency for Laboratory Personnel (NCA)](http://www.ncaclsi.org) or the [American Society for Clinical Pathology (ASCP)](http://www.ascp.org). Awarding of the degree or certificate is not contingent on passing an external certification or licensing examination.

**Credit by Examination**

Students enrolled in the clinical laboratory sciences baccalaureate or post-baccalaureate certificate programs may attempt to earn credit by examination according to the policy and procedures in the [School of Health Professions](http://www.utsa.edu/health-programs) section of this Catalog. Students who have college credit for CLT/MLT coursework are eligible to take “challenge examinations.” Students who are certified CLT(NCA) or MLT(ASCP), have completed a CLT/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 Department of Clinical Laboratory Sciences.

**Educational Practicum Assignments – Clinical Laboratory Sciences**

Making assignments to affiliates for practicum courses is a random process based on availability of positions at the affiliate sites. All students are expected to complete at least one practicum at an affiliate located outside of San Antonio. Refusal to go to an assigned affiliate will result in a loss of the student's practicum position and delay of graduation. Students who have special needs and request specific considerations for practicum assignments must put the request in writing to the Department chair. The chair will take the request to the faculty who will approve or disapprove the request.

In the unlikely event that there are not enough sites available for the number of students ready to enter practicums, assignments will be made in the following priority order:

1. Students in the last semester of their senior year who have completed all didactic and laboratory courses
2. Students in their last semester of the senior year.
3. All remaining students will be prioritized based on highest grade point average.
4. Those who have practicums delayed for more than two semesters will be moved to top priority.

Students who fail a practicum may not take priority in practicum assignments over students who are in good standing. Students who fail a practicum and cannot be accommodated for remediation before completion of their didactic courses may repeat the practicum within the first seven weeks of the fall or spring semester following completion of didactic courses.

**Educational Practicum Assignments – Cytogenetics**

During the second and third semesters, students in the Cytogenetics program are required to obtain their clinical experience in one or more clinical sites that may or may not be located in San Antonio. Each student's clinical practicum aims to provide comprehensive exposure to a wide variety of technology. Primary site assignment is made to provide the student with a breadth of experiences that encompass all major content areas.
Assignments to affiliates for Cytogenetics practicum courses are made as fairly as possible based on availability of positions at the affiliate sites and student needs. Practicum courses typically begin in the spring semester and are completed during the summer semester. Since many of the practicum sites are in distant cities and student relocation may incur considerable student expense, every effort is made to place students in a single city for their entire practicum experience.

During the fall semester students must submit in writing to the program director their first, second, and third city of preference for practicum assignments. If there are sufficient available sites, each student is assigned to one or more laboratories in their first choice city. If there are more first choice requests for a particular city than are available practicum positions in that city, the program director will ask each student who requested the city as their first choice to write a one-page essay on the student’s reason for requesting the assignment. The program director will take the request and essays to the department faculty for a decision on placement priorities.

Assignments are made according to prioritization until all sites in the city are filled. Students receiving low priority will be offered the opportunity of an alternate site, but immediate assignment in the city of their second or third preference. If a student declines the second or third city preference assignment, they may choose to defer their clinical practice until assignment can be made to their original first choice site the following summer semester and complete their practicum during the follow fall semester.

Graduation Requirements

Degree- and certificate-seeking students must complete all courses listed as required core curriculum, program prerequisite, or professional education courses in order to graduate. Certificate students with current certification in a clinical laboratory sciences discipline, e.g., cytogenetics technology, clinical laboratory sciences, etc., may petition for exemption from didactic courses taken within the last seven years for which they can demonstrate content equivalency.

The minimum grade point average required for graduation from the Bachelor of Science and certificate programs is 2.0. Minimum grade point average for Master of Science students is 3.0 (see “Graduate School of Biomedical Sciences”).

Students in the Cytogenetics program must complete all Health Science Center coursework within three years from the time of entry.

Immunizations/Safety and Protection Requirements

In laboratories, students are expected to wear laboratory coats, closed-toe shoes, and latex gloves. Safety goggles are available. In affiliate clinical laboratories, students may be required to adhere to additional safety precautions and dress codes.

Students are required to attend a laboratory safety orientation, read all safety procedures contained in laboratory manuals, and pass a written safety examination before they are allowed to work in departmental or clinical affiliate laboratories. Hepatitis immunizations are required before students are allowed to work with specimens in the department laboratories and/or in affiliate clinical laboratories.

International Applicants

See “International Applicants” in the Health Professions introductory section of this Catalog.

Placement Examinations

Individuals who have certification from NCA or ASCP as a CLT or MLT and have graduated from an accredited CLT/MLT program with an associate degree are awarded credits for equivalent level-one clinical laboratory professional courses.

Placement examinations may be given to determine areas of strengths and weaknesses. These individuals may also enroll in senior-level Web-based courses.

Professional Behavior

A. Cheating and other forms of scholastic dishonesty are not tolerated.
B. Attendance

1. Lecture courses are coordinated by the Clinical Laboratory Sciences faculty in cooperation with pathologists and other clinical faculty as guest lecturers. These lectures are designed to present information not always available in textbooks and to provide students the opportunity to develop interpretation and problem-solving skills. Therefore, promptness and attendance at all lectures are expected. Lateness is defined as entrance into the classroom any time after class has begun. Each individual faculty member will discuss her/his policy for attendance and lateness.

2. Clinical practicums are scheduled individually, based on facility work schedules. Students are required to be in attendance the entire time scheduled.

3. If the student is unable to attend clinical practicum or will be late, CLS department faculty and the laboratory supervisor of the section must be notified each day.

4. Regardless of absence in lecture or clinical practicum, all required work must be completed. Absence in the practicum will require make-up time for the number of hours missed. Make-up time will be arranged with the Education Coordinator and clinical instructor to assure appropriate supervision of learning activities. Extended illness may require enrollment in an additional semester. Absence in lecture may require additional oral or written assignments.

C. Dress Code Students will not be allowed in the clinical laboratories or lecture without appropriate attire. The student will be required to make up all time lost due to violation of the dress code.
1. The following dress code is prescribed during practicum to assure safety and to maintain a professional image. Students must adhere to the dress code of the affiliate clinical sites.
   a. Students are expected to wear a uniform or a clean lab coat over street clothes. Street clothes should be conservative and professional.
   b. Shoes must be closed-toe and closed-heel.
   c. Blue jeans, T-shirts, sandals, high-heeled shoes, and shorts will not be permitted.
   d. Hair should be neat and tied back, if long.
   e. Jewelry, if worn, should be conservative.
2. Dress for lecture may be informal, but not distracting.
3. Students are expected to be neat, clean, and professional at all times.
4. Assume a professional manner in attire and conduct.
5. Practice good safety habits in the laboratory and when handling biologically hazardous materials.
6. Safeguard the dignity and privacy of patients and confidentiality of patient information.
7. Treat all body fluids and specimens with great respect; and always remember that they are collected from fellow human beings in order to help improve their quality of life. The student will receive a revised copy of the Program Philosophy and Policies as these policies are reviewed and updated each year. The student will be responsible for reviewing the updated copy of the program policies and signing the appropriate form indicating that they have read and understood the policies.

**Program Costs**

<table>
<thead>
<tr>
<th>Program Costs</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-resident, Bachelor of Science in Clinical Laboratory Sciences program</td>
<td>$800 for Cytogenetics programs, and $1,400 for Master of Science programs.</td>
</tr>
<tr>
<td>Non-resident, Master of Science in Clinical Laboratory Sciences program</td>
<td>$800 for Cytogenetics programs, and $1,400 for Master of Science programs.</td>
</tr>
</tbody>
</table>

Travel and living expenses for local and out-of-town clinical practicums are not included in this estimate. Non-resident students are subject to additional tuition costs (see "Financial Information" in this Catalog).

**Student Code of Ethics**

As a student of Clinical Laboratory Sciences at the Health Science Center, I hereby pledge to conduct myself in the following manner:

1. Conduct myself with the highest degree of honesty and integrity and never betray the trust placed in me by my instructors.
2. Accept responsibility for my own work and results.
3. Conduct myself in a professional manner both on and off campus, and thus help reflect a positive image for my school.
4. Assume a professional manner in attire and conduct.
5. Practice good safety habits in the laboratory and when handling biologically hazardous materials.
6. Safeguard the dignity and privacy of patients and confidentiality of patient information.
7. Treat all body fluids and specimens with great respect; and always remember that they are collected from fellow human beings in order to help improve their quality of life.
8. Establish a rapport with other health professionals.
9. Establish confidence of the patient through kindness and empathy.
10. Hold colleagues and profession in high esteem.
11. Avoid plagiarism and follow copyright guidelines.
12. Contribute to the general well being of the community.

**Transfer of Credits**

Agreements for transferable coursework exist with some area colleges and universities. Students should contact the Department of Clinical Laboratory Sciences or the biology advisor at their institution to determine if such an agreement exists with their school.
Program Curricula

- Bachelor of Science in Clinical Laboratory Sciences
- Bachelor of Science in Clinical Laboratory Sciences - Cytogenetics Track
- Bachelor of Science in Clinical Laboratory Sciences - Molecular Diagnostics Track
- Post-baccalaureate Categorical Certificates
- Master of Science in Clinical Laboratory Sciences - Immunohematology Track
- Master of Science in Clinical Laboratory Sciences - Forensic/Analytical Toxicology Track
- Course Descriptions

Bachelor of Science in Clinical Laboratory Sciences

Post-baccalaureate Certificates in Clinical Laboratory Sciences

The courses listed below constitute the curriculum for the bachelor’s degree and post-baccalaureate certificates in clinical laboratory sciences. All students receiving a bachelor’s degree from a Texas public college or university must complete the Texas Core Curriculum. Bachelor’s degree students in clinical laboratory sciences program may fulfill the Health Science Center’s core curriculum or the core curriculum of another Texas public college or university. Students in the post-baccalaureate programs are not required to complete the core curriculum; however, they must complete program prerequisites.

**HSC Core Curriculum** — Information on the Health Science Center’s core curriculum is provided in this Catalog. Students are encouraged to seek advisement from the Health Professions Welcome Center about program prerequisites that may fulfill the HSC core curriculum requirements.

Individualized degree plans are created for each student admitted to the Bachelor of Science in Clinical Laboratory Sciences and Post-Baccalaureate Certificate in Clinical Laboratory Sciences programs in consultation with the program director. Degree plans include the following courses, sequenced according to the student’s needs.

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLSC 2000 - Introduction to Clinical Laboratory Sciences or AHS 1883 Introduction to Clinical Lab. Sciences (UTSA)</td>
<td>3.0</td>
</tr>
<tr>
<td>CLSC 3001 - Phlebotomy Practicum</td>
<td>0.5</td>
</tr>
<tr>
<td>CLSC 3003 - Parasitology and Mycology Laboratory</td>
<td>1.0</td>
</tr>
<tr>
<td>CLSC 3004 - Parasitology and Mycology</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 3010 - Body Fluids</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Bachelor of Science in Clinical Laboratory Sciences — Cytogenetics Track

Post-baccalaureate Certificate in Cytogenetics

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLSC 3011 - Quality Assurance in the Clinical Laboratory</td>
<td>1.0</td>
</tr>
<tr>
<td>CLSC 3033 - Medical Microbiology</td>
<td>3.0</td>
</tr>
<tr>
<td>CLSC 3034 - Medical Microbiology Laboratory</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 3051 - Hematology</td>
<td>3.0</td>
</tr>
<tr>
<td>CLSC 3052 - Hematology Laboratory</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 3060 - Immunohematology</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 3064 - Immunohematology Laboratory</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 3065 - Clinical Immunology</td>
<td>3.0</td>
</tr>
<tr>
<td>CLSC 3071 - Diagnostic Immunology Laboratory</td>
<td>0.5</td>
</tr>
<tr>
<td>CLSC 3081 - Clinical Chemistry</td>
<td>2.5</td>
</tr>
<tr>
<td>CLSC 3082 - Clinical Chemistry Laboratory</td>
<td>1.5</td>
</tr>
<tr>
<td>CLSC 4033 - Advanced Medical Microbiology</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 4035 - Introduction to Molecular Diagnostics</td>
<td>1.5</td>
</tr>
<tr>
<td>CLSC 4037 - Microbiology Practicum</td>
<td>4.0</td>
</tr>
<tr>
<td>CLSC 4053 - Advanced Hematology</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 4055 - Advanced Immunohematology</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 4057 - Hematology Practicum</td>
<td>4.0</td>
</tr>
<tr>
<td>CLSC 4067 - Immunohematology Practicum</td>
<td>4.0</td>
</tr>
<tr>
<td>CLSC 4070 - Immunology Practicum</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 4083 - Advanced Clinical Chemistry</td>
<td>3.0</td>
</tr>
<tr>
<td>CLSC 4087 - Chemistry Practicum</td>
<td>4.0</td>
</tr>
<tr>
<td>CLSC 4092 - Management I</td>
<td>1.0</td>
</tr>
<tr>
<td>CLSC 4093 - Management II: Techniques for Clinical Laboratory Sciences</td>
<td>2.0</td>
</tr>
<tr>
<td>INTD 4006 - Professional Issues</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Clinical Laboratory Sciences Total: 63.5
Bachelor of Science in Clinical Laboratory Sciences — Molecular Diagnostics Track

Post-baccalaureate Certificate in Molecular Diagnostics

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLSC 2000 - Introduction to Clinical Laboratory Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>CLSC 4034 - Advanced Molecular and Laboratory Diagnostics — Lab</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 4035 - Introduction to Molecular Diagnostics</td>
<td>1.5</td>
</tr>
<tr>
<td>CLSC 4036 - Advanced Molecular and Laboratory Diagnostics — Lecture</td>
<td>3.0</td>
</tr>
<tr>
<td>CLSC 4040 - Human Genetics</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 4042 - Hematology for the Geneticist</td>
<td>1.0</td>
</tr>
<tr>
<td>CLSC 4044 - Current Topics in Genetics</td>
<td>1.0</td>
</tr>
<tr>
<td>CLSC 4092 - Management I</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td><strong>13.5</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spring Semester</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CLSC 4010 - Advanced Molecular Diagnostics Practicum I</td>
<td>6.0</td>
</tr>
<tr>
<td>CLSC 4010 - Advanced Molecular Diagnostics Practicum II</td>
<td>6.0</td>
</tr>
<tr>
<td>CLSC 4010 - Advanced Molecular Diagnostics Practicum III</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Successful completion of all courses, including core curriculum (for Bachelor of Science degree students) and program prerequisites, is required for graduation. Postbaccalaureate certificate students with current certification in a clinical laboratory sciences discipline (cytotechnology, clinical laboratory science, etc.) may petition for exemption from didactic courses for which they can demonstrate content equivalency within the last seven years. All coursework offered at the Health Science Center must be completed within three years after entering the program.

Post-baccalaureate Categorical Certificates

Microbiology Categorical Certificate

<table>
<thead>
<tr>
<th>Summer Semester</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLSC 3010 - Body Fluids</td>
<td>2.0</td>
</tr>
</tbody>
</table>

| **Semester Total**                                                            | **2.0**      |

Fall Semester

| CLSC 2000 - Introduction to Clinical Laboratory Sciences or AHS 1883 Introduction to Clinical Lab. Sciences (UTSA) | 3.0          |
| CLSC 3001 - Phlebotomy Practicum                                              | 0.5          |
| CLSC 3003 - Parasitology and Mycology Laboratory                              | 1.0          |
| CLSC 3004 - Parasitology and Mycology                                        | 2.0          |
| **Semester Total**                                                            | **6.5**      |

Spring Semester

| CLSC 3011 - Quality Assurance in the Clinical Laboratory                     | 1.0          |
| CLSC 3033 - Medical Microbiology                                             | 3.0          |
| CLSC 3034 - Medical Microbiology Laboratory                                  | 2.0          |
| CLSC 4093 - Management II: Techniques for Clinical Laboratory Sciences       | 2.0          |
| INTD 4006 - Professional Issues                                              | 1.0          |
### Microbiology Categorical Certificate

<table>
<thead>
<tr>
<th>Summer Semester</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLSC 4038 - Microbiology Categorical Practicum</td>
<td>10.0</td>
</tr>
<tr>
<td>Semester Total</td>
<td>10.0</td>
</tr>
<tr>
<td>Fall Semester</td>
<td>Credit Hours</td>
</tr>
<tr>
<td>CLSC 4033 - Advanced Medical Microbiology</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 4035 - Introduction to Molecular Diagnostics</td>
<td>1.5</td>
</tr>
<tr>
<td>CLSC 4092 - Management I</td>
<td>1.0</td>
</tr>
<tr>
<td>Semester Total</td>
<td>4.5</td>
</tr>
<tr>
<td>Microbiology Categorical Certificate Total</td>
<td>32.0</td>
</tr>
</tbody>
</table>

### Clinical Chemistry Categorical Certificate

<table>
<thead>
<tr>
<th>Summer Semester</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLSC 3010 - Body Fluids</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 3081 - Clinical Chemistry</td>
<td>2.5</td>
</tr>
<tr>
<td>CLSC 3082 - Clinical Chemistry Laboratory</td>
<td>1.5</td>
</tr>
<tr>
<td>Semester Total</td>
<td>6.0</td>
</tr>
<tr>
<td>Fall Semester</td>
<td>Credit Hours</td>
</tr>
<tr>
<td>CLSC 2000 - Introduction to Clinical Laboratory Sciences or AHS 1883 (UTSA)</td>
<td>3.0</td>
</tr>
<tr>
<td>CLSC 3001 - Phlebotomy Practicum</td>
<td>0.5</td>
</tr>
<tr>
<td>CLSC 4035 - Introduction to Molecular Diagnostics</td>
<td>1.5</td>
</tr>
<tr>
<td>CLSC 4088 - Clinical Chemistry Categorical Practicum</td>
<td>6.0</td>
</tr>
<tr>
<td>CLSC 4092 - Management I</td>
<td>1.0</td>
</tr>
<tr>
<td>Semester Total</td>
<td>12.0</td>
</tr>
<tr>
<td>Spring Semester</td>
<td>Credit Hours</td>
</tr>
<tr>
<td>CLSC 3011 - Quality Assurance in the Clinical Laboratory</td>
<td>1.0</td>
</tr>
<tr>
<td>CLSC 3051 - Hematology</td>
<td>3.0</td>
</tr>
<tr>
<td>CLSC 3052 - Hematology Laboratory</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 4055 - Advanced Immunohematology</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 4093 - Management II: Techniques for Clinical Laboratory Sciences</td>
<td>2.0</td>
</tr>
<tr>
<td>INTD 4006 - Professional Issues</td>
<td>1.0</td>
</tr>
<tr>
<td>Semester Total</td>
<td>11.5</td>
</tr>
</tbody>
</table>

### Immunohematology Categorical Certificate

<table>
<thead>
<tr>
<th>Fall Semester</th>
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<tbody>
<tr>
<td>CLSC 2000 - Introduction to Clinical Laboratory Sciences or AHS 1883 Introduction to Clinical Lab. Sciences (UTSA)</td>
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<tr>
<td>CLSC 3060 - Immunohematology</td>
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<tr>
<td>CLSC 3064 - Immunohematology Laboratory</td>
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<tr>
<td>CLSC 3070 - Diagnostic Immunology Lecture</td>
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<tr>
<td>CLSC 3071 - Diagnostic Immunology Laboratory</td>
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<tr>
<td>CLSC 4035 Introduction to Molecular Diagnostics</td>
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</tr>
<tr>
<td>CLSC 4092 - Management I</td>
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<tr>
<td>Spring Semester</td>
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<tr>
<td>CLSC 3001 - Phlebotomy Practicum</td>
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<tr>
<td>CLSC 3011 - Quality Assurance in the Clinical Laboratory</td>
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</tr>
<tr>
<td>CLSC 3051 - Hematology</td>
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</tr>
<tr>
<td>CLSC 4055 - Advanced Immunohematology</td>
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</tr>
<tr>
<td>CLSC 4093 - Management II: Techniques for Clinical Laboratory Sciences</td>
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<tr>
<td>INTD 4006 - Professional Issues</td>
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<td>Summer Semester</td>
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<tr>
<td>CLSC 4068 - Immunohematology Categorical Practicum</td>
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<td>Immunohematology Categorical Certificate Total</td>
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### Hematology Categorical Certificate

<table>
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<tr>
<th>Spring Semester</th>
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<tbody>
<tr>
<td>CLSC 2000 - Introduction to Clinical Laboratory Sciences or AHS 1883 Introduction to Clinical Lab. Sciences (UTSA)</td>
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<tr>
<td>CLSC 3011 - Quality Assurance in the Clinical Laboratory</td>
<td>1.0</td>
</tr>
<tr>
<td>CLSC 3051 - Hematology</td>
<td>3.0</td>
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</table>
Hematology Categorical Certificate Total 25.0

Electives — Electives are selected to complement the student's career objectives and provide requisite knowledge to complete the research project. Suggested courses include CLSC 5036 and CLSC 5037.

Thesis — All Master of Science students are required to complete a project for the degree. The project must be relevant to forensics or analytical toxicology or to a clinical problem related to immunohematology, including transfusion services or paternity testing. A research mentor will be selected to assist the student in completing the project.

Immunohematology Track — During the first year, the student participates in the Specialist in Blood Banking Program offered jointly by the Health Science Center and University Hospital. Students enroll in lectures and practicums designed to provide specialized knowledge for transfusion services, donor services, and HLA testing. Practicums are at University Hospital and other facilities throughout San Antonio and the state. Continuation in the program is contingent on passing the Specialist in Blood Banking examination given by the American Society for Clinical Pathology (ASCP).

The Specialist in Blood Banking Program is accredited by the American Association of Blood Banks (AABB), 8101 Glenbrook Road, Bethesda, Maryland 20814-2749; phone (301) 907-6977; fax (301) 907-6895; e-mail aabb@aabb.org, in cooperation with the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 35 East Wacker Drive, Suite 1970, Chicago, Illinois 60601, phone (312) 553-9355.

Any remaining core graduate courses (above) must be completed in the second year. Electives will be used to complement the student’s career objectives and provide the requisite knowledge to complete the research project.

Applicants who have successfully completed an accredited Specialist in Blood Banking program and passed the national certification examination should consult with the graduate program advisor for options available to them. Suggested Course Sequence for the Immunohematology Track

Suggested Course Sequence for the Immunohematology Track

<table>
<thead>
<tr>
<th>First Year*</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>CLSC 5001 - Basic Concepts in Immunohematology</td>
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<tr>
<td>CLSC 5002 - Immunohematology I: The Donor</td>
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</tr>
<tr>
<td>CLSC 5003 - Immunohematology Practicum I</td>
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</tr>
<tr>
<td>CLSC 5012 - Immunohematology II: Human Blood Group Systems</td>
<td>2.0</td>
</tr>
<tr>
<td>CLSC 5013 - Immunohematology Practicum II</td>
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<tr>
<td>CLSC 5022 - Immunohematology III: New Approaches</td>
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<tr>
<td>CLSC 5023 - Immunohematology Practicum III</td>
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<td>CLSC 5004 - Transfusion Medicine</td>
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<td>CLSC 5005 - Seminar in Education and Management</td>
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<td>MICR 5051 - Introduction to Immunology</td>
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*First Year includes summer semester

Second Year

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>CLSC 6097 - Research</td>
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<tr>
<td>CLSC 6098 - Thesis</td>
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<tr>
<td>INTD 5005 - Core Course I: Biochemistry</td>
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</tr>
<tr>
<td>INTD 5064 - Applied Statistics for Health Care Practitioners</td>
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</tr>
<tr>
<td>INTD 6002 - Ethics in Research</td>
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</tr>
</tbody>
</table>

Immunohematology Track Total 39.0

Toxicology Track — In addition to advanced clinical laboratory science courses, the student enrolls in specified courses offered by the Graduate School of Biomedical Sciences and the School of Nursing. Practicums are scheduled at various toxicology laboratories in San Antonio and the state of Texas.
Clinical Laboratory Sciences Course Descriptions

**CLSC 2000 - Introduction to Clinical Laboratory Sciences (or AHS 1883 Introduction to Clinical Lab. Sciences-UTSA)**

This course is an overview of the clinical laboratory science profession. There are three general areas of study. The first is information on the profession including history, educational requirements, job responsibilities and opportunities, as well as the structure and role of the clinical laboratory in medicine. The second is an introduction to medical terminology using an overview of the body systems. Examples of the use of laboratory tests to detect pathologies in these systems are included. The third area is laboratory mathematics and quality assurance. This Web-based course is offered through the UT Telecampus. Enrollment is open to laboratory science students at other universities both in state and out of state. Texas residents and non-residents living in Texas pay applicable tuition and fees of the Health Science Center: $200 per semester credit hour.

*Semester Credit Hours: 3.0*

**CLSC 2005 - Special Topics in Parasitology and Mycology**

This course is designed for students who have completed a parasitology and mycology course that included parasitology and mycology at an accredited CLT/MLT program. The course provides the student the opportunity to gain an understanding of selected parasitology and mycology topics that may include theory and/or practice. The topics vary according to student’s previous experience and education. Credit hours are variable. Hours will be assigned based on the topics covered.

*Semester Credit Hours: 1.0–3.0*

**Prerequisites:** proficiency exam; permission from course director

**CLSC 2053 - Special Topics in Hematology**

This course is designed for students who have completed a hematology course at an accredited CLT/MLT program. The course provides the student the opportunity to gain an understanding of selected hematology topics which may include theory and/or practice. The topics vary according to student’s previous experience and education. Credit hours are variable. Hours will be assigned based on the topics covered.

*Semester Credit Hours: 1.0–5.0*

**Prerequisites:** proficiency exam; permission from course director

**CLSC 3001 - Phlebotomy Practicum**

Under the direction and supervision of a clinical instructor in a hospital or outpatient facility, the student will be given the opportunity to gain experience and expertise in phlebotomy procedures. This practicum may be taken any time after the student has been accepted into the program. Positions will be based on the availability of sites. Students must arrange this practicum with the education coordinator before enrolling. This practicum must be completed before beginning clinical practicums in the senior year. *Practicum fee: $10. Semester Credit Hours: 0.5*

**CLSC 3003 - Parasitology and Mycology Laboratory**

This is a clinical laboratory course emphasizing the diagnostic stages of parasites of man. In the mycology portion of the course, students will have the opportunity to isolate and identify fungi pathogenic to man. *Lab fee: $20. Microscope fee: $16. Semester Credit Hours: 1.0*

*Cross-listed/Concurrent Concurrent enrollment in CLSC 3004*

**CLSC 3004 - Parasitology and Mycology**

The parasitology portion of this course is a study of protozoa and helminthes that parasitize man. Emphasis is placed on the identification and differentiation of pathogenic organisms. The mycology portion of the course is a study of the structural characteristics, diagnostic features, and isolation methods of fungal agents pathogenic to man. Specimen collection, processing, and handling are discussed.

*Semester Credit Hours: 2.0*

**CLSC 3010 - Body Fluids**

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 labora-
tory 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. Lab fee: $30. Microscope fee: $16.
Semester Credit Hours: 2.0

CLSC 3011 - Quality Assurance in the Clinical Laboratory
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.
Semester Credit Hours: 1.0

CLSC 3020 - Special Topics in Clinical Immunology
This course is designed for students who have completed a course that included clinical immunology/serology at an accredited CLT/MLT program. The course provides the student the opportunity to gain an understanding of selected immunology/serology topics that may include theory and/or practice. The topics vary according to student's previous experience and education. Credit hours are variable. Hours will be assigned based on the topics covered.
Semester Credit Hours: 1.0–2.0
Prerequisites: proficiency exam; permission from course director

CLSC 3022 - Special Topics in Body Fluids
This course is designed for students who have completed a course that included urinalysis and other body fluids at an accredited CLT/MLT program. The course provides the student the opportunity to gain an understanding of selected body fluids topics that may include theory and/or practice. The topics vary according to student's previous experience and education. Credit hours are variable. Hours will be assigned based on the topics covered.
Semester Credit Hours: 1.0–2.0
Prerequisites: proficiency exam; permission from course director

CLSC 3033 - Medical Microbiology
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.
Semester Credit Hours: 3.0
Prerequisites: BIO 3713 and 3722

CLSC 3034 - Medical Microbiology Laboratory
This is a laboratory course emphasizing diagnostic clinical microbiology. Examination of samples from different body sites provides the student 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. Lab fee: $30. Microscope fee: $16.
Semester Credit Hours: 2.0
Prerequisites: concurrent enrollment in CLSC 3033

CLSC 3035 - Special Topics in Medical Microbiology
This course is designed for students who have completed a medical microbiology course at an accredited CLT/MLT program. The course provides the student the opportunity to gain an understanding of selected medical microbiology topics that may include theory and/or practice. The topics vary according to student's previous experience and education. Credit hours are variable. Hours will be assigned based on the topics covered.
Semester Credit Hours: 1.0–5.0
Prerequisites: proficiency exam; permission from course director

CLSC 3051 - Hematology
This course is designed for students who have completed an immunohematology course at an accredited CLT/MLT program. The course provides the student the opportunity to gain an understanding of selected medical microbiology topics that may include theory and/or practice. The topics vary according to student's previous experience and education. Credit hours are variable. Hours will be assigned based on the topics covered.
Semester Credit Hours: 3.0
Prerequisites: AHS 1883

CLSC 3052 - Hematology Laboratory
This is a clinical laboratory course emphasizing manual and semiautomated cell counting techniques and other basic hematologic tests. Time is devoted to the examination of normal and abnormal blood smears 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.
Semester Credit Hours: 2.0
Prerequisites: concurrent enrollment in CLSC 3051

CLSC 3060 - Immunohematology
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.
Semester Credit Hours: 2.0

CLSC 3063 - Special Topics in Immunohematology
This course is designed for students who have completed an immunohematology course at an accredited CLT/MLT program. The course provides the student the opportunity to gain an understanding of selected immunohematology topics that may include theory and/or practice. The topics vary according to student's previous experience and education. Credit hours are variable. Hours will be assigned based on the topics covered.
Semester Credit Hours: 1.0–4.0
Prerequisites: proficiency exam; permission from course director

CLSC 3064 - Immunohematology Laboratory
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. Lab fee: $30. Microscope fee: $16. Semester Credit Hours: 2.0
Prerequisites: concurrent enrollment in CLSC 3060

CLSC 3065 - Clinical Immunology
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 autoimmune, hypersensitivity, transplantation and tumor immunology, immunodeficiency, syphilis, infectious mononucleosis, etc. Laboratory testing for these disorders will be described. Semester Credit Hours: 3.0

CLSC 3070 - Diagnostic Immunology Lecture
This didactic course presents the principles and applications of immunology as it pertains to diagnosis of disease states. The course will cover methods to detect infectious as well as autoimmune diseases using immunologic technologies such as immunofluorescence, enzyme immunoassays, and flow cytometry. Correlation of the laboratory results with the disease states will be emphasized. Clinical applications of flow cytometry, histocompatibility testing, serology, and immunohematology assays will be presented. Semester Credit Hours: 1.5
Prerequisites: Immunology

CLSC 3071 - Diagnostic Immunology Laboratory
This laboratory course will offer the opportunity for students to perform immunologic procedures commonly used in the diagnosis of infectious and autoimmune diseases. Principles and applications of quality control procedures are practiced. Lab fee: $30. Microscope fee: $16. Semester Credit Hours: 0.5

CLSC 3072 - Molecular and Immunological Diagnostics
This didactic course presents the principles of molecular biology and an in-depth review of immunology. Molecular and immunological techniques such as PCR, western blotting, flow cytometry, and immunohematology assays will be discussed with an emphasis on the diagnosis of disease states. Clinical applications in forensics, paternity testing, diagnosis of infectious disease states, inherited conditions and neoplasms will be presented. Semester Credit Hours: 4.0
Prerequisites: BIO 2313 Genetics

CLSC 3073 - Molecular and Immunological Diagnostics Laboratory
This laboratory course will offer the opportunity for students to perform both molecular and immunologic techniques. Students will perform molecular diagnostic techniques such as PCR and gel electrophoresis that are used in the investigation of inherited conditions and neoplasms and become familiar with potential sources of error. Students will also perform immunologic procedures commonly used in the diagnosis of infectious and autoimmune diseases. Principles and applications of quality control procedures are practiced. Lab fee: $30. Microscope fee: $16. Semester Credit Hours: 1.0
Prerequisites: concurrent enrollment in CLSC 3072

CLSC 3081 - Clinical Chemistry
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. Semester Credit Hours: 2.5
Prerequisites: CHE 2604/2612 and BIO 3513

CLSC 3082 - Clinical Chemistry Laboratory
This is a laboratory course emphasizing biochemical analysis of body fluids utilizing manual procedures and semiautomated 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. Lab fee: $30. Semester Credit Hours: 1.5
Prerequisites: BIO 3513, AHS 3463, and concurrent enrollment in CLSC 3081

CLSC 3083 - Special Topics in Clinical Chemistry
This course is designed for students who have completed a clinical chemistry course at an accredited CLT/MLT program. The course provides the student the opportunity to gain an understanding of selected clinical chemistry topics that may include theory and/or practice. The topics vary according to student’s previous experience and education. Credit hours are variable. Hours will be assigned based on the topics covered. Semester Credit Hours: 1.0–4.0
Prerequisites: proficiency exam; permission from course director

CLSC 3085 - Principles of Biochemistry
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. Semester Credit Hours: 3.0

CLSC 4010 - Advanced Molecular Diagnostics Practicum I
Under the direction of a qualified instructor, the student will have the opportunity to gain expertise and confidence working with general molecular biology and molecular-based diagnostic and identification techniques. The specific laboratories will include any and all molecular-based laboratories with an empha-
sis on the clinical laboratory and clinical diagnosis. In addition, students will have the opportunity to acquire expertise in the pathology laboratory, research laboratory, forensics laboratory, biotechnology laboratory, and company-based R&D laboratory. Students will have the opportunity to become proficient at clinical specimen processing for molecular diagnostics as well as non-clinical processing. Specific techniques will be emphasized and performed in the various laboratories. $10 practicum fee.

Semester Credit Hours: 6.0

**CLSC 4011 - Advanced Molecular Diagnostics Practicum II**

Under the direction of a qualified instructor, the student will have the opportunity to gain expertise and confidence working with general molecular biology and molecular-based diagnostic and identification techniques. The specific laboratories will include any and all molecular-based laboratories with an emphasis on the clinical laboratory and clinical diagnosis. In addition, students will have the opportunity to acquire expertise in the pathology laboratory, research laboratory, forensics laboratory, biotechnology laboratory, and company-based R&D laboratory. Students will have the opportunity to become proficient at clinical specimen processing for molecular diagnostics as well as non-clinical processing. Specific techniques will be emphasized and performed in the various laboratories. $10 practicum fee.

Semester Credit Hours: 6.0

**CLSC 4012 - Advanced Molecular Diagnostics Practicum III**

Under the direction of a qualified instructor, the student will have the opportunity to also gain expertise and confidence working with general molecular biology and molecular-based diagnostic and identification techniques. The specific laboratories will include any and all molecular-based laboratories with an emphasis on the clinical laboratory and clinical diagnosis. In addition, students will have the opportunity to acquire expertise in the pathology laboratory, research laboratory, forensics laboratory, biotechnology laboratory, and company-based R&D laboratory. Students will have the opportunity to become proficient at clinical specimen processing for molecular diagnostics as well as non-clinical processing. Specific techniques will be emphasized and performed in the various laboratories. $10 practicum fee.

Semester Credit Hours: 6.0

**CLSC 4013 - Advanced Molecular Diagnostics Practicum IV**

Under the direction of a qualified instructor, the student will have the opportunity to gain expertise and confidence working with general molecular biology and molecular-based diagnostic and identification techniques. The specific laboratories will include any and all molecular-based laboratories with an emphasis on the clinical laboratory and clinical diagnosis. In addition, students will have the opportunity to acquire expertise in the pathology laboratory, research laboratory, forensics laboratory, biotechnology laboratory, and company-based R&D laboratory. Students will have the opportunity to become proficient at clinical specimen processing for molecular diagnostics as well as non-clinical processing. Specific techniques will be emphasized and performed in the various laboratories. $10 practicum fee.

Semester Credit Hours: 6.0

**CLSC 4014 - Advanced Molecular Laboratory Practices**

This course is an advanced course designed to review basic principles and reinforce previous work and experiences. Students will review all course work, specific techniques, problem situations, and unique experiences acquired during the practicum portion of instruction. The advanced diagnostic experience acquired by the student will be correlated with clinical case studies, problems in biotechnology, problems in forensics, and unique research situations. An in-depth exploration of the problem solving process and strategies for resolving difficult cases is a main focus of the course. The students will be tested and will have the opportunity to prepare for the certification examination as a specialist in molecular biology.

Semester Credit Hours: 2.0

**CLSC 4020 - Issues in Health Care**

This course is a study of selected topics in health care.

Semester Credit Hours: 1.0–3.5

Prerequisites: Consent of instructor

**CLSC 4033 - Advanced Medical Microbiology**

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. Students in this section will pay the instructional fee for the course. Texas residents and non-residents living in Texas pay applicable tuition and fees of the Health Science Center. Distance education fee: $200.

Semester Credit Hours: 2.0

**CLSC 4034 - Advanced Molecular and Laboratory Diagnostics — Lab**

The laboratory is offered in conjunction with CLSC 4036 as a senior-level course. Direct hands-on experience will be included in sample preparation, DNA purification, RNA purification, tissue culture, viral culture, electrophoresis, restriction enzyme manipulation, blotting technology, Southern/Northern/Western Blot, PCR, PT-PCR, LCR, NASBA, probe design, primer design, and advanced instrumentation. DNA sequencing, cloning, DNA fingerprinting, and protein purification and analysis will be included. Cases relevant to genetic disease, forensic analysis, and molecular-based diagnosis and design will be discussed.

Semester Credit Hours: 2.0

**CLSC 4035 - Introduction to Molecular Diagnostics**

This course is a study of recombinant DNA concepts and technology. Applications of this technology in diagnosis and therapy of disease is emphasized. The course is a combination of lecture and laboratory. Prerequisites include genetics and junior CLSC coursework. 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 in-
CLSC 4036 - Advanced Molecular and Laboratory Diagnostics — Lecture
The course is offered as an undergraduate, senior-level course in the Department of Clinical Laboratory Science. The design is intended to give senior students an understanding of the use of advanced technology in the diagnosis, treatment, and monitoring of the disease process. Students will have the opportunity to acquire experience in clinical laboratory diagnostic design and detailed hands-on experience in the laboratory. The course will include molecular diagnostic techniques, amplification and micro-array technology, Southern/Northern/Western blotting, advanced clinical virology, tissue culture techniques, and advanced instrumentation. Students will be required to participate in an analysis and presentation of clinical cases relevant to new and innovative laboratory technology.
Semester Credit Hours: 3.0

CLSC 4037 - Microbiology Practicum
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. Practicum fee: $10.
Semester Credit Hours: 4.0

CLSC 4038 - Microbiology Categorical Practicum
Under the direction and supervision of a clinical instructor in the clinical microbiology lab, the student is introduced to the functional roles of the clinical microbiology laboratory. Students will have the opportunity to develop proficiency in the areas of bacteriology, parasitology, mycology, mycobacteriology, immunology, and virology. A period of time will be devoted to allowing the student to gain experience in performing microbiological studies in each of these areas.
Semester Credit Hours: 10.0

CLSC 4039 - Selected Practicum Experience in Medical Microbiology
This course is for individuals who have completed an accredited CLT/MLT medical microbiology practicum. The course emphasizes the areas in medical microbiology in which the student lacks previous experience or requires updated proficiency. Credit hours are variable. Hours will be assigned based on the topics covered. Practicum fee: $10.
Semester Credit Hours: 3.0–5.0
Prerequisites: permission from course director

CLSC 4040 - Human Genetics
An advanced course which provides the student an opportunity to study the cell cycle, oogenesis, spermatogenesis, Mendelian inheritance, polygenic inheritance, population genetics, medical genetics, clinical cytogenetics, and basic molecular techniques. The course is self-paced requiring approximately 2 hours/week.
Semester Credit Hours: 2.0
Prerequisites: admission to Cytogenetics Program or consent of instructor

CLSC 4041 - Clinical Cytogenetics
This is an advanced lecture course covering theories, concepts, and techniques applicable to the practice of clinical cytogenetics. Topics include mitotic and meiotic cell cycles with emphasis on errors and manipulations, chromosome structure, mechanisms of chromosome abnormality formation, cytogenetics syndromes, inheritance patterns, cancer genetics, instability syndromes, clinical correlation of chromosome abnormalities, microscopy, computer imaging, cell culture, analysis, ISCN, pedigree construction, and other current genetic issues. Lab fee: $30.
Semester Credit Hours: 4.0
Prerequisites: CLSC 4040 or consent of instructor

CLSC 4042 - Hematology for the Geneticist
This is an advanced study of the normal production, maturation and function of erythrocytes, leukocytes and platelets. The pathogenic mechanisms as well as the peripheral blood and bone marrow findings in relation to leukocyte disorders will be covered. Study of the correlation of cytogenetic abnormalities to specific disorders will be emphasized.
Semester Credit Hours: 1.0
Prerequisites: concurrent enrollment in CLSC 4041 or consent of the instructor

CLSC 4043 - Cytogenetics Techniques
This is an advanced laboratory course designed to cover all aspects of cytogenetic laboratory practice including specimen evaluation, culture initiation, culture maintenance, harvesting, slidemaking, staining and banding techniques (conventional, GTG, QFQ, CBG, AgNOR, DA/DAPI, SCE, and FISH), banding pattern recognition, microscopic analysis, computer imaging, computer-assisted karyotyping and ISCN. Instrumentation, solution preparation, laboratory math, quality control, and regulatory issues will be emphasized. Lab fee: $30. Microscope fee: $16.
Semester Credit Hours: 4.0
Prerequisites: concurrent enrollment in CLSC 4041 or consent of the instructor

CLSC 4044 - Current Topics in Genetics
This is an advanced seminar course that provides the student an opportunity to acquire knowledge of the latest developments in the field of human genetics with emphasis on the structure, behavior, and function of chromosomes as related to human diseases. Discussion sessions follow seminar presentation of critical literature reviews of a specific topic, current journal articles, or of individual research. Presenters will be drawn from the cytogenetics community of the Health Science Center and surrounding area. Each student is required to make a short presentation on a topic of interest selected with the aid of the coordinator.
Semester Credit Hours: 1.0  
Prerequisites: CLSC 4041 or concurrent enrollment

CLSC 4045 - Clinical Cytogenetics Laboratory I  
Under the supervision and direction of a clinical instructor in a hospital or reference laboratory setting, the student will have the opportunity to extend their knowledge of principles and techniques of clinical cytogenetics which were presented in the didactic portion of the curriculum. The student will have the opportunity to gain experience with a wide variety of procedures which include culturing, harvesting, slide preparation, staining, and analyzing metaphases, with emphasis on the processing of peripheral blood samples. Clinical correlations of the chromosomal findings are included. Grades are based on laboratory performance and results achieved on written and/or practical examinations conducted at the particular clinical affiliate to which the student is assigned. Practicum fee: $10.  
Semester Credit Hours: 5.0  
Prerequisites: CLSC 4041, 4043, and 4042

CLSC 4046 - Clinical Cytogenetics Laboratory II  
Under the supervision and direction of a clinical instructor in a hospital or reference laboratory setting, the student will have the opportunity to extend their knowledge of principles and techniques of clinical cytogenetics which were presented in the didactic portion of the curriculum. The student will have the opportunity to gain experience with a wide variety of procedures which include culturing, harvesting, slide preparation, staining, and analyzing metaphases, with emphasis on the processing of amniotic fluid and chorionic villi samples. Clinical correlations of the chromosomal findings are included. Grades are based on laboratory performance and results achieved on written and/or practical examinations conducted at the particular clinical affiliate to which the student is assigned. Practicum fee: $10.  
Semester Credit Hours: 5.0  
Prerequisites: CLSC 4045

CLSC 4047 - Clinical Cytogenetics Laboratory III  
Under the supervision and direction of a clinical instructor in a hospital or reference laboratory setting, the student will have the opportunity to extend their knowledge of principles and techniques of clinical cytogenetics that were presented in the didactic portion of the curriculum. The student will have the opportunity to gain experience with a wide variety of procedures which include culturing, harvesting, slide preparation, staining, and analyzing metaphases, with emphasis on the processing of bone marrow and solid tumor samples. Clinical correlations of the chromosomal findings are included. Grades are based on laboratory performance and results achieved on written and/or practical examinations conducted at the particular clinical affiliate to which the student is assigned. Practicum fee: $10.  
Semester Credit Hours: 5.0  
Prerequisites: CLSC 4046

CLSC 4048 - Clinical Cytogenetics Laboratory IV  
Under the supervision and direction of a clinical instructor in a hospital or reference laboratory setting, the student will have the opportunity to extend their knowledge of principles and techniques of clinical cytogenetics that were presented in the didactic portion of the curriculum. The student will have the opportunity to gain experience with a wide variety of procedures which include culturing, harvesting, slide preparation, staining, and analyzing metaphases, with emphasis on quality control, applications of FISH, molecular techniques and computer imaging. Clinical correlations of the chromosomal findings are included. Grades are based on laboratory performance and results achieved on written and/or practical examinations conducted at the particular clinical affiliate to which the student is assigned. Practicum fee: $10.  
Semester Credit Hours: 5.0  
Prerequisites: CLSC 4047

CLSC 4049 - Cytogenetics Laboratory Practices  
An exploration of problem-solving processes and strategies for resolving difficult cases is the focus of this course. Students will be presented with the opportunity to integrate previously presented topics with experiences gained from clinical practice. A thorough review of basic principles as applied in the clinical laboratory is included.  
Semester Credit Hours: 1.0  
Prerequisites: CLSC 4048 or consent of instructor

CLSC 4050 - Research in Cytogenetics  
This is an advanced course that provides the student an opportunity to apply scientific method to a clinical laboratory research problem, demonstrate a systematic application of hypothesis formation, and decision-making through research design principles. Course evaluation is based upon performance on the term project. May be repeated for credit.  
Semester Credit Hours: 1.0  
Prerequisites: CLSC 4047 and consent of the Program Director and Instructor

CLSC 4053 - Advanced Hematology  
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.  
Semester Credit Hours: 2.0

CLSC 4054 - Advanced Hematology/Web-Based  
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. Texas residents and non-residents living in Texas pay applicable tuition and fees of the Health Science Center. Distance education fee: $200.  
Semester Credit Hours: 2.0
CLSC 4055 - Advanced Immunohematology

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. Students in this section will pay the instructional fee for the course. Texas residents and non-residents living in Texas pay applicable tuition and fees of the Health Science Center. Distance education fee: $200.

Semester Credit Hours: 2.0

CLSC 4056 - Selected Practicum Experience in Hematology

This course is for individuals who have completed an accredited CLT/MLT clinical hematology practicum. The course emphasizes the areas in clinical hematology in which the student lacks previous experience or requires updated proficiency. Credit hours are variable. Hours will be assigned based on the topics covered. Practicum fee: $10.

Semester Credit Hours: 3.0–5.0

Prerequisites: permission from course director

CLSC 4057 - Hematology Practicum

Under the direction and supervision of a clinical instructor, the student will have the opportunity to gain expertise and confidence working in the clinical hematology section of the hospital laboratory. Students will be allowed to perform hematologic tests as well as “troubleshoot” automated cell counters. 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 the immunologic study of disease states. 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 results. Practicum fee: $10.

Semester Credit Hours: 4.0

CLSC 4058 - Hematology Categorical Practicum

Under the direction and supervision of a clinical instructor, the student will have the opportunity to gain expertise working in the clinical hematology laboratory. Students will perform routine and special hematologic procedures, “troubleshoot” automated cell counters, and gain proficiency in morphologic evaluation of normal and abnormal cellular morphology, including peripheral blood and bone marrow examination. The student will be introduced to the technology of flow cytometry and immunologic study of disease states. In addition, the student will perform routine and special coagulation procedures and evaluate body fluids. Internal and external quality control methods in the hematology/coagulation laboratory will be emphasized. Phlebotomy techniques also will be practiced.

Semester Credit Hours: 6.0

CLSC 4067 - Immunohematology Practicum

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. Practicum fee: $10.

Semester Credit Hours: 4.0

CLSC 4068 - Immunohematology Categorical Practicum

Under the supervision and direction of a clinical laboratory instructor, the student will have the opportunity to gain expertise in the various facets of clinical immunohematology. Areas emphasized include donor collection and processing, component preparation, routine grouping and typing, and compatibility testing. Students will have the opportunity to perform serologic testing for transfusion-transmitted disease. In addition, they will solve complex antibody problems and typing discrepancies using specialized techniques such as enzyme treatment, elution, and autoabsorption. Students will be required to perform HLA typing and investigate suspected cases of hemolytic disease of the newborn and transfusion reactions. Quality control procedures and records management for each area will be emphasized.

Semester Credit Hours: 6.0

CLSC 4069 - Selected Practicum Experience in Immunohematology

This course is for individuals who have completed an accredited CLT/MLT immunohematology practicum. The course emphasizes the areas in immunohematology and serology in which the student lacks previous experience or requires updated proficiency. Credit hours are variable. Hours will be assigned based on the topics covered. Practicum fee: $10.

Semester Credit Hours: 3.0–5.0

Prerequisites: permission from course director

CLSC 4070 - Immunology Practicum

The student will be introduced to the technology of flow cytometry and the immunologic study of disease states. In the immunology/serology laboratory, the student will be required to perform routine testing of antigen/antibody reactions to help in the diagnosis of certain disease states. Practicum fee: $10.

Semester Credit Hours: 2.0

CLSC 4083 - Advanced Clinical Chemistry

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 immunochromatography, 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. Students in this section will pay the instructional fee for the course. Texas residents and non-residents living in Texas pay applicable tuition and fees of the Health Science Center. Distance education fee: $200.

Semester Credit Hours: 3.0
CLSC 4087 - Chemistry Practicum
Under the supervision and direction of a clinical instructor in the hospital setting, the student is introduced to the delivery of health care as it relates to the chemistry diagnostic laboratory. The student has the opportunity to gain experience in toxicology, electrophoresis, immunochemical assays, urinalysis, and special chemistry procedures including neonatal intensive care testing. The student will be given the opportunity to operate modern, state-of-the-art clinical laboratory equipment. Motor skills as well as interpretive skills will be stressed. Knowledge of internal and external quality control methods in the clinical chemistry laboratory will be emphasized. Practicum fee: $10. Semester Credit Hours: 4.0

CLSC 4088 - Clinical Chemistry Categorical Practicum
Under the supervision and direction of a clinical instructor in a hospital or reference laboratory setting, the student will have the opportunity to gain expertise and confidence working with automated clinical analyzers and performing esoteric clinical chemistry analyses. The student will have the opportunity to operate state-of-the-art, high-volume chemical analyzers, to observe preventive maintenance and troubleshooting procedures, and to gain firsthand experience with the recording and evaluation of quality control results. The student will perform highly specialized chemical analyses that may include serum protein electrophoresis, lipoprotein electrophoresis, toxicology screens, immunochemical assays, lecithin/sphingomyelin ratio for assessment of fetal lung maturity, blood gas analyses, and blood gas instrument troubleshooting procedures. The ability to organize work in a multitask environment will be emphasized. The student will be encouraged to present interesting and unusual case studies in an academic environment. Semester Credit Hours: 6.0

CLSC 4089 - Selected Practicum Experience in Clinical Chemistry
This course is for individuals who have completed an accredited CLT/MLT clinical chemistry practicum. The course emphasizes the areas in clinical chemistry in which the student lacks previous experience or requires updated proficiency. Credit hours are variable. Hours will be assigned based on the topics covered. Practicum fee: $10. Semester Credit Hours: 3.0–5.0
Prerequisites: permission from course director

CLSC 4090 - Management for Clinical Laboratory Sciences
This course is designed to provide the student with the opportunity to develop entry-level management and supervisory skills. Topics include principles of communication; group dynamics; leadership styles; interviewing; planning; financial analysis; and policies, procedures, and regulations. Developing and designing presentations; learning principles, objectives and use of audiovisual aids; and design and evaluation of research projects are discussed. Other timely topics in health care may be considered. This is a Web-based course and enrollment is open to clinical laboratory technicians or military-trained personnel who have been accepted into the CLS program, or by special permission from the course director. Texas residents and non-Texas residents living in Texas pay applicable tuition and fees of the Health Science Center. Semester Credit Hours: 2.5–5.0

CLSC 4091 - Independent Study
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. Semester Credit Hours: 1.0–12.0

CLSC 4092 - Management I
This course is designed to present the principles of group dynamics, human resource management, and financial analysis to students in laboratory medicine. Topics include leadership styles, staffing, and laboratory information systems (data management, analysis, selection). Writing résumés, job performance, and laboratory procedures are included. This course includes interviewing techniques and performance evaluations. Semester Credit Hours: 1.0

CLSC 4093 - Management II: Techniques for Clinical Laboratory Sciences
Students will have the opportunity to become involved in a project or other activity that will allow application of course principles. Class topics will vary depending on the project assigned, but will generally include ethics, leadership styles, planning, financial analysis in the laboratory, laboratory information systems (data management, analysis, selection), research techniques, and writing procedure manuals. Current issues in managed care are considered. Other timely topics in health care are 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. Texas residents and non-residents living in Texas pay applicable tuition and fees of the Health Science Center. Distance education fee: $200. Semester Credit Hours: 2.0

CLSC 4094 - Honors CLS Course
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. Semester Credit Hours: 2.5–5.0

CLSC 4095 - Honors CLS Practicum
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. 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.

Semester Credit Hours: 1.0–5.0

CLSC 5001 - Basic Concepts in Immunohematology

Topics covered include the essential concepts of primary and secondary hemostasis, the application of principles of genetics and immunology to immunohematology. Selected areas of hematology pathology and the relationship to the transfusions service will be discussed.

Semester Credit Hours: 2.0

CLSC 5002 - Immunohematology I: The Donor

Topics in this course will include: (1) principles and applications for the preparation, storage, and handling of blood components; (2) regulations and quality assurance for the laboratory and donor area; (3) donor qualifications and preparation for routine, autologous, directed, and hemapheresis, as well as the principles and applications, will be discussed; and (4) routine testing of donor units including testing for agents of infectious disease.

Semester Credit Hours: 2.0

CLSC 5003 - Immunohematology Practicum I

During this practicum the student will have the opportunity to gain experience in all aspects of blood procurement and preparation of components. Donor selection, serologic testing of units for infectious diseases, processing, and component preparation, as well as the quality assurance procedures and criteria, will be covered. Experience in hemapheresis will be included. Practicum fee: $10.

Semester Credit Hours: 4.0

CLSC 5004 - Transfusion Medicine

Immune mediated and drug induced hemolytic anemias, leukemias, and other clinical conditions that require specialized workup, transfusion therapy and clinical management will be discussed in this course. Diagnosis, treatment, and prevention on hemolytic disease of the newborn will be discussed. In addition, the general indications for transfusion therapy, the benefits and adverse effects of component transfusion, and special transfusion problems are included.

Semester Credit Hours: 1.0

CLSC 5005 - Seminar in Education and Management

The key concepts of effective management including planning, employee selection and orientation, productivity, and performance evaluation will be covered. Students also will have the opportunity to study the education theory and techniques necessary for teaching in the clinical environment and for small-group teaching. Lecturing in the undergraduate Clinical Laboratory Science program will be required.

Semester Credit Hours: 0.5

CLSC 5007 - Toxics, the Donor

This is a one-semester rotation through different types of toxicology laboratories including medical examiners, clinical, and drug testing. Practicums will be supervised by faculty.

Semester Credit Hours: 5.0

CLSC 5012 - Immunohematology II: Human Blood Group Systems

Course topics will include discussion and application of genetic, immunologic, and biochemical characteristics of the major blood group systems, as well as high and low frequency and HTLA antigens. The relationship and significance of these systems to transfusion, transplantation, anthropological studies, and disease association will be covered. Special techniques and problem-solving methods for identification and resolution of typing discrepancies and alloantibody and autoantibody problems will be presented.

Semester Credit Hours: 2.0

CLSC 5013 - Immunohematology Practicum II

During this practicum the student will have the opportunity to gain experience in all areas/applications of compatibility testing and antibody identification. The use of special techniques for solving complicated immunohematologic problems and multiple antibodies, workup of suspected transfusion reaction, hemolytic disease of the newborn, and resolution of problems caused by autoantibodies will be included. Special transfusions practices for selected patient groups will be included. Practicum fee: $10.

Semester Credit Hours: 8.5

CLSC 5014 - Principles and Applications in Analytical Toxicology

This course will concentrate on major topical areas of toxicology including: mechanisms of toxicity including mutagenicity, teratogenicity, and carcinogenicity; mechanisms of systemic toxicity and damage to specific organ systems; chemical and biochemical analytical techniques including non-instrumental methods such as microdiffusion and instrumental methods such as HPLC and GC/MS; and toxicology of toxins, toxicants, narcotics, organic solvents, and other classes of materials. Case studies will be used to develop skills in the application of concepts and principles.

Semester Credit Hours: 5.5

CLSC 5017 - Toxicology Seminar

This course includes formal exchange of scientific information and ideas through presentations from recent scientific literature and from faculty and student research.

Semester Credit Hours: 1.0

CLSC 5018 - Special Topics in Medical/Forensic Toxicology

This course includes an introduction to types and uses of evidence, investigations, and the legal requirements in dealing with physical evidence. Areas such as clinical toxicology, forensic toxicology, and forensic pathology will be included. Using a case-study format, the course will also concentrate on specific topics within toxicology including natural toxins, drugs of abuse, psychotropic agents, industrial chemical disasters, and poison management. Requirements for toxicology laboratory certification and design will be included. Selected topics may include laboratory demonstration.

Semester Credit Hours: 5.0
CLSC 5020 - Topics in Applied Toxicology
This course is designed to complement courses CLSC 5014, 5018, and 5097. Under supervision of the program coordinator and toxicologists from various areas of the discipline, the student will apply her/his knowledge of toxicology and forensic science to solving clinical and forensic cases.
Semester Credit Hours: 2.0

CLSC 5022 - Immunohematology III: New Approaches
In this course students will have the opportunity to apply genetic, immunological, and biochemical principles to the study of HLA, platelet, and granulocyte antigens. The relationship of these systems to transfusion, transplantation, disease association, paternity testing, and family studies will be covered. Techniques and use of stem cells, DNA technology, and their application to selected areas of transfusion medicine will be included.
Semester Credit Hours: 0.5

CLSC 5023 - Immunohematology Practicum III
During this practicum the student will have the opportunity to gain experience in specialized applications and areas associated with transfusion medicine including histocompatibility testing for paternity or family studies and for transplantation, cytogenetics, coagulation, and molecular biology. Practicum fee: $10.
Semester Credit Hours: 3.0

CLSC 5036 - Advanced Molecular and Laboratory Diagnostics — Lecture
The course is designed to provide an opportunity for students to gain an in-depth understanding of the role of advanced technology in the diagnosis, treatment, and monitoring of the disease process. Students will have the opportunity to acquire detailed experience in molecular-based diagnostic design and extensive hands-on laboratory experience. The course will include molecular diagnostic techniques, amplification and micro-array technology, Southern/Northern/Western blotting, advanced clinical virology, tissue culture techniques, and advanced instrumentation. Students are required to participate in an analysis of clinical cases relevant to the new and innovative technology, individual presentations, and written papers.
Semester Credit Hours: 3.0

CLSC 5037 - Advanced Molecular and Laboratory Diagnostics — Lab
The course is offered as a graduate-level course in the Master of Science Program in the Department of Clinical Laboratory Science. The design is intended to give students an in-depth understanding of the role of advanced technology in the diagnosis, treatment, and monitoring of the disease process. Students will have the opportunity to acquire detailed experience in molecular-based diagnostic design and extensive hands-on laboratory experience. The course will include molecular diagnostic techniques, amplification and micro-array technology, Southern/Northern/Western blotting, advanced clinical virology, tissue culture techniques, and advanced instrumentation. Students will have the opportunity to participate in an analysis of clinical cases relevant to the new and innovative technology, individual presentations, and written papers.
Semester Credit Hours: 2.0

CLSC 5040 - Laboratory Medicine
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. The majority of the course is Web-based.
Semester Credit Hours: 3.0

CLSC 5041 - Laboratory Medicine - Laboratory
This course is offered to students in the Physician Assistant Studies Program. This is a laboratory course that provides the student with hands-on experience in performing common physician office laboratory procedures. Case studies are used to help students interpret and use laboratory test results. Laboratory fee: $120.
Semester Credit Hours: 1.0

CLSC 5085 - Biochemistry
This course is designed for graduate students and will cover amino acids, proteins, enzymology, the physical structure, chemistry and metabolism of carbohydrates, the chemical and physical properties of lipids and biogenic amines. Lectures also will cover the synthesis and metabolism of phospholipids and signal transduction mechanisms in depth.
Semester Credit Hours: 4.5

CLSC 5090 - Independent Study in Clinical Laboratory Sciences
This course allows for in-depth study in a specific topic area. Topics and method of study are agreed upon by instructor and student. The course may be repeated for credit when topics vary.
Semester Credit Hours: 1.0–4.0

CLSC 6097 - Research
Supervised research under direction of faculty.
Semester Credit Hours: 3.0

CLSC 6098 - Thesis
Instruction in the preparation of a thesis. Registration is required for at least one term for the MS candidate.
Semester Credit Hours: 3.0
Prerequisites: admission to candidacy for the Master of Science degree

INTD 4006 - Professional Issues
Using a workshop format, this interdisciplinary course will provide an overview of ethical issues in health care professions. Topics to be discussed include responsibilities of the health care practitioner; life and death decisions; ethics issues in managed care; legal issues in several areas such as patient confidentiality, sexual harassment and informed consent; ethics in research; and other critical issues related to health care practice. Problem cases will be used to stimulate discussion among students.
Semester Credit Hours: 1.0

INTD 5064 - Applied Statistics for Health Care Practitioners
This online course focuses on the application of descriptive and inferential statistics in research studies. Students are ex-
pected 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.

Semester Credit Hours: 3.0

**OCCT 5023 - Research I: Assessment and Research Statistics**

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 have the opportunity to develop skill in selecting and using the most appropriate standardized assessment for a given purpose.

Semester Credit Hours: 3.0
Deaf Education and Hearing Science

- Master of Deaf Education and Hearing Science Program
- Application and Admission
- General Policies and Information
- Program Curriculum
- Course Descriptions

The Master of Deaf Education and Hearing Science program is offered by the School of Health Professions, in partnership with the Sunshine Cottage School for Deaf Children that serves as the primary teaching laboratory for the program. Sunshine Cottage School for Deaf Children is an auditory-oral school whose mission is to teach children with hearing loss to develop listening, language, and speech in order to become part of the hearing world and be academically competitive with their hearing peers; sign language is not used nor taught.

Students graduate as specialists in providing training that enhances spoken communication and listening skills to children with hearing loss. Advances in hearing-aid technology and surgical procedures, such as cochlear implantation, make the employment demand high for individuals with this preparation.

Master of Deaf Education and Hearing Science Program

The Master of Deaf Education and Hearing Science (MDEHS) program is designed to further the education of individuals with undergraduate degrees in education and other related fields. The program prepares students for a career in the education of children with hearing loss through spoken language, using auditory-oral and auditory-verbal methods. Graduate-level coursework trains teachers to work as members of multi-professional teams to address the educational, social, and health needs of children who have hearing loss. The MDEHS program is completed in six semesters.

The program consists of 36 semester credit hours of course work that includes observations, seminars, demonstrations, research opportunities, and practicum. Practicum assignments are scheduled at Sunshine Cottage, the Health Science Center, and partnership schools and clinics in the San Antonio area. To accommodate working professionals, classes are offered in the evenings and during summers. Students must be available for two 5-week practice teaching sessions during their course of study.

Students who successfully complete the course requirements must pass a comprehensive examination covering the major components of the program. A thesis is not required; however, students are required to acquire competency in reading and critically reviewing professional and research literature, and to develop awareness of statistical and research design concepts for educational and clinical studies.

The MDEHS program is accredited by the Council on Deaf Education, Gallaudet University, 800 Florida Ave. NW, Washington, D.C. 20002-3695, and telephone (202) 651-5525, fax (202) 651-5749.

Philosophy

The MDEHS 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 sometime 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.

Application and Admission

Application for admission to Master of Deaf Education and Hearing Science program may be completed online at https://www.applytexas.org/adappc/commonapp.WBX. Detailed information about application and admission is available from the Health Professions Welcome Center at (866) 802-6288 (toll-free) or (210) 567-8744, and online at http://studentservices.uthscsa.edu/prospects_apply_ah.aspx. Completed application, application fee, official transcripts, and supporting documents must be submitted to the Registrar between September 1 and February 15.

All required admissions information and documents must be submitted to the Office of the Registrar before an applicant is considered for admission. Because applications and docu-
ments 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 Master of Deaf Education and Hearing Science:

- Bilingual ability
- Race/ethnicity
- Hometown or county of residence that has been designated a medically under-served 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
- Personal disability condition

Admission Requirements
To be admitted to the MDEHS 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. 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.

General Policies and Information

Advancement, Probation, and Dismissal
All decisions concerning a student’s status in the program are based on recommendations from the program faculty. Faculty meet regularly to review students’ performance and progress. The faculty may recommend: continuation in the program, academic probation, dismissal, repetition of the course when next offered, repetition of the semester/year, or other actions as deemed appropriate. Under no circumstances will a student on academic probation be awarded a degree.

Advancement
Continuation in the program is dependent on:

- Maintenance of a minimum cumulative grade point average of 3.0 (B) for all courses taken while enrolled in the program
- Satisfactory rate of progress toward the degree
- Satisfactory progress in meeting conditions imposed at the time of admission

Probation
A student whose grade point average falls below 3.0 will be subject to academic probation and informed that continuation in the program is in jeopardy.
- 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.

Dismissal
A student may be dismissed from the program for any of the reasons below:

- Failure to maintain a B average while on probation
- Receiving a grade of D or F in any semester
- A student who continues on probation may also be subject to dismissal.
- Unsatisfactory progress toward correcting deficiencies
- Violation of the provisions in the “Guide for Professional Conduct” (School of Health Professions introductory section)
- Violation of professional ethics

Attendance
Attendance at all scheduled classes, clinical experiences, and practicums is expected. Excused absences may be granted in such cases as illness or personal emergency. Verification of the reason for an absence may be required. It is the student’s responsibility to notify the faculty member if an absence occurs and to arrange for make-up work, if necessary. Excessive absences may be cause for reductions in course grades.

Background Checks
In addition to the background check completed before admission, students are subject to background checks that may be required by clinical or practicum sites, such as Sunshine Cottage School for Deaf Children. Students are required to pay the cost of the background check, if not paid by the practicum site.

Computers
Students are required to use personal computers throughout the MDEHS program and should be competent in basic computer skills to complete assignments; communicate by e-mail with other students, staff, and faculty; manage assigned clients; conduct library and Internet research; participate in Web-based portions of courses; etc. Students will find a computer indispensable for their study, research, and communication. Numerous computers for student use are available in the
HSC Library and the Allied Health/Research Building, but access may be limited due to high use. It is strongly recommended that MDEHS students acquire a computer for use at home.

Professional Attire, Demeanor, and Conduct

Students must dress at all times in a manner consistent with a professional image while on campus and at practicum sites. Appropriate attire for practicums or other clinical/educational settings may vary, depending on local customs and expectations. It is the student's responsibility to inquire about dress and demeanor expectations and to comply with them.

Program Costs

Total, part-time program costs for Texas resident tuition and fees, parking permits, health and liability insurance, etc., are approximately $11,000. In addition, costs for other expenses, such as textbooks, personal computer, course manuals, and supplies are approximately $3,500. Non-resident students are subject to additional costs, which may be found under “Financial Information” in this Catalog.

Scholarships

Students are eligible to apply for competitive scholarships. After the application process is reviewed, recipients are selected by the department and approved by the School of Health Professions Scholarship Committee. Information about applying for scholarships is available from the MDEHS Office 210-567-8912; trautwein@uthscsa.edu or the Assistant Dean for Student Affairs at 210-567-8704.

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). All students who enter the program already holding teacher certification must pass the Texas State Certification Examination Hearing Impaired #181, K–12 (ExCET). 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 the Education of the Deaf (CED). It is highly recommended that students apply for certification through CED as well.

Time to Degree

The usual time to degree for the MDEHS program is six semesters. In unusual cases (e.g., leave of absence), students may require a longer time period to complete the degree. However, all degree requirements including the Comprehensive Examination must be completed within six years after initial entry into the program, and under the Catalog in effect at the time of initial entry. An extension of study beyond 6 years may be authorized by the faculty only with demonstration of justifiable cause.

HSC/UTSA Cooperative Agreement

Through a cooperative agreement with The University of Texas at San Antonio (UTSA), students may be admitted to the MDEHS program and then take preparatory/background coursework at UTSA at the undergraduate or graduate level. UTSA courses may include: Principles of Learning and Classroom Management, Introduction to Exceptionality, Language and Cognitive Development, and reading instruction courses. Contact the program director for further information.

Master of Deaf Education and Hearing Sciences Curriculum

<table>
<thead>
<tr>
<th>First Year</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summer Semester</strong></td>
<td></td>
</tr>
<tr>
<td>DEHS 5005 - Factors in Child Language Acquisition</td>
<td>2.5</td>
</tr>
<tr>
<td>DEHS 5007 - Introduction to Audiology</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td>4.5</td>
</tr>
<tr>
<td><strong>Fall Semester</strong></td>
<td></td>
</tr>
<tr>
<td>DEHS 5003 - Speech Mechanisms–Anatomy, Physiology, Acoustics</td>
<td>2.5</td>
</tr>
<tr>
<td>DEHS 5011 - Language Development and Hearing Ability</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td>6.5</td>
</tr>
<tr>
<td><strong>Spring Semester</strong></td>
<td></td>
</tr>
<tr>
<td>DEHS 6004 - Curriculum Modifications for Children with Hearing Loss</td>
<td>2.5</td>
</tr>
<tr>
<td>DEHS 6008 - Speech for Hearing-Impaired Students</td>
<td>2.5</td>
</tr>
<tr>
<td>DEHS 5021 - Teaching/Management Apprenticeship I</td>
<td>20</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td>7.0</td>
</tr>
<tr>
<td><strong>Second Year</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Summer Semester</strong></td>
<td></td>
</tr>
<tr>
<td>DEHS 5009 - Introduction to Sign (ASL and Signed English)</td>
<td>2.5</td>
</tr>
<tr>
<td>DEHS 5001 - Foundations of Education for the Deaf</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td>5.0</td>
</tr>
<tr>
<td><strong>Fall Semester</strong></td>
<td></td>
</tr>
<tr>
<td>INTD 5064 - Applied Statistics for Health Care Practitioners</td>
<td>3.0</td>
</tr>
<tr>
<td>DEHS 6010 - Mainstream Services for Children with Hearing Loss</td>
<td>1.5</td>
</tr>
<tr>
<td>DEHS 6022 - Teaching/Management Apprenticeship II</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td>8.0</td>
</tr>
<tr>
<td><strong>Spring Semester</strong></td>
<td></td>
</tr>
<tr>
<td>DEHS 6002 - Comprehensive Assessment, Counseling and Management</td>
<td>2.5</td>
</tr>
</tbody>
</table>
Deaf Education and Hearing Science Course Descriptions

DEHS 5001 - Foundations of Education for the Deaf
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.
Semester Credit Hours: 2.5

DEHS 5003 - Speech Mechanisms–Anatomy, Physiology, Acoustics
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.
Semester Credit Hours: 2.5

DEHS 5005 - Factors in Child Language Acquisition
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.
Semester Credit Hours: 2.5

DEHS 5007 - Introduction to Audiology
Nature of sound, anatomy, and physiology of hearing; types of testing for hearing loss; analysis of audiograms; fitting of earmolds; operation and design of hearing aids; use and maintenance of FM units; and Cochlear implants and assistive technology. Practicum included.
Semester Credit Hours: 2.0

DEHS 5009 - Introduction to Sign (ASL and Signed English)
This course is a study of the evolution of the various forms of manual communication, review of options available in Texas public schools, and implications of American Sign Language as a first language.
Semester Credit Hours: 2.5

DEHS 5011 - Language Development and Hearing Ability
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.
Semester Credit Hours: 2.0

DEHS 5021 - Teaching/Management Apprenticeship I
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.
Semester Credit Hours: 2.0

DEHS 5090 - Independent Study
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.
Semester Credit Hours: 0.5–4.0

DEHS 6002 - Comprehensive Assessment, Counseling and Management
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.
Semester Credit Hours: 2.5

DEHS 6004 - Curriculum Modifications for Children with Hearing Loss
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.
Semester Credit Hours: 2.5

DEHS 6006 - Auditory-Verbal Principles & Practices in Early Intervention
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.
Semester Credit Hours: 2.5
DEHS 6008 - Speech for Hearing-Impaired Students
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.
Semester Credit Hours: 2.5

DEHS 6010 - Mainstream Services for Children with Hearing Loss
Management of resource and mainstream services in school settings. Logistical considerations in grouping, teacher placement, and the development of individualized educational plans combining language/speech/listening consideration with academic instruction. Development of consultative style of interaction with regular education personnel.
Semester Credit Hours: 1.5

DEHS 6022 - Teaching/Management Apprenticeship II
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.
Semester Credit Hours: 3.5

DEHS 6099 - Comprehensive Examination
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.
Semester Credit Hours: 0.0

INTD 5064 - Applied Statistics for Health Care Practitioners
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.
Semester Credit Hours: 3.0
Dental Hygiene

The dental hygienist works as an integral member of a professional health care delivery team, functioning under the general supervision of a dentist. The primary specialties of the practitioner are oral health promotion and disease prevention for diverse client populations. Typical duties include evaluating and charting oral disease and health conditions, planning dental hygiene treatment, removing deposits from the teeth, taking and processing dental radiographs, taking impressions, providing nutritional counseling, and applying preventive agents to the teeth.

Dental hygienists are employed by general dentists or specialists in private dental practices and clinics, hospitals, public health, research, public schools, business and industry, civil service, and the armed forces. Individuals considering a career in dental hygiene should have a strong commitment to working with diverse groups of people to meet their oral health needs. Further, they should be dedicated to delivering competent and compassionate health care. The ability to communicate effectively is essential to a successful and rewarding career in this profession.

Dental Hygiene is a licensed profession, requiring successful completion of the National Board Examination, the Western Regional Examining Board (WREB), and a state Jurisprudence Exam. The National Board Examination, given during the spring semester of the second year, is a comprehensive written examination covering dental and dental hygiene sciences, theoretical aspects of patient care, and principles of dental hygiene therapy. The WREB is offered before graduation and requires a practical demonstration of clinical competence. A Texas license to practice dental hygiene is granted upon successful completion of the WREB, the National Board Examination, the Texas State Jurisprudence Exam, and payment of appropriate fees to the State Board of Dental Examiners.

The Bachelor of Science in Dental Hygiene program is accredited by the American Dental Association (ADA) Commission on Dental Accreditation (CODA), 211 E. Chicago Avenue, Chicago, Illinois 60611; phone (312) 440-2719. The last site evaluation was conducted in 2005 and the program was granted a status of APPROVAL without reporting requirements.

Dental Hygiene Degree Program

The Department of Dental Hygiene offers a bachelor’s degree (both entry-level and degree completion program) and a master’s degree program that prepare dental hygienists for a variety of career opportunities. The Bachelor of Science entry-level program provides the opportunity for graduates to prepare to become licensed registered dental hygienists and work as part of a professional health care delivery team. The program requires the completion of Texas Core Curriculum (see “Texas Core Curriculum” in the introductory section of this Catalog) and program prerequisite courses before entering the dental hygiene major. Graduates of the entry-level bachelor’s degree program are eligible to take the National Board Examination, the Western Regional Examining Board (WREB), and the Texas State Jurisprudence Exam for eligibility to practice.

Entry-Level Bachelor of Science in Dental Hygiene Program

The entry-level bachelor’s degree consists of a minimum of 123 semester credit hours, including 60 semester credit hours of Texas Core Curriculum (see Texas Core Curriculum in the introductory section of this Catalog) and program prerequisite courses and 63 semester credit hours of dental hygiene courses taken over two academic years of full-time study. Core curriculum and program prerequisite courses must be completed before entry into the program. Courses in the program include basic, dental, and social sciences; clinical theory and practice; and community experience. The curriculum combines classroom and laboratory instruction with clinical experience to develop student skills in comprehensive dental hygiene care.

Bachelor of Science in Dental Hygiene Degree Completion Program (Online)

The Bachelor of Science Degree Completion Program is designed to allow a registered Dental Hygienist (RDH) who has completed a certificate or associate’s degree program in dental hygiene that is accredited by the Commission on Dental Accreditation (CODA), the opportunity to earn a baccalaureate degree in the field. Dental hygienists with baccalaureate degrees may be employed in community college or university settings as teachers, public health departments or other health care facilities, oral health care businesses, and other similar job opportunities. Salaries vary, depending on the career choice.

This online program is designed to be completed by the practicing dental hygienist and may be taken on a part-time schedule. Didactic course work is offered electronically. However, courses intended to prepare hygienists to become future educators in clinical dental hygiene will require the student to participate in clinical teaching at a CODA-accredited school of dental hygiene.
Coursework for the degree completion program includes the arts, humanities, basic and behavioral sciences, and the advanced professional curriculum.

All students must complete 123 credit hours to earn the BS degree, including 42 semester credit hours of Texas Core Curriculum. The Bachelor of Science Degree Program Director will evaluate applicant’s transcripts to determine the number of credit hours required to complete the degree.

Master of Science in Dental Hygiene Degree Program (Online)

The Master of Science in Dental Hygiene degree program prepares registered dental hygienists who have earned a bachelor’s degree for advanced education in dental hygiene teaching, administration, research, and other related areas. This program requires 36 semester credit hours of graduate work, including a research-based thesis.

The Master of Science degree builds on a baccalaureate degree in dental hygiene or a related field to develop professionals with expertise in a specialized area of dental hygiene. Through academic courses, independent study, research and practical experience, graduate students will have the opportunity to prepare to meet the demands of an evolving health care environment. The primary goal of graduate education in dental hygiene is to prepare professionals to assume leadership roles in clinical, educational, research, political, administrative, and other health care delivery agencies.

Graduate education is delivered within a multidisciplinary framework through the School of Health Professions, the Dental School, and the Graduate School of Biomedical Sciences. Graduates are expected to develop expertise in conducting research related to dental hygiene, health care delivery, health promotion, or other relevant areas. The master’s degree also forms a foundation for future doctoral study.

Application and Admission

Application for admission to Dental Hygiene degree programs may be completed at https://www.applytexas.org/adappc/commonapp.WBX. Detailed information about application and admission is available from the Health Professions Welcome Center at (866) 802-6288 (toll-free) or (210) 567-8744, and online at http://studentservices.uthscsa.edu/prospects_apply_ah.aspx. Completed application, application fee, official transcripts, and supporting documents must be submitted to the Registrar by February 1 for fall semester enrollment. Transcripts for prerequisite courses completed after that date must be submitted to the Registrar by July 1.

Admission Factors

In addition to the academic admission requirements described under each program, the following non-academic factors may be considered when selecting students for admission to all Dental Hygiene programs:

- Bilingual ability
- Hometown or county of residence that has been designated a medically underserved and/or health professions shortage area, with particular emphasis on South Texas
- Employment history, especially as it occurred simultaneously with undergraduate academic preparation
- Public/community service in volunteer-related areas
- Awards and honors
- Experience in providing healthcare-related services, e.g., prior military training and experience, other health-related fields, dental assisting experience
- Graduation from another accredited healthcare-related curriculum
- References or recommendations
- Race/ethnicity
- Knowledge of and preparation to enter the profession of dentistry gained through observing or volunteering in a dental practice
- Communication skills
- Future professional goals
- Previously selected as an alternate for the Health Science Center dental hygiene program

Entry-Level Bachelor of Science in Dental Hygiene Program

A maximum of 30 qualified students are admitted to the bachelor of science degree programs. Admission requirements for the entry-level bachelor’s degree program include 42 semester credit hours of Texas Core Curriculum requirements (see “Texas Core Curriculum” in the introductory section of the Catalog) and 36 semester credit hours of program prerequisites (listed below). A total of 60 semester credit hours of core curriculum and program prerequisites must be completed with a minimum 2.7 grade point average (on a 4-point scale). Note that courses that satisfy program prerequisites may also satisfy core curriculum requirements. These courses must be completed with a grade of C or better. Applicants are encouraged to seek advisement from their college counselors or the Health Professions Welcome Center at (866) 802-6288 (toll-free) or (210) 567-8569, or e-mail SHPwelcome@uthscsa.edu.

Program Prerequisites: In addition to the Texas Core Curriculum requirements (see “Texas Core Curriculum” in the introductory section of this Catalog), the following program prerequisites must be completed:

<table>
<thead>
<tr>
<th>course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy with laboratory or Anatomy and Physiology I with laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>Computer Applications or equivalent</td>
<td>3.0</td>
</tr>
<tr>
<td>English Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>Introductory Chemistry with laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>Microbiology with laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>Nutrition</td>
<td>3.0</td>
</tr>
</tbody>
</table>
Physiology with laboratory or Anatomy and Physiology II with laboratory 4.0
Psychology 3.0
Sociology 3.0
Statistics 3.0
Elective(s) 2.0

Program Prerequisite Total 36.0

Courses listed above must be completed by July 1 for anticipated fall enrollment.

Bachelor of Science in Dental Hygiene Degree Completion Program (Online)

Twelve students may be admitted to the bachelor’s degree completion program each year. Applications are accepted at any time. Applications, supporting documents, and official transcripts should be submitted to the Registrar by February 1 for fall entry.

Information about application and admission to the bachelor’s degree completion program is detailed in the Applicant Viewbook of the School of Health Professions. All applicants are required to complete the Texas Core Curriculum courses (see “Texas Core Curriculum” in the introductory section of this Catalog) before entering the program. Admission requirements include:

- Graduation from an ADA/CODA-accredited dental hygiene program in the U.S. or Canada; applicants who have completed at least one year of an accredited program may apply before graduation, but must be scheduled to graduate before beginning the program of study and meet all prerequisite requirements.
- Grade point average (GPA) of at least 2.5 for all college courses taken
- Dental hygiene GPA of at least 2.5 in the entry-level program

In addition to Texas Core Curriculum requirements, noted above, and completion of an accredited dental hygiene program, the following prerequisites must be completed for admission:

- Computer Applications, or equivalent 3.0
- Statistics 3.0

Master of Science in Dental Hygiene Degree Program (Online)

Information about admission and application to the Master of Science in Dental Hygiene program is detailed in the Applicant Viewbook of the School of Health Professions. Admission requirements include:

- Bachelor’s degree from a regionally accredited college or university, or proof of equivalent degree and training in a foreign country
- Grade point average of at least 3.0 in bachelor’s degree
- Graduation from an ADA/CODA-accredited dental hygiene program in the U.S. or Canada
- Successful completion of the Dental Hygiene National Board Examination
- Current licensure as a Registered Dental Hygienist from any state in the U.S. or Canada
- Graduate Record Examination or Miller Analogies Test; tests must have been taken within 5 years of admission
- Three completed recommendation forms available at http://studentservices.uthscsa.edu/prospects_apply_ah.aspx
- Personal interview with representatives of the graduate program may be required.

Applications, supporting documents, and all official transcripts should be submitted to the Registrar by February 1 for the fall semester. Admission is offered through the Graduate School of Biomedical Science’s Dental Hygiene Committee on Graduate Studies (COGS). Four to six students may be admitted each year.

General Policies and Information

Academic Advising

The department chair and faculty serve as student advisors. Advisors have the role of assisting students to solve problems and/or find 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, 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.

Advancement, Probation, and Dismissal

A satisfactory rate of progress toward the degree is determined by the faculty for the bachelor’s degree, or the Committee on Graduate Studies (COGS) for the master’s degree, according to the following standards. 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.

Performance Review: Each student’s performance is reviewed at the middle and end of every term by the faculty/COGS. At midterm the faculty/COGS 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 remedying any academic deficiencies.

Promotion Recommendations: At semester’s end, the faculty/COGS determines the student’s promotion status. The faculty/COGS evaluates other aspects of the student’s performance: (1) course grade(s), (2) attendance record, (3) professional behaviors, (4) and psychomotor skill development. The faculty/COGS also may assess extenuating circumstances that might have affected student progress on an individual ba-
Revisions are forwarded to the department chair/program director for final approval. A student performing at an unsatisfactory level will receive written notification of her/his status from the department chair.

The policies below apply to students in the bachelor's degree programs (entry-level and degree completion). Students in the Master of Science degree program follow policies of the Graduate School of Biomedical Science, found in this Catalog.

**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,
- 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.

**Remediation** – Remediation of a course in which an unsatisfactory grade was earned may be considered by the faculty/COGS if recommended by the course director and/or faculty/COGS. Methods for remediation are determined by the faculty/COGS in consultation with the individual course instructor, and specified in writing to the student. The student is expected to complete the course(s) within the time frame specified by the faculty/COGS.

In addition, the faculty will consider all areas listed above under Promotion Recommendations. The faculty reserves the right to make alternate recommendations as deemed appropriate.

**Appeal Procedures**

Student appeals and grievances are handled through established policies and procedures for the School of Health Professions, outlined in School of Health Professions section of this Catalog.

**Attendance**

Because of the nature and complexity of the dental hygiene programs, prompt attendance is expected at all scheduled classes, laboratories, and clinic sessions. Other attendance requirements for regularly scheduled classes, laboratories, and clinic sessions are established by the instructor for that particular portion of the curriculum. The policy regarding attendance for each course is outlined in the course outline/syllabus.

Unexcused absences may be considered sufficient cause for failure. Excused absences may be granted by the course 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. The student is responsible for arranging with the course director to make up missed work.

**Auditing Courses**

Students who have transferred courses from other accredited institutions for credit in Dental Hygiene programs or those who successfully pass course challenge examinations may elect to audit these same courses while enrolled in the curriculum, to assure retention of those concepts/skills. Students who elect to enroll in a course which is designated as an audit course with laboratory or psychomotor skills may be required to demonstrate competency in the psychomotor aspects of the course. Professionalism standards apply to students auditing any dental hygiene course. The symbol AU will be recorded on the student’s official transcript on completion of the course provided that attendance and other requirements have been met.

**Computer Requirement**

Students accepted into the Dental Hygiene program are expected to have basic computer skills including the ability to use e-mail, the Internet, and word-processing software. All bachelor's degree entry-level students are required to buy a laptop computer from the Health Science Center's Computer Store when entering the program. This computer will be formatted with program specifications that allow access to digital radiography and patient records, as well as online learning materials. It is expected that students will use computers in class for course-specific purposes or activities directed by the instructor. The approximate cost of the computer will be $2000, including all software and memory requirements. In addition, high-speed Internet access is strongly recommended.

**Dropping Courses**

See “Adding/Dropping Courses” under General Academic Policies in this Catalog for information on limitations on dropping courses.
Grade

Courses may be graded using letter grades, Satisfactory/ Unsatisfactory, Pass/Fail, or Incomplete. In the bachelor’s degree programs (entry-level and degree completion), letter grades of A, B, C, and S, and Pass are considered satisfactory in all courses. The grade of C, S, or Pass is the minimum acceptable grade for all courses. Grades of D, F, U, or Fail are considered unsatisfactory grades in all courses. Students in the Master of Science degree program follow grading policies of the Graduate School of Biomedical Sciences, found in this Catalog.

In computing the grade point average, grade points are assigned: A = 4 points, B = 3 points, C = 2 points, D = 1 point, and F = 0 points. Grades of S/U or Pass/Fail are not computed into the grade point average.

Examination scores and course grades are released in a secure manner only.

Incomplete Grades: A grade of I (Incomplete) is recorded for a student who has not completed class, laboratory, or clinical requirements by the conclusion of the course. Incomplete work must be made up within the time specified by the Committee on Allied Health Studies or Committee on Graduate Studies, or the I will be replaced with a grade of F, resulting in the repetition of the course or dismissal from the program.

Graduation Requirements

The Dental Hygiene Bachelor of Science degree and the Dental Hygiene Master of Science degree are awarded on the satisfactory completion of the prescribed academic programs, recommendation of the faculty for the bachelor’s degree, or the Committee on Graduate Studies for the master’s degree, and certification of the candidate by the dean and president.

A candidate for graduation must have completed all prescribed courses at a satisfactory level (see “Grades”) and earned a cumulative grade point average of 2.0 in the bachelor’s degree program or 3.0 in the master’s degree program. Completion of all courses with satisfactory grades does not necessarily assure candidates a recommendation for graduation. The School of Health Professions Faculty Council may refuse to recommend for graduation any student who has not:

- Met all financial indebtedness to the Health Science Center;
- Independently completed all her/his work in the school’s facilities; or
- Exhibited those intellectual, ethical, and behavioral qualities necessary for a career as a dental hygiene professional.

Diplomas are awarded in formal public ceremonies held by the Health Science Center at the end of spring semester.

Honors and Awards

Students in the bachelor’s degree programs may be eligible for various honors or awards based on academic, clinical, and professional abilities.

Dean’s List: Students who are enrolled full-time and earn a semester’s grade point average (GPA) of 3.5 or greater in all course work taken that semester will be eligible for the Dean’s List.

Honors: Students who earn a cumulative GPA of 3.50–3.74 in the bachelor’s degree program will graduate Magna Cum Laude, and those with a cumulative GPA of 3.75–4.0 will graduate Summa Cum Laude.

Sigma Phi Alpha: Students who demonstrate excellence in scholarship and professional leadership potential may be selected for the national dental hygiene honor society Sigma Phi Alpha. Faculty select honorees from the top 10% of the class, determined by cumulative GPA.

Additional Awards: Individual program awards are presented at graduation. A description of these awards is provided to students during orientation.

International Applicants

Guidelines for international applicants are provided under “International Applicants” in the School of Health Professions section of this Catalog.

Program Costs

Total program costs for dental hygiene degree programs are shown in the table “Dental Hygiene Program Costs.” All figures are approximate and based on full-time enrollment. Non-resident students are subject to additional costs that may be found under “Financial Information” in this Catalog.

<table>
<thead>
<tr>
<th>Program</th>
<th>Tuition and Fees</th>
<th>Health Insurance</th>
<th>Other Costs</th>
<th>Master of Science Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry-level Bachelor’s Degree</td>
<td>$12,400</td>
<td>$2,040</td>
<td>$7,800</td>
<td>$7,700</td>
</tr>
<tr>
<td>Bachelor’s Degree Completion – HSC Graduates</td>
<td>$12,200</td>
<td>$470</td>
<td>$750</td>
<td>$7,800</td>
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<tr>
<td>Bachelor’s Degree Completion – Other Graduates</td>
<td>$6,300</td>
<td>$1,200</td>
<td>$250</td>
<td>$7,800</td>
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<tr>
<td>Master of Science Degree</td>
<td>$7,700</td>
<td>$1,840</td>
<td>$250</td>
<td></td>
</tr>
</tbody>
</table>

^TOP / SHP Programs

^a Students who provide proof of health insurance that meets state requirements are not required to pay the health insurance fee.

^b Other Costs include textbooks, computer, and other miscellaneous expenses.

^c Based on completion of the program in 4 semesters

Student Conduct

Students are responsible for knowing and observing the university’s regulations governing Student Conduct and Discipline, described in this Catalog, and the Rules and Regulations of the Board of Regents of The University of Texas System.
Dental hygiene students are considered 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. Examples of professional behaviors are given under “Guide for Professional Conduct” in the School of Health Professions section of this Catalog.

Students are expected to perform at a professional level when interacting with peers, patients, faculty, and staff when representing the Health Science Center at clinical rotation sites or other community activities. A breach of professional conduct may be considered grounds for dismissal from the program, to be determined by the Committee on Allied Health Studies or Committee on Graduate Studies.

Dental Hygiene Professionalism: Students in the dental hygiene programs are expected to abide by ethical standards set forth in policies of the Department of Dental Hygiene, School of Health Professions, and the Health Science Center. Representative examples of professional behaviors, traits, and qualities are given below, but are not all-inclusive.*

Reliability and Responsibility
- Fulfilling responsibilities in a reliable manner
- Learning how to complete assigned tasks
- Managing time in a responsible manner to avoid tardiness, absence, or late assignments
- Providing thorough and complete documentation of clinical activities
- Adhering to clinic or course protocol

Self-improvement and Adaptability
- Accepting constructive feedback
- Recognizing limitations and seeking help
- Being respectful of colleagues and patients
- Incorporating feedback in order to make changes in behavior
- Adapting to change

Relationships with Students, Faculty, Staff, Patients, and Guests
- Establishing rapport
- Being sensitive to the needs of patients
- Establishing and maintaining appropriate boundaries in work and learning situations
- Extending professional courtesy and attentiveness to fellow students in a learning environment
- Extending professional courtesy and attentiveness to staff in a learning environment
- Extending professional courtesy and attentiveness to faculty in a learning environment
- Extending professional courtesy and attentiveness to faculty and guests in an academic or professional setting

Professional Behaviors in Class
- Students should display appropriate professional behaviors while attending classes, laboratories, or clinic sessions:
- Respect for the instructor or guest speaker by attending class on time. If the student is 15 minutes late to any class, it is considered an absence.
- Refrain from talking to classmates while class is in session.
- Refrain from eating inside the classroom.
- Remain in class until the official end of the class period or dismissal by the instructor.
- Keep cell/digital phones and pagers on silent mode during classes, laboratories, and clinic sessions.
- Refrain from non-academic activity on electronic devices (e.g., Internet surfing, checking e-mail, etc.).

Withdrawal
Permission to withdraw from a course(s) may be granted by the department chair. Students wishing to withdraw for any reason must submit a written request in writing to the department chair, including a reason for the request, and meet with the department chair to discuss the withdrawal process. The symbol W is recorded for each course that the student did not complete. Students may not withdraw from any course after the final examination period has begun.

Program Curricula
- Entry-Level Bachelor of Science in Dental Hygiene
- Bachelor of Science in Dental Hygiene Degree Completion Program
- Master of Science in Dental Hygiene
- Course Descriptions

Entry-Level Bachelor of Science in Dental Hygiene Program

<table>
<thead>
<tr>
<th>First Year</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall Semester</strong></td>
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</tr>
<tr>
<td>DENH 3004 - Oral Anatomy</td>
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<tr>
<td>DENH 3006 - Preclinical Dental Hygiene</td>
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</tr>
<tr>
<td>DENH 3018 - Dental Radiography</td>
<td>3.0</td>
</tr>
<tr>
<td>DENH 3019 - Oral Health Promotion/Disease Prevention</td>
<td>4.0</td>
</tr>
<tr>
<td>DENH 3023 - Introduction to Clinical Theory</td>
<td>3.0</td>
</tr>
<tr>
<td>DENH 3033 - Structures of the Head and Neck</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td><strong>16.0</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Spring Semester</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DENH 3020 - Clinic I Seminar</td>
<td>2.0</td>
</tr>
<tr>
<td>DENH 3021 - Clinic I</td>
<td>3.0</td>
</tr>
<tr>
<td>DENH 3034 - Periodontics</td>
<td>3.0</td>
</tr>
</tbody>
</table>
DENH 3035 - Pharmacotherapeutics 4.0
DENH 3040 - Histology/Embryology 2.0
Semester Total 14.0

Summer Session
DENH 3022 - Dental Materials 3.0
DENH 4018 - Introduction to Research 3.0
Semester Total 6.0

Second Year
Fall Semester
DENH 4012 - Oral Pathology 3.0
DENH 4020 - Clinic II Seminar 2.0
DENH 4021 - Community Oral Health 3.0
DENH 4022 - Clinic II 3.0
DENH 4025 - Advanced Periodontics 3.0
Semester Total 14.0

Spring Semester
DENH 4015 - Clinic III 3.0
DENH 4011 - Current Issues in Dental Hygiene 3.0
DENH 4016 - Clinic III Seminar 2.0
DENH 4017 - Community Oral Health Practicum 2.0
DENH 4019 - Practice Management 2.0
DENH 4026 - Healthcare Ethics 1.0
Semester Total 14.0

Bachelor of Science in Dental Hygiene Degree Completion Program (Online)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENH 3007 - Preclinical Teaching Practicum</td>
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</tr>
<tr>
<td>DENH 4011 - Current Issues in Dental Hygiene</td>
<td>3.0</td>
</tr>
<tr>
<td>DENH 3015 - Public Health Practicum</td>
<td>4.0</td>
</tr>
<tr>
<td>DENH 3017 - Clinical Teaching Practicum</td>
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</tr>
<tr>
<td>DENH 4007 - Clinical Administration Practicum</td>
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</tr>
<tr>
<td>DENH 4018 - Introduction to Research</td>
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</tr>
<tr>
<td>DENH 4023 - Special Topics</td>
<td>1.0–3.0</td>
</tr>
<tr>
<td>DENH 4024 - Concepts and Practice in Teaching</td>
<td>3.0</td>
</tr>
<tr>
<td>DENH 4091 - Independent Study</td>
<td>1.0–3.0</td>
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<tr>
<td>DENH 4103 - Health Promotion</td>
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</tr>
<tr>
<td>DENH 4415 - Advanced Public Health Practicum</td>
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</tbody>
</table>

Program Total for Entry-Level Bachelor of Science 63.0

A total of 123 credit hours are required to earn a Bachelor of Science Degree in Dental Hygiene, including Texas Core Curriculum courses, program prerequisites, entry-level dental hygiene courses, and advanced dental hygiene major courses.

Registered Dental Hygienists who are not graduates of the Dental Hygiene entry-level program are required to take a minimum of 30 semester credit hours to earn the bachelor’s degree.

*May be repeated for one to three credit hours, depending on student’s course of study.

Master of Science in Dental Hygiene (Online)
The Master of Science in Dental Hygiene degree program requires a minimum of 36 semester hours, including successful completion of a research-based thesis. A part-time option is available, but all work toward the degree should be completed within 6 years of initial enrollment. Students with extenuating circumstances may petition the Committee on Graduate Studies for additional time to complete the degree. The curriculum includes specific core courses and electives. Individualized degree plans are formulated from the following courses depending upon the student’s interests.

Master of Science in Dental Hygiene Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENH 5022 - Research Apprenticeship</td>
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</tr>
<tr>
<td>DENH 5024 - Professional Communication</td>
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</tr>
<tr>
<td>DENH 5026 - Research Principles and Applications</td>
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</tr>
<tr>
<td>DENH 5924 - Biostatistics</td>
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</tr>
<tr>
<td>DENH 6098 - Thesis</td>
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<tr>
<td>INTD 6002 - Ethics in Research</td>
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</table>

Total for Core Courses 18.5

Master of Dental Hygiene Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>DENH 5003 - Current Issues in Dental Hygiene</td>
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<tr>
<td>DENH 5007 - Clinical Administration Practicum</td>
<td>4.0</td>
</tr>
<tr>
<td>DENH 5010 - Teaching Internship</td>
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<tr>
<td>DENH 5015 - Public Health Practicum</td>
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</tr>
<tr>
<td>DENH 5017 - Clinical Teaching Practicum</td>
<td>4.0</td>
</tr>
<tr>
<td>DENH 5022 - Research Apprenticeship</td>
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</tr>
<tr>
<td>DENH 5036 - Health Promotion</td>
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</tr>
<tr>
<td>DENH 5050 - Educational Principles and Application</td>
<td>3.0</td>
</tr>
<tr>
<td>DENH 5091 - Special Topics in Dental Hygiene</td>
<td>1.0–3.0</td>
</tr>
<tr>
<td>DENH 5903 - Organizational Leadership</td>
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</tr>
</tbody>
</table>
Dental Hygiene Course Descriptions

**DENH 3004 - Oral Anatomy**
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. Lab fee: $4.*
Semester Credit Hours: 2.0

**DENH 3006 - Preclinical Dental Hygiene**
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. Lab fee: $10.*
Semester Credit Hours: 2.0
Prerequisites: concurrent with DENH 3023

**DENH 3007 - Preclinical Teaching Practicum**
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. *Practicum fee: $10.*
Semester Credit Hours: 4.0

**DENH 3015 - Public Health Practicum**
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. *Practicum fee: $10.*
Semester Credit Hours: 4.0

**DENH 3017 - Clinical Teaching Practicum**
This course is an introduction to clinical instruction. 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 facilitator, role model, and evaluator. *Practicum fee: $10.*
Semester Credit Hours: 4.0

**DENH 3018 - Dental Radiography**
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. Laboratory fee: $25.*
Semester Credit Hours: 3.0

**DENH 3019 - Oral Health Promotion/Disease Prevention**
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 four (4) lecture hours per week.*
Semester Credit Hours: 4.0

**DENH 3020 - Clinic I Seminar**
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.*
Semester Credit Hours: 2.0
Prerequisites: All fall DH I courses and concurrent with DENH 3021

**DENH 3021 - Clinic I**
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) clinical hours per week. *Lab fee: $30. Practicum fee: $10 per semester credit hour.*
Semester Credit Hours: 3.0
Prerequisites: all fall courses and concurrent with DENH 1045

**DENH 3022 - Dental Materials**
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. Laboratory fee: $25.*
Semester Credit Hours: 3.0

**DENH 3023 - Introduction to Clinical Theory**
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 as-
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.
Semester Credit Hours: 3.0
Prerequisites: concurrent with DENH 3006

DENH 3033 - Structures of the Head and Neck
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.
Semester Credit Hours: 2.0
Prerequisites: Preclinic (course should be taken in same semester as DENH 3021)

DENH 3034 - Periodontics
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.
Semester Credit Hours: 3.0

DENH 3035 - Pharmacotherapeutics
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. Laboratory fee: $10.
Semester Credit Hours: 4.0

DENH 3040 - Histology/Embryology
This course continues the study of the oral cavity from a historical 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.
Semester Credit Hours: 2.0

DENH 4007 - Clinical Administration Practicum
The purpose of this course is to present 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 clinical administration issues including outcomes assessment, quality assurance, and information technology. NOTE: The course instructor may waive the prerequisites course requirement based on an interview with the student. Practicum fee: $10.
Semester Credit Hours: 4.0

DENH 4011 - Current Issues in Dental Hygiene
This course provides students with an introduction to the various functional roles of the dental hygienist. Topics include self interest inventories; professional and educational qualifications for various career options; résumé/curriculum vitae development; interviewing strategies; opportunities to observe professionals in their career roles; and major issues facing the dental and dental hygiene professions, such as new treatment modalities, workforce issues, quality assurance, access to care for special patient populations, and the cost of health care.
Semester Credit Hours: 3.0

DENH 4012 - Oral Pathology
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 pathology per week.
Semester Credit Hours: 3.0
Prerequisites: DENH 3033

DENH 4015 - Clinic III
A continuation of DENH 4022 Clinic II, 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. Laboratory fee: $30. Practicum fee: $10 per semester credit hour.
Semester Credit Hours: 3.0
Prerequisites: DENH 4012, 4022, and 4014 and concurrent DENH 4020

DENH 4016 - Clinic III Seminar
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 three (3) lecture hours per week.
Semester Credit Hours: 2.0
DENH 4017 - Community Oral Health Practicum
This course is the continuation of the fall Community Oral Health Course 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. Practicum fee: $10.
Semester Credit Hours: 2.0
Prerequisites: DENH 4021

DENH 4018 - Introduction to Research
This course presents basic research principles to facilitate reading and reviewing professional and scientific literature, obtaining research information to support current oral health care treatment and preventive procedures, and providing accurate information to their patients. Topics include the role of the dental hygienist in research, basic research terminology, design and methods, sampling techniques, conducting literature reviews, understanding basic statistics, and applying this information to professional dental hygiene practice. Learners will also have the opportunity to develop team building and communication skills within the context of a team project utilizing face-to-face and virtual environments. Includes three (3) lecture hours per week.
Semester Credit Hours: 3.0

DENH 4019 - Practice Management
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.
Semester Credit Hours: 2.0

DENH 4020 - Clinic II Seminar
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 Preclinic 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 three (3) lecture hours per week.
Semester Credit Hours: 2.0

DENH 4021 - Community Oral Health
Community Oral Health is a two-semester course. It is the intent of the course to teach the important role of the dental hygienist in the community, and to describe the relationship of community oral health to public health. The course prepares the student to promote oral health and prevent oral disease in the community. The concepts of assessment, planning, implementation, and evaluation phases of community-based programs are taught. During the first semester, the student plans a community oral health education program that is implemented and evaluated during the second semester of this course. Cultural differences, socioeconomic factors, and barriers to health care are discussed in relation to developing preventive programs. Federal and state public health programs are discussed as well as current public health issues. Community oral health programs for vulnerable populations such as indigent, geriatric, and special-needs patients are included. Includes three (3) lecture hours per week.
Semester Credit Hours: 3.0

DENH 4022 - Clinic II
A continuation of DENH 3021 Clinic I, 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. Laboratory fee: $30. Practicum fee: $10 per semester credit hour.
Semester Credit Hours: 3.0
Prerequisites: DENH 3022, 3035, 3021, 3034, and concurrent with DENH 4020

DENH 4023 - Special Topics
Students will be given an opportunity to gain an in-depth understanding of selected topics through seminars, conferences, projects, or other appropriate learning methods.
Semester Credit Hours: 1.0–3.0

DENH 4024 - Concepts and Practice in Teaching
This course 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.
Semester Credit Hours: 3.0

DENH 4025 - Advanced Periodontics
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.

**Semester Credit Hours:** 3.0

**Prerequisites:** completion of first-year Dental Hygiene coursework

**DENH 4026 - Healthcare Ethics**

This interdisciplinary course will provide students with 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. Includes one (1) lecture hour per week.

**Semester Credit Hours:** 1.0

**DENH 4091 - Independent Study**

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.

**Semester Credit Hours:** 1.0–3.0

**DENH 4103 - Health Promotion**

This is a theory-based course in which oral health will be viewed holistically. Topics will include the evolving profession of dental hygiene, paradigm shifts in dental hygiene, concepts of health and wellness, behavioral foundations for the dental hygiene process, cultural diversity, approaches to health care delivery, and health needs assessment.

**Semester Credit Hours:** 3.0

**DENH 4415 - Advanced Public Health Practicum**

This course is a continuation of the Public Health Practicum and will provide 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.

**Semester Credit Hours:** 4.0

**DENH 5003 - Current Issues in Dental Hygiene**

This course provides students with an introduction to the various functional roles of the dental hygienist. Topics include self interest inventories; professional and educational qualifications for various career options; résumé/curriculum vitae development; interviewing strategies; opportunities to observe professionals in their career roles; and major issues facing the dental and hygiene professions, such as new treatment modalities, workforce issues, quality assurance, access to care for special patient populations, and the cost of health care.

**Semester Credit Hours:** 3.0

**DENH 5007 - Clinical Administration Practicum**

The purpose of this course is to present 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. Practicum fee: $10.

**Semester Credit Hours:** 4.0

**DENH 5010 - Teaching Internship**

This internship will provide graduate students with the opportunity to teach 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 faculty.

**Practicum fee:** $10.

**Semester Credit Hours:** 3.0

**DENH 5015 - Public Health Practicum**

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. Practicum fee: $10.

**Semester Credit Hours:** 4.0

**DENH 5017 - Clinical Teaching Practicum**

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.

**Practicum fee:** $10.

**Semester Credit Hours:** 4.0

**DENH 5022 - Research Apprenticeship**

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.

**Semester Credit Hours:** 3.0

**DENH 5024 - Professional Communication**

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 are 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.

**Semester Credit Hours:** 3.0

**DENH 5026 - Research Principles and Applications**

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.

**Semester Credit Hours:** 3.0
DENH 5036 - Health Promotion
This course is a theory-based course in which oral health will be viewed holistically. Topics will include the evolving profession of dental hygiene, paradigm shifts in dental hygiene, concepts of health and wellness, behavioral foundations for the dental hygiene process, cultural diversity, approaches to health care delivery, and health needs assessment.
Semester Credit Hours: 3.0

DENH 5050 - Educational Principles and Application
This course provides foundational information in educational concepts, principles, methodology, and evaluation. Through this course the student will have the opportunity to gain an understanding in adult learning theories and motivation, develop a personal philosophy of teaching, curriculum and syllabus design, develop instructional goals and objectives, and design and learn the fundamental skills in providing effective written and oral feedback. Students will have the opportunity to learn how to develop and implement teaching methodologies in cognitive, psychomotor, and affective domains.
Semester Credit Hours: 3.0

DENH 5091 - Special Topics in Dental Hygiene
Students will be given an opportunity to gain an in-depth understanding of selected topics through seminars, conferences, projects, or other appropriate learning methods.
Semester Credit Hours: 1.0–9.0

DENH 5093 - Organizational Leadership
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 academic leadership and administration. The course will provide general information relating to organizational theory and more specific information about how educational organizations are designed and managed within different institutional settings: community colleges, private and public colleges, and universities. Additional topics will include external and internal factors affecting education, administrative roles, leadership and management styles, program planning and implementation, budget and personnel management, faculty and staff development, outcomes assessment, accreditation, and other topics related to student interests.
Semester Credit Hours: 3.0

DENH 5924 - Biostatistics
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.
Semester Credit Hours: 3.0

DENH 5926 - Preclinical Teaching Practicum
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. Practicum fee: $10.
Semester Credit Hours: 4.0

DENH 6091 - Independent Study
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.
Semester Credit Hours: 1.0–3.0

DENH 6098 – Thesis
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.
Semester Credit Hours: Variable
Prerequisites: Admission to candidacy for the M.S. degree

INTD 6002 - Ethics in Research
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.
Semester Credit Hours: 0.5
Dental Laboratory Sciences

- Bachelor of Science in Dental Laboratory Sciences Program
- Application and Admission
- General Policies and Information
- Program Curricula
- Course Descriptions

Dental Laboratory Sciences is the study and practice of fabricating prosthetic devices used in the treatment and rehabilitation of orally challenged patients. The dental technologist is an integral member of the professional dental team who functions in concert with the dentist to fabricate prosthetic devices used to rehabilitate oral malfunctions.

Dental technologists blend highly developed artistic skills with an extensive knowledge of science, dental materials, and dental anatomy to create prostheses unique to the individual patient’s dental/medical needs. The dental technologist works independently in a laboratory environment, using sophisticated equipment, processing systems, and such materials as gold, porcelain, and acrylics to produce oral appliances that are compliant with the exacting details of the dentist’s prescription and the impressions of the patient’s teeth. Dental technologists fabricate implants, gold crowns, porcelain bridges, removable partial dentures, complete dentures, orthodontic devices, and other appliances. The Department of Dental Laboratory Sciences offers advanced certificate and baccalaureate degree programs to meet the needs of dental professionals.

Advanced Certificate in Dental Laboratory Sciences

The Advanced Certificate in Dental Laboratory Sciences program is designed to update and/or maintain the proficiency of the competent dental technician to a cutting-edge level. It also offers individuals with science, math, engineering, and computer science background the opportunity to focus their knowledge and skills on dental applications. The program offers advanced training in dental laboratory procedures, with equal focus on the dental team concept. Featured is a unique opportunity to participate in clinical observations and lectures with dentists who are associated with the Graduate Prosthodontics Advanced Education Program in Prosthetics. The program provides non-degree seeking students an opportunity to acquire or enhance their skills and knowledge in one of three tracks: (1) Theory and Practice, (2) Laboratory Operations, and (3) Advanced Technology Applications. Each track consists of 20 semester credit hours of prescribed upper-division coursework offered at the Health Science Center.

Bachelor of Science in Dental Laboratory Sciences Program

The Bachelor of Science in Dental Laboratory Sciences degree program is an integrated program that combines general education, basic sciences, laboratory management operations, technical production, and dental sciences and technology. Depending on their background, interests, and career goals, students have a choice of three tracks in completing the degree program. These tracks are (1) Theory and Practice, (2) Laboratory Operations, and (3) Advanced Technology Applications. The program requires a minimum of 120 semester credit hours for completion, including 90 semester credit hours of Texas Core Curriculum and program prerequisites, and 30 semester credit hours of coursework in dental laboratory sciences at the HSC. The curriculum is presented in a flexible format that is supportive of both the traditional on-campus student and the off-campus working technician requiring a distance education format.

The Theory and Practice Track addresses state of the art technologies in the dental industry. The role of the dental technician as a member of the dental health team is changing. Recent technological advances in CAD/CAM (computer-aided design and computer-aided manufacturing) are dictating major changes in the clinical and laboratory phases of dental prosthetics. Dentists have become more dependent on the dental laboratory for advice concerning patient treatment planning. In addition to changes in science and technology, dentists and laboratories are placing a great deal more emphasis on business management.

The Laboratory Operations Track blends laboratory production with sound business management principles. This track reinforces the student’s understanding and knowledge of laboratory business operations as practiced in the most successful dental laboratories. Specifically, it challenges the student’s abilities in analytical reasoning and problem solving in the extremely competitive dental business environment. Courses include workshops, guest lectures, field trips, individual visits, and evaluations of management strategies practiced by various types of dental clinic and laboratory operations.

The Advanced Technology Applications Track focuses on the science and technology of dentistry. Recent innovations in clinical and laboratory dentistry involve the application CAD-CAM, laser, digital imaging, robotic, and computer technology and science. Emerging needs in the clinic and laboratory require scientists and technologists with backgrounds that can be applied to these innovations.

The Pre-Dental Track concentrates on knowledge, skills, and attitudes necessary to better prepare students for the dental school application process, enhances their likelihood of success once admitted, and provides them with a better perspective of interaction between the clinic and the laboratory. The curriculum focuses on areas of dental science including dental anatomy, dental materials, and dental research. Students are
exposed to the opportunity to fabricate and evaluate dental prostheses, an extremely important asset for the dental student and even more important for the practicing dentist. Students will conduct a research project that culminates in a presentation and submission for publication. Coursework, extracurricular experiences, and preparatory skills are developed to enhance the special areas of effective clinical/laboratory communication, interview techniques, case studies, basic research methods, and professional development activities. This Pre-Dental Track addresses these and other qualifications designed to make students more competitive when entering the dental school application process. The university is a health science center environment. Although the pre-dental track is not a part of the dental school, students have the opportunity to interact with students from the Dental School, School of Medicine, School of Nursing, Graduate School of Biomedical Sciences, and School of Health Professions. Students enjoy opportunities to serve on any/all student-related committees and participate in intramural activities.

Application and Admission

Application for admission to the Bachelor of Science in Dental Laboratory Sciences and Advanced Certificate in Dental Laboratory Sciences programs may be completed at https://www.applytexas.org/adappc/commonapp.WBX. Detailed information about application and admission is available from the Registrar at (210) 567-2660 and online at http://studentservices.uthscsa.edu/prospects_apply_ah.aspx, or from the Health Professions Welcome Center. Completed application, application fee, official transcripts, and supporting documents must be submitted to the Registrar by June 1 for fall semester admission, and November 15 for spring admission.

Admission Factors

In addition to the admission requirements described below, the following factors are considered for selecting students for the Bachelor of Science in Dental Laboratory Sciences program:

- Bilingual ability
- Race/ethnicity
- Hometown or county of residence that has been designated an underserved and/or dental professions shortage area, especially
- South Texas
- Socio-economic history (educationally and/or economically disadvantaged)
- Public/community service or “volunteer” related activities
- Intention to serve a disadvantaged socioeconomic area
- Success in overcoming adverse life conditions/experiences
- Communication skills
- Future goals
- Residential status: Texas residents or permanent Texas resident aliens are given preference
- Preparation to enter other dental professions

Admission Requirements

Advanced Certificate – Theory and Practice Track and Laboratory Operations Track

Admission requirements for the Advanced Certificate Theory and Practice Track and Laboratory Operations Track include:

- Background in dental laboratory technology – This requirement may be met by the completion of a two-year dental laboratory technology program from a recognized institution, or documented credentials from a recognized licensing/certifying organization, or completion of knowledge/skills examinations administered by the Department of Dental Laboratory Sciences.
- Completion of college-level courses in English composition, algebra, and introduction to business or business management from a regionally accredited college or university with grades of C or better

Advanced Certificate – Advanced Technology Applications Track

Admission requirements for the Advanced Certificate Advanced Technology Applications Track include:

- Background in basic sciences, mathematics, engineering, or computer science – This requirement may be met by successful completion of 30 semester credit hours from among the disciplines listed above.
- Completion of college-level courses in English composition, algebra, and introduction to business or business management from a regionally-accredited college or university with grades of C or better

Bachelor of Science – Theory and Practice Track and Laboratory Operations Track

Admission requirements for the Bachelor of Science Theory and Practice Track and Laboratory Operations Track include:

- Completion of the Texas Core Curriculum with a grade of C or better (42 semester credit hours) (detailed information about the Texas Core Curriculum is provided in the introductory section of this Catalog)
- Completion of BUSI 1302 Business Principles, or equivalent, with a grade of C or better (3 semester credit hours)
- Background in dental laboratory technology (see detail below for further information about this requirement)

Background in Dental Laboratory Technology – This requirement may be met by the completion of at least 45 semester credit hours of coursework in dental laboratory technology with grades of C or better at a nationally-accredited, two-year certificate or associate degree program in dental laboratory technology. Academic credits earned in such a program may be transferred to satisfy requirements of the Bachelor of Science in Dental Laboratory Sciences. The curriculum must cover the professional areas of:

- Dental sciences, i.e., tooth morphology, dental materials, oral anatomy, and occlusion

^TOP / SHP Programs
• Complete denture prosthodontics
• Fixed restorative prosthodontics (crown & bridge and ceramics)
• Removable partial denture prosthodontics
• Blood-borne infectious diseases
• Knowledge of the dental laboratory profession
• Orthodontic appliances
• Ethics and jurisprudence
• Dental laboratory techniques and practices
• Practical dental laboratory experience

If admitted to the Bachelor of Science program, students who have not earned 45 semester credit hours of dental laboratory technology prior to matriculating must earn the required number of credit hours by completing additional courses offered by the Department of Dental Laboratory Sciences.

Bachelor of Science – Advanced Technology Applications Track

Admission requirements for the Bachelor of Advanced Technology Applications Track include:

• Completion of the Texas Core Curriculum with a grade of C or better (42 semester credit hours) (detailed information about the Texas Core Curriculum is provided in the introductory section of this Catalog)
• Completion of at least 30 semester credit hours in basic sciences, mathematics, engineering, or computer science with grades of C or better from a regionally-accredited college or university; these courses are in addition to Texas Core Curriculum requirements
• Completion of college-level courses in English composition, algebra, and statistics from a regionally-accredited college or university with grades of C or better

^TOP / SHP Programs

General Policies and Information

Advancement, Probation, and Dismissal

The faculty review a student’s rate of progress toward the completion of the program. Students may be suspended, dismissed, or refused re-admission at any time if circumstances of an ethical, moral, social, legal, health, psychomotor skills development, or academic nature are considered to justify such action (see procedures and regulations governing “Student Conduct and Discipline” in this Catalog).

Performance Review: The faculty review a student’s performance at the middle and end of each term. At midterm the faculty determine whether the student is progressing satisfactorily or whether a warning letter from the department chair is needed. Warning letters specify each course in which the student is performing unsatisfactorily and require that the student meet with the course director and academic advisor to assist in remediation strategies. Students are responsible for arranging faculty counseling and assistance in remedying academic deficiencies. Failure to meet with the course director and academic advisor may be grounds for dismissal.

Promotion Recommendations: At the end of a semester, the faculty determine each student’s promotion status. In making these determinations, the faculty evaluate several aspects of the student’s performance: (1) course grades, (2) attendance record, (3) professional behavior, and (4) psychomotor skills development. The faculty also may assess extenuating circumstances that might have affected the student’s progress on an individual basis. A student performing at an unsatisfactory level will receive written notification of her/his status from the department chair. The faculty may recommend one of the following:

Unconditional Advancement – A student must:
• achieve a minimum grade point average of 2.0 each semester;
• successfully complete all prescribed courses and requirements;
• earn a satisfactory grade in each course taken (minimum grade of C, S, or Pass).

In addition, the faculty will consider all areas listed above under Promotion Recommendations.

Probationary Advancement – A student may be considered for advancement while on probation if the student:
• withdraws from a prescribed course with the approval of the department chair, but has met all other conditions for Unconditional Advancement (see above);
• receives an unsatisfactory grade in any course;
• receives a grade of I (Incomplete);
• earns a semester grade point average below 2.0.

A student who receives an unsatisfactory grade (D, F, U, or Fail) in any course may be required to repeat all or part of the academic year or may be allowed to remediate the areas of deficiency. When repeating any portion of the academic year, the student must earn grades of at least C, S, or Pass in each course to remain in the program. Remediation of a course in which a grade lower than C, S, or Pass was earned may be considered by the CAHS if: (1) such action is recommended by the course director for the course in question, (2) the course is not required for advancement to the next semester or year, or (3) remediation could be completed prior to the beginning of the next semester or year.

Methods for remediation are determined by the faculty in consultation with the course director and specified in writing to the student. The faculty will also specify a time frame for completion of the remediation.

A student who withdraws from a course with the permission of the department chair or who receives an I in any course may advance on probation to the next semester if she/he has maintained a grade point average of at least 2.0. The student will be required to finish incomplete work or enroll in courses that were dropped and may be required to meet special stipulations or conditions determined by the faculty. A student placed on probation will remain on probation until all deficiencies are corrected.

Dismissal – A student is subject to dismissal from the program if the student:
It is the responsibility of the student to arrange with the instructor to make up missed work.

**Auditing Courses**

Students who audit any course are expected to be present at all scheduled lectures, class sessions, or laboratories. Audit students must adhere to the same course attendance policy as regularly enrolled students and may be required to take examinations or evaluations in didactic courses. Students auditing a course with laboratory or psychomotor skill components are required to demonstrate competency in the psychomotor aspects and professionalism of the course. The symbol AU is entered on the student’s official transcript upon completion of the course, provided that attendance and other requirements are met.

**Credit by Examination**

Credit by examination is offered for many courses in the program. Credit by examination is validation of the student’s competencies, and credit may be awarded based on achievement of objectives demonstrated by passing the challenge examination. The student is then allowed to register for courses appropriate for the demonstrated level of achievement.

Students who choose to challenge courses may obtain course syllabi from the course director. Students attempting credit by examination will not receive tutoring by faculty in preparation for a challenge examination.

Students may not take an examination for credit if they have previously completed the course(s) with either a passing or failing grade or they have withdrawn from the course(s). Credit is granted for a grade of C or higher on a challenge examination. Credit earned by examination will be recorded as the actual letter grade achieved and will be used in computing the cumulative grade point average.

Students wishing to challenge a course by examination must submit a written request to the Committee on Allied Health Studies a minimum of 6 weeks prior to the beginning of the semester in which the course is offered. Once approval is granted, the student may schedule the examination with the Department Chair.

**Professional Attire**

Students are expected to dress in a professional manner. The mandatory attire for students is a traditional V-neck short sleeve, cotton-polyester blend, scrub-style uniform consisting of a scrub top and pant. Closed-toe shoes and university-issued name tags also are mandatory. Students have the option of purchasing a white, short sleeved, lab jacket to be worn with or without the scrubs. The Department’s official guidelines pertaining to student dress is issued to all students during Registration. Any student not complying with the dress code may not be allowed to attend class.
Professional Ethics

The dental laboratory technician must maintain the highest level of professionalism in conduct, aims, and qualities that characterize or mark Dental Laboratory Technology.

- A technician must always put the welfare of the patient above all other considerations.
- Complete patient confidentiality is practiced at all times.
- A technician must display the knowledge of, and practice the theories of, laboratory safety consciousness and infection control.
- A technician must have integrity in all professional activities.
- A technician must embrace the values of academic excellence by continually participating in continuing dental education courses.
- A technician must contribute to the betterment of the dental community.

Students are expected to learn and practice this code of ethics throughout their academic experience as well as throughout their professional careers.

Program Costs

Total program costs for tuition and fees, parking permits, health and liability insurance, etc., for the Advanced Certificate tracks are approximately $5100. In addition, costs for other expenses such as textbooks, course manuals, equipment lease, uniforms or scrubs, and supplies are approximately $2000.

Total program costs for tuition and fees, parking permits, health and liability insurance, etc., for the Bachelor of Science degree program are approximately $8000. In addition, costs for other expenses such as textbooks, course manuals, equipment lease, uniforms or scrubs, and supplies are approximately $2600.

Non-resident students are subject to additional costs, which may be found under "Financial Information" in this Catalog. Non-resident students who live outside of Texas while taking a distance education course are charged an Out-of-State Instructional Fee of $165 per semester credit hour instead of regular tuition.

Remediation

A student who earns a D or F in any Dental Laboratory Technology course but who is otherwise in good standing, with the approval of the Committee on Allied Health Studies (CAHS), may be allowed one opportunity to repeat the course under conditions imposed by the CAHS. A maximum grade of C is assigned for successful completion of courses that are repeated. The opportunity to repeat a course depends on space availability and cannot be guaranteed. If, in the judgment of the CAHS, it is impractical for the student to attempt to remediate deficiencies by repeating courses, the student may be required to repeat the academic year in part or in entirety.

Program Curricula

- Advanced Certificate - Theory and Practice Track
- Advanced Certificate - Laboratory Operations Track
- Advanced Certificate - Advanced Technology Applications Track
- Bachelor of Science in Dental Laboratory Sciences
- Course Descriptions

Advanced Certificate – Theory and Practice Track

The Advanced Certificate Theory and Practice Track consists of 20 semester credit hours, including the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DELT 3001</td>
<td>Introduction to Dental Laboratory Operations</td>
<td>3.0</td>
</tr>
<tr>
<td>DELT 3005</td>
<td>Advanced Laboratory Procedures I</td>
<td>4.0</td>
</tr>
<tr>
<td>DELT 3015</td>
<td>Advanced Laboratory Procedures II</td>
<td>4.0</td>
</tr>
<tr>
<td>DELT 4007</td>
<td>QA/QC in the Dental Laboratory</td>
<td>3.0</td>
</tr>
<tr>
<td>DELT 4013</td>
<td>Compliance Issues in the Dental Laboratory Profession</td>
<td>3.0</td>
</tr>
<tr>
<td>DELT 4090</td>
<td>Special Topics or DELT 4091 - Independent Study</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20.0</td>
</tr>
</tbody>
</table>

Advanced Certificate – Laboratory Operations Track

The Advanced Certificate Laboratory Operations Track consists of 20 semester credit hours, including the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DELT 3001</td>
<td>Introduction to Dental Laboratory Operations</td>
<td>3.0</td>
</tr>
<tr>
<td>DELT 3013</td>
<td>Development of Education and Training Programs</td>
<td>3.0</td>
</tr>
<tr>
<td>DELT 4007</td>
<td>QA/QC in the Dental Laboratory</td>
<td>3.0</td>
</tr>
<tr>
<td>DELT 4013</td>
<td>Compliance Issues in the Dental Laboratory Profession</td>
<td>3.0</td>
</tr>
<tr>
<td>DELT 4090</td>
<td>Special Topics</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20.0</td>
</tr>
</tbody>
</table>

Advanced Certificate – Advanced Technology Applications Track

The Advanced Certificate – Advanced Technology Applications Track consists of 20 semester credit hours, including the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DELT 3013</td>
<td>Development of Education and Training Programs</td>
<td>3.0</td>
</tr>
</tbody>
</table>
Bachelor of Science in Dental Laboratory Sciences

The Bachelor of Science in Dental Laboratory Sciences consists of 120 semester credit hours including Texas Core Curriculum and prerequisites (see “Admission Requirements” above) and at least 30 semester credit hours of Dental Laboratory Sciences coursework. The curricula for the Theory and Practice Track and the Laboratory Operations Track consist of 18 semester credit hours of required courses and at least 12 semester credit hours of electives (total of 30). The curriculum for the Advanced Technology Applications Track consists of 18 semester credit hours of required courses and at least 30 semester credit hours of electives (total of 48).

### Junior Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Semester</td>
<td></td>
</tr>
<tr>
<td><strong>Required Courses</strong></td>
<td></td>
</tr>
<tr>
<td>DELT 3001 - Introduction to Dental Laboratory Operations</td>
<td>3.0</td>
</tr>
<tr>
<td>DELT 3045 - Introduction to Dental Research</td>
<td>3.0</td>
</tr>
<tr>
<td>DELT 4013 - Compliance Issues in the Dental Laboratory Profession</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Elective Courses</strong></td>
<td></td>
</tr>
<tr>
<td>DELT 3005 - Advanced Laboratory Procedures I</td>
<td>4.0</td>
</tr>
<tr>
<td>DELT 3043 - Current Issues in the Dental Laboratory Profession</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Semester Total (Required Courses)</strong></td>
<td>9.0</td>
</tr>
<tr>
<td>Spring Semester</td>
<td></td>
</tr>
<tr>
<td><strong>Required Courses</strong></td>
<td></td>
</tr>
<tr>
<td>DELT 3041 - Innovations in Dental Technology</td>
<td>3.0</td>
</tr>
<tr>
<td>DELT 3047 - Case Presentation</td>
<td>3.0</td>
</tr>
<tr>
<td>DELT 4007 - QA/QC in the Dental Laboratory</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Elective Courses</strong></td>
<td></td>
</tr>
<tr>
<td>DELT 3015 - Advanced Laboratory Procedures II</td>
<td>4.0</td>
</tr>
<tr>
<td>DELT 3043 - Current Issues in the Dental Laboratory Profession</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Semester Total (Required Courses)</strong></td>
<td>9.0</td>
</tr>
<tr>
<td>Summer Semester</td>
<td></td>
</tr>
<tr>
<td><strong>Elective Courses</strong></td>
<td></td>
</tr>
<tr>
<td>DELT 3013 - Development of Education and Training Programs</td>
<td>3.0</td>
</tr>
<tr>
<td>DELT 3035 - Dental Laboratory Operation Strategies</td>
<td>3.0</td>
</tr>
</tbody>
</table>

### Senior Year

<table>
<thead>
<tr>
<th>Semester</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Semester</td>
<td></td>
</tr>
<tr>
<td><strong>Elective Courses</strong></td>
<td></td>
</tr>
<tr>
<td>DELT 3037 - Internship in Education and Training</td>
<td>8.0</td>
</tr>
<tr>
<td>DELT 4021 - Internship in Dental Laboratory Production</td>
<td>8.0</td>
</tr>
<tr>
<td>DELT 4022 - Internship in Dental Laboratory Operations</td>
<td>8.0</td>
</tr>
<tr>
<td>DELT 4090 - Special Topics</td>
<td>1.0-4.0</td>
</tr>
<tr>
<td>DELT 4091 - Independent Study</td>
<td>1.0-4.0</td>
</tr>
<tr>
<td>Spring Semester</td>
<td></td>
</tr>
<tr>
<td><strong>Elective Courses</strong></td>
<td></td>
</tr>
<tr>
<td>DELT 4090 - Special Topics</td>
<td>1.0-8.0</td>
</tr>
<tr>
<td>DELT 4091 - Independent Study</td>
<td>1.0-8.0</td>
</tr>
</tbody>
</table>

### Program Totals:

| Program Total (Theory and Practice, and Laboratory Operations Tracks) | 30.0 |
| Program Total (Advanced Technology Applications Track) | 48.0 |

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### Dental Laboratory Sciences Course Descriptions

**DELT 3001 - Introduction to Dental Laboratory Operations**

This course introduces students to key theoretical and practical laboratory issues such as management principles, functional activities, and problems related to the operations of a dental laboratory. Class projects focus on planning and organization issues.

*Semester Credit Hours: 3.0*

**DELT 3005 - Advanced Laboratory Procedures I**

This course examines the theoretical foundations underpinning the production of prosthetic devices. Course content includes the study of composition, as well as properties of dental materials and how these materials interact with the environment in which they are used. *Laboratory fee: $4.*

*Semester Credit Hours: 4.0*

**DELT 3013 - Development of Education and Training Programs**

This course introduces students to the theoretical and practical aspects of developing educational and training programs. Course topics include analyzing training needs, designing instruction, developing instructional materials, evaluating instructional media, developing training documentation, and
DELTA 3015 - Advanced Laboratory Procedures II
This course is a continuation of Advanced Laboratory Procedures I. Students are provided an opportunity to expand their knowledge, understanding, and skills in the fabrication of advanced laboratory prostheses. Laboratory fee: $4.
Semester Credit Hours: 3.0

DELTA 3032 - Dental Lab Production Systems
This course will focus on developing fabrication and production systems for the small, medium, and large dental laboratories. Course content will address areas such as facilities layout, cost-reduction strategies, production flow, and problems associated with the economical production of high-quality dental appliances. Emphasis will be placed on ways to blend high quality with high production through the efficient use of technical resources. This Web-based course is offered by distance education technology. Texas residents and non-residents living in Texas pay applicable tuition and fees of the Health Science Center. Non-Texas residents living outside of Texas pay the Out-of-State Instructional Fee.
Semester Credit Hours: 3.0

DELTA 3035 - Dental Laboratory Operation Strategies
This course examines contemporary strategies for the blending of administrative and supervisory theories related to the art and sciences of dental technology. Included is a series of lectures by faculty and laboratory owners, as well as field visits offering in-depth insight into dental laboratory operations. The student is required to conduct a written evaluation of a dental laboratory practice. An additional assignment includes the model design and presentation of a full-service dental laboratory.
Semester Credit Hours: 3.0

DELTA 3037 - Internship in Education and Training
This course provides the student with the opportunity to observe work in dental laboratory education and training settings. The institution is required to allow the student to shadow faculty and observe their daily job functions. The site is required to allow the student to present lecture and laboratory lessons based on the institution's curricula. The site is required to allow the student to complete a pre-approved project.
Semester Credit Hours: 8.0

DELTA 3039 - Dental Laboratory Professional Development
This course exposes the student to issues related to developing professional, productive members of the dental health team. Emphasis is placed on supervisory and leadership training in areas such as work ethics, technical skills, and professionalism. Students are required to conduct on-site visits to dental clinics and dental laboratories to observe the development and utilization of dental staff supervision practices.
Semester Credit Hours: 3.0

DELTA 3041 - Innovations in Dental Technology
This course presents the most recent innovations in dental laboratory technology, including innovations in areas of operation and production.
Semester Credit Hours: 3.0

DELTA 3043 - Current Issues in the Dental Laboratory Profession
This course presents an overview of current issues facing the dental laboratory profession and dentistry in general. These issues are examined in the context of their cause, effect, and possible solutions.
Semester Credit Hours: 3.0

DELTA 3045 - Introduction to Dental Research
This course direction is to equip the dental technician with knowledge and understanding of research concepts that impact the operations of a dental laboratory. These concepts include the understanding scientific literature and basic statistics. Students have the opportunity to utilize these concepts in evaluating laboratory materials, systems, and procedures as well as manufacturer's claims and sales jargon.
Semester Credit Hours: 3.0

DELTA 3047 - Case Presentation
This course direction is to prepare the student in presenting the laboratory portion of a patient case study. The student is required to document, explain, and defend the laboratory options selected for the case. The student is given the opportunity to utilize multimedia presentation methods.
Semester Credit Hours: 3.0

DELTA 4005 - Advanced Laboratory Procedures III
This course is the last in the series of Advanced Laboratory Procedures. Primary goals include developing problem-solving skills and enhancing technical proficiency. Laboratory projects reflect the difficulty and time restraints encountered in commercial laboratory settings. Laboratory fee: $4.
Semester Credit Hours: 3.0

DELTA 4007 - QA/QC in the Dental Laboratory
The concept of Total Quality Management is the major focus of this course as it applies to laboratory operations. Special emphasis is placed on the historical, competitive, and economic aspects of TQM in the cycle of dental services.
Semester Credit Hours: 3.0

DELTA 4013 - Compliance Issues in the Dental Laboratory Profession
This course presents issues related to laws, regulations, and ethics that impact the dental laboratory profession. Emphasis is placed on exposure control, hazardous communication, and protection of personal information.
Semester Credit Hours: 3.0

DELTA 4015 - Laboratory Skills IV
This is the last in the series of laboratory skills courses. It is designed to help students maintain their technical proficiency in the production of prosthetic devices. Students are required to explain comprehensive case management in an oral presentation of the case and treatment alternatives. Major emphasis will be placed on establishing and maintaining dental team relationships. Laboratory fee: $4.
Semester Credit Hours: 4.0
Prerequisites: DELTA 3005, 3015, and 4005 DELTA 4021 - Internship in Dental Laboratory Production
DELT 4021 - Internship in Dental Laboratory Production
This course provides the student the opportunity to observe/work in dental laboratory production settings. The laboratory is required to provide the student with hands-on experience in the various departments involved in the production of dental prostheses. The laboratory is required to allow the student to shadow supervisors and observe their daily job functions.
Semester Credit Hours: 8.0

DELT 4022 - Internship in Dental Laboratory Operations
This course provides the student the opportunity to observe/work in dental laboratory operations settings. The laboratory is required to allow the student to shadow managers and observe their daily job functions. The laboratory is required to allow the student to complete a pre-approved assignment based on the lab's operations.
Semester Credit Hours: 8.0

DELT 4090 - Special Topics
This 1-to-8-hour credit course is arranged through department faculty. The course topics vary according to student interest. Semester hours are variable and are assessed per topic. This course is offered in the senior year and may be repeated for credit.
Semester Credit Hours: 1.0–8.0

DELT 4091 - Independent Study
This 1-to-8-hour credit course is arranged through department faculty. The student is required to conduct an independent research and writing project under the direction of faculty. Semester hours are variable and are assessed per topic. This course is offered in the senior year and may be repeated for credit.
Semester Credit Hours: 1.0–8.0

DELT 4914 - Dental Laboratory Operation and Production Seminar
This course consists of student participation in problem-oriented discussion sessions designed around simulated and/or actual case experiences. Decision-making, critical thinking, and communication-skills exercises are integrated into these shared-experiences sessions.
Semester Credit Hours: 3.0
Dietetics and Nutrition

The Profession

Dietetics professionals are instrumental in interpreting the science of food and nutrition to promote the well-being of individuals and communities. Dietitians assess the nutritional status of individuals using anthropometric measurements, dietary histories, clinical observations, and biochemical lab data. In the community, dietitians are instrumental in conducting needs assessment to promote health and prevent chronic diseases. Dietitians develop and implement intervention programs or medical nutrition therapy based on the needs of individuals and the community. Dietitians offer nutrition education and counseling in a variety of settings. They are also involved in food product development, research, and foodservice production.

Dietitians serve diverse groups and individuals of all ages. They are employed by healthcare facilities such as hospitals, long-term care facilities, and clinics; sports, wellness, and fitness centers; food-service operations, industry, pharmaceutical and food companies; community programs; and government agencies, private practice, and professional health organizations.

Coordinated Program in Dietetics

The overall mission of the Coordinated Program in Dietetics (CPD) is to graduate students with food and nutrition knowledge, skills and competencies to positively impact the nutritional status and health of individuals and the community. Knowledge, skills and competencies are gained through a solid academic education program, practicum, and service-learning experiences.

The CPD offers a rigorous didactic curriculum that is integrated with a progression of supervised experiences aimed at preparing entry-level practitioners with a concentration in Health Promotion/Disease Prevention and Treatment. The program prepares students for careers in which they can improve the well-being of individuals and communities by making a positive impact in their food and nutrition choices, eating behaviors, and lifestyles, particularly in the South Texas region.

The CPD is designed to grant a dual degree consisting of a Bachelor of Science in Nutrition and Dietetics and/or a Master of Dietetics Studies (MoDS) for students without a previous degree or as transfer student from other majors. The professional phase focuses on the acquisition of scientific and theoretical foundation knowledge requirements and the achievement of competencies through supervised experiences at various sites throughout South Texas. After the successful completion of 120 semester credit hours, which includes a didactic portion of the curriculum and introductory supervised experiences, a student receives a Bachelor of Science with a Major in Nutrition and Dietetics, which is awarded at the conclusion of the CPD. The preparatory practicum includes 45 contact hours in Applied Food Sciences and 90 contact hours in Food Production Practicum. The intermediate practicum includes 45 contact hours in Community Service and 45 contact hours in Nutritional Care Process.

At the Master’s degree level, students enroll in 14 semester credit hours of didactic course work. The advanced Dietetics Practicum (16 credit hours) consists of six weeks of foodservice management, six weeks in general dietetics practice in community, six weeks of general dietetics practice in clinical, ten weeks in health promotion/disease prevention and treatment, one week of a selected professional development experience and two weeks of staff relief. All together the CPD provides approximately 1,217 contact hours in supervised practice.

After the successful completion of thirty credit hours at the Master’s degree level, students will earn a Master of Dietetic Studies degree and a verification statement of completion of the Coordinated Program in Dietetics. At this point, students may apply to take the Commission on Dietetics Registration national examination to become a Registered Dietitian (RD).

Students with a Bachelor of Science degree who have fulfilled all Didactic Program in Dietetics (DPD) requirements from a CADE-accredited program may apply for the Advanced Standing option leading to a Master of Dietetics Studies (MoDS), which is equivalent to a dietetic internship. Students entering this option must have equivalent coursework to the bachelor’s degree program in Nutrition and Dietetics offered by the Health Science Center and a DPD verification statement from a CADE accredited program. Other courses may be required as recommended by the program director and admission committee.

Students with a BS in Nutrition (non-DPD) or other disciplines may also apply for the MoDS option. Academic transcripts will be evaluated on a case by case for all students transferring coursework or degrees to determine if prerequisites and equivalency for didactic or practicum coursework have been met. Students successfully completing any of the CPD options will receive a verification statement that will enable them to take the Commission on Dietetics Registration examination.
The CPD has received candidacy for accreditation from the Commission on Accreditation for Dietetics Education (CADE). For further information on accreditation contact:

CADE, American Dietetic Association
120 South Riverside Plaza, Suite 2000
Chicago, Illinois 60606-6995
Phone: (312) 899-0040, ext. 5400
Fax: (312) 899-4817
E-mail: cade@eatright.org
URL: http://www.eatright.org/cade

Application and Admission

Applications for admission to The University of Texas Health Science Center at San Antonio may be completed at https://www.applytexas.org/adappc/gen/c_start.WBX?slogon_msg=Y. Detailed information about application to the Coordinated Program in Dietetics and admission requirements is available from the Health Professions Welcome Center at (866) 802-6288 or (210) 567-8744 and http://studentservices.uthscsa.edu/prospects_ah_programs_dietetics.aspx. Application materials for the CPD, application fee, official transcripts, and supporting documents must be submitted to the Registrar by May 1 for fall admission. Applicants who are enrolled in college courses at the time of application should submit an official transcript upon completion of the courses. Conditional admission may be granted contingent on satisfactory completion of the courses in progress.

Admission Factors

The following factors are considered when selecting students for the CPD program:

- Academic performance (i.e., overall grade point average), prerequisite grade point average, consistency of academic performance, and coursework completed before application to the CPD program
- References
- Awards and honors
- Communication skills
- Future professional goals
- Race/ethnicity
- Bilingual ability
- Hometown or county of residence that has been designated a medically underserved and/or health professions shortage area, with particular emphasis on South Texas
- Public/community service in volunteer-related areas, employment history or experience in health care-related services

Admission Requirements

Admission to the Coordinated Program in Dietetics is on a competitive basis. A maximum of 24 full-time students can be admitted each year to the CPD, 12 at the San Antonio campus and 12 at the Regional Campus in Laredo. Only two positions are available for students with advanced standing who are only seeking a Master of Dietetics Studies. Application and admission requirements include:

- Completed application for admission to The University of Texas Health Science Center at San Antonio available at https://www.applytexas.org/adappc/gen/c_start.WBX?slogon_msg=Y
- Official transcripts from all institutions attended, fees, and two references (http://studentservices.uthscsa.edu/pdf/Viewbooks/DieteticsRefForm021109.pdf)
- Letter indicating career goals and interests
- Completion of 67 semester hours with a minimum cumulative grade point average of 2.75 (on a 4-point scale)
- All prerequisite courses must be passed with a C or better.
- Completion of all prerequisites by the spring semester prior to entering the program in the fall semester
- Foreign-educated students must submit official transcripts as well as a course-by-course evaluation by an approved credentialing organization, such as Foreign Credentials Service of America, 1910 Justin Lane, Austin, TX 78757-2411, USA, Tel: (512) 459-8428, FAX: (512) 459-4565, e-mail: fcsa@jump.net.
- Test of English as a Foreign Language (TOEFL) – International applicants only: minimum scores 560 (paper), 220 (computer), 68 (Internet)

Advanced Standing – Master of Dietetics Studies Option

The advanced standing option is for students with a Bachelor of Science degree who have fulfilled all Didactic Program in Dietetics (DPD) requirements from a CADE-accredited program and are only seeking a Master of Dietetics Studies (MoDS), which is equivalent to a dietetic internship. Students entering this option must have equivalent coursework to the BS Program in Nutrition and Dietetics offered by the Health Science Center and a DPD verification statement from a CADE-accredited program. Other courses may be required as recommended by the Program Director and admission committee.

Program Prerequisites

Applicants without a baccalaureate degree must complete the Texas core curriculum that consists of 42 semester credit hours. Some courses that satisfy core curriculum requirements may also satisfy program prerequisites. For further information see “UTHSCSA Core Curriculum” in this Catalog. All applicants must complete the program prerequisites below; some program prerequisites will satisfy core curriculum requirements.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry with laboratory</td>
<td>8.0</td>
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<tr>
<td>Organic Chemistry with laboratory</td>
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</tr>
<tr>
<td>Human Anatomy with laboratory</td>
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</tr>
<tr>
<td>Human Physiology with laboratory</td>
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</tr>
<tr>
<td>Microbiology with laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>Biochemistry with laboratory</td>
<td>4.0</td>
</tr>
</tbody>
</table>
General Policies and Information

Academic Advising

The program director and faculty serve as student advisors. Advisors have the role of assisting students to solve problems and/or find 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, program policies, study problems, time management, and progress in the supervised rotations, as well as the advisor's referral to other support systems in the university or community. The student may choose their advisor and may change advisors on a yearly basis, or at the discretion of the program director.

Advancement, Probation, and Dismissal

All decisions concerning a student’s status in the program are based on recommendations from the program faculty. Faculty meet regularly to review students’ performance and progress. Faculty may recommend: continuation in the program, academic probation, dismissal, repetition of the course when next offered, repetition of the semester/year, or other actions as deemed appropriate. Under no circumstances will a student on academic probation be awarded a degree.

Advancement

Continuation in the program is dependent on:

- Maintenance of a minimum cumulative grade point average of 3.0 (B) for all courses taken while enrolled in the program
- Satisfactory rate of progress toward the degree
- Satisfactory progress in meeting conditions imposed at the time of admission

Probation

- A student whose grade point average falls below 3.0 will be subject to academic probation and informed that continuation in the program is in jeopardy.
- 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.

Dismissal

A student may be dismissed from the program for any of the reasons below:

- Failure to maintain a 3.0 grade point average while on probation
- Receiving a grade of D or F in any semester
- A student who continues on probation may also be subject to dismissal.
- Unsatisfactory progress toward correcting deficiencies
- Violation of the provisions in the “Guide for Professional Conduct” (Health Professions Introductory Section)
- Violation of professional ethics

Appeal Procedures

Student appeals and grievances are handled through established policies and procedures described in the School of Health Professions section of this Catalog.

Attendance

Attendance at all scheduled classes, clinical experiences, and practicums is expected. Excused absences may be granted in such cases as illness or personal emergency. Verification of the reason for an absence may be required. It is the student’s responsibility to notify the faculty member if an absence occurs and to arrange for make-up work, if necessary. Excessive absences may be cause for reductions in course grades.

Background Checks

All students offered admission to programs at the Health Science Center must pass a background check. An offer of admission is not final until completion of the background check(s) with results deemed favorable. Students must pay costs for the background check. Information on how to order and pay for the background check is included in the offer of admission letter.

Professional Attire, Demeanor, and Conduct

Students must dress at all times in a manner consistent with a professional image while on campus and at practicum sites. Appropriate attire for practicums or other clinical/educational settings may vary, depending on local rules and expectations of the affiliations. It is the student’s responsibility to inquire about dress and demeanor expectations and to comply with them.

Student Conduct

Students are responsible for knowing and observing the university’s regulations governing Student Conduct and Discipline, described in this Catalog, and the Rules and Regulations of the Board of Regents of The University of Texas System.

Students in the CPD 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. Examples of professional behaviors are given under Guide for Professional Conduct in the School of Health Professions section of this Catalog.
Program Curricula

Dual Degree Curriculum: Bachelor of Science in Nutrition and Dietetics and/or Master of Dietetics Studies (MoDS)

<table>
<thead>
<tr>
<th>Bachelor’s Degree Requirements</th>
<th>Semester Credit Hours</th>
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<tbody>
<tr>
<td><strong>First Year</strong></td>
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<tr>
<td><strong>Fall Semester</strong></td>
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<tr>
<td>NTDT 3190 - Applied Food Science Practicum</td>
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<tr>
<td>NTDT 3201 - Introduction to Nutrition and Dietetics Careers</td>
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</tr>
<tr>
<td>NTDT 3210 - Medical Terminology</td>
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<tr>
<td>NTDT 3310 - Applied Food Science</td>
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<tr>
<td>NTDT 3410 - Advanced Human Nutrition</td>
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<tr>
<td>NTDT 3290 - Food Production Practicum</td>
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</tr>
<tr>
<td>NTDT 3320 - Nutrition and Health Assessment</td>
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<tr>
<td>NTDT 3330 - Nutrition Counseling and Education</td>
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<tr>
<td>NTDT 3340 - Nutrition in the Life Span</td>
<td>3.0</td>
</tr>
<tr>
<td>NTDT 3350 - Production and Foodservice System Management I</td>
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<tr>
<td><strong>Second Year</strong></td>
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<tr>
<td><strong>Fall Semester</strong></td>
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</tr>
<tr>
<td>NTDT 4190 - Community Service Practicum</td>
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<tr>
<td>NTDT 4210 - Special Topics in Nutrition and Dietetics</td>
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<tr>
<td>NTDT 4310 - Production and Food Service System Management II</td>
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<tr>
<td>NTDT 4320 - Medical Nutrition Therapy I</td>
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<td>NTDT 4330 - Community Nutrition</td>
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<td><strong>Spring Semester</strong></td>
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<tr>
<td>NTDT 4191 - Nutrition Care Process Practicum</td>
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<tr>
<td>NTDT 4340 - Nutrition in Disease Prevention and Health Promotion</td>
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<tr>
<td>NTDT 4350 - Medical Nutrition Therapy II</td>
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<tr>
<td>NTDT 4360 - Current Issues in Nutrition</td>
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<td><strong>Master’s Degree Requirements</strong></td>
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<td>NTDT 5110 - Seminar in Dietetics</td>
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<td>NTDT 5120 - Research Seminar</td>
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<td>NTDT 5320 - Nutrition Pathophysiology</td>
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<td><strong>Master’s Phase Total</strong></td>
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<tr>
<td><strong>Program Total</strong></td>
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</table>

Master of Dietetics Studies Curriculum

This option is for students with a Bachelor of Science degree who have fulfilled all Didactic Program in Dietetics (DPD) requirements from a CADE-accredited program and are seeking a Master of Dietetics Studies (MoDS) which is equivalent to a dietetic internship. Students entering this option must have equivalent coursework to the Bachelor of Science in Nutrition and Dietetics offered by the Health Science Center and a DPD verification statement from a CADE-accredited program. Other courses may be required as recommended by the program director and admissions committee.

<table>
<thead>
<tr>
<th>Master of Dietetics Studies Curriculum</th>
<th>Semester Credit Hours</th>
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</thead>
<tbody>
<tr>
<td><strong>First Year</strong></td>
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<tr>
<td><strong>Fall Semester</strong></td>
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<tr>
<td>NTDT 3190 - Applied Food Science Practicum</td>
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</tr>
<tr>
<td>NTDT 3310 - Applied Food Science</td>
<td>3.0</td>
</tr>
<tr>
<td>NTDT 4190 - Community Service Practicum</td>
<td>1.0</td>
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<tr>
<td>NTDT 4210 - Special Topics in Nutrition and Dietetics</td>
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<tr>
<td>Elective</td>
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<tr>
<td>NTDT 3290 - Food Production Practicum</td>
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<tr>
<td>NTDT 4191 - Nutrition Care Process Practicum</td>
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<tr>
<td>NTDT 4360 - Current Issues in Nutrition</td>
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<td>NTDT 5330 - Nutritional Supplements and Functional Foods</td>
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<tr>
<td>NTDT 5110 - Seminar in Dietetics</td>
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<td>NTDT 5320 - Nutrition Pathophysiology</td>
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<td>NTDT 5890 - Advanced Dietetics Practicum I</td>
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<td><strong>Spring Semester</strong></td>
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<tr>
<td>NTDT 5120 - Research Seminar</td>
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<td>NTDT 5340 - Integration of Metabolism</td>
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<td><strong>Semester Total</strong></td>
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<tr>
<td><strong>Program Total</strong></td>
<td>43.0</td>
</tr>
</tbody>
</table>
Dietetics and Nutrition Course Descriptions

NTDT 3190 - Applied Food Science Practicum
This course covers the application of concepts related to the chemical, physical, sensory, and nutritional properties of food in menu planning, food preparation, and recipe modification. Materials fee. Semester Credit Hours: 1.0 Prerequisites: must be taken concurrently with Applied Food Science or with permission of advisor

NTDT 3201 - Introduction to Nutrition and Dietetics Careers
This course is a general overview of nutrition and dietetics as a profession, including career opportunities, scope of practice, credentialing, code of ethics, and collaboration with other disciplines. Semester Credit Hours: 2.0

NTDT 3210 - Medical Terminology
This course is an introduction to medical terminology, abbreviations, pronunciation, word roots, prefixes and suffixes; and application of word parts in the understanding of medical terms. Semester Credit Hours: 2.0

NTDT 3290 - Food Production Practicum
This is a practicum related to the procurement, preparation, and delivery of food in large foodservice operations. Practicum fee. Semester Credit Hours: 2.0 Prerequisites: must be taken concurrently with Production and Foodservice System Management I or with permission of advisor

NTDT 3310 - Applied Food Science
This course includes concepts related to the chemical, physical, sensory, and nutritional properties of food in menu planning, food preparation, and recipe modification. Semester Credit Hours: 3.0 Prerequisites: Microbiology; must be taken concurrently with Applied Food Science Practicum

NTDT 3320 - Nutrition and Health Assessment
This course includes methods, tools, and interpretation of data in assessing the nutritional status of individuals including dietary, anthropometric, biochemical, and clinical assessment, as well as other measurements of health in individuals and the community. Semester Credit Hours: 3.0 Prerequisites: NTDT 2310 Introduction to Nutritional Sciences

NTDT 3330 - Nutrition Counseling and Education
This course includes theories of learning and behavior modification, models and techniques, communication skills, evaluation methods, and cultural competence in nutrition counseling and education; and application of concepts in facilitating behavioral change. Semester Credit Hours: 3.0 Prerequisites: NTDT 2310 Introduction to Nutritional Sciences

NTDT 3340 - Nutrition in the Life Span
This course covers nutritional needs during various stages of the lifecycle as influenced by physiologic, cultural, and environmental factors. Semester Credit Hours: 3.0 Prerequisites: Introduction to Nutritional Sciences and Physiology

NTDT 3350 - Production and Foodservice System Management I
This course covers the principles related to the menu planning, food sanitation and safety, procurement, production, marketing, and materials management in foodservice operations. Semester Credit Hours: 3.0 Prerequisites: Applied Food Science or equivalent; must be taken concurrently with Food Production Practicum

NTDT 3410 - Advanced Human Nutrition
This course is an advanced discussion of nutrient structure, function and interaction, metabolic pathways, and regulation and integration of metabolism. The course includes lecture and one additional hour per week of recitation. Materials fee. Semester Credit Hours: 4.0 Prerequisites: Biochemistry and Introduction to Nutritional Sciences or equivalent

NTDT 4190 - Community Service Practicum
This course is the application of learned strategies in meaningful community service through collaborative tasks performed at various community programs. Service learning activities are aimed at enriching the life experiences of students through civic responsibility and community outreach. Practicum fee. Semester Credit Hours: 1.0 Prerequisites: must be taken concurrently with Community Nutrition or with permission of advisor

NTDT 4191 - Nutrition Care Process Practicum
This course is a problem-based approach to dietetics practice using case simulations and studies; application of basic nutritional assessment skills, nutritional diagnosis, intervention and monitoring in different settings; practice skills in counseling and nutrition education Practicum fee. Semester Credit Hours: 1.0 Prerequisites: must be taken concurrently with Advanced Medical Nutrition Therapy II or with permission of advisor

NTDT 4210 - Special Topics in Nutrition and Dietetics
This course is an exploration of topics of interest to the student in Nutrition and Dietetics. Students work under the close supervision of a faculty member to conduct research or intense study or project related to the selected topic. May be repeated for credit. Semester Credit Hours: 2.0

NTDT 4310 - Production and Food Service System Management II
This course covers theories and principles related to the foodservice, systems management including leadership, decision-making, human resources, and financial management of operations. Semester Credit Hours: 3.0
Prerequisites: Production and Foodservice System Management I and Food Production Practicum or equivalent

NTDT 4320 - Medical Nutrition Therapy I
This course includes pathophysiology and the application of the nutritional care process in the treatment of simple human diseases and conditions, part 1.
Semester Credit Hours: 3.0
Prerequisites: Nutrition and Health Assessment, Nutrition Counseling and Education and Physiology or equivalent

NTDT 4330 - Community Nutrition
This course covers nutrition-related issues in public health, various community resources, agencies, and programs involved in health promotion and disease prevention.
Semester Credit Hours: 3.0

NTDT 4340 - Nutrition in Disease Prevention and Health Promotion
This course is an evidence-based analysis as it relates to diet/nutrition in the prevention of chronic diseases; and fundamental concepts in the promotion of health among individuals and groups.
Semester Credit Hours: 3.0
Prerequisites: Advanced Human Nutrition

NTDT 4350 - Medical Nutrition Therapy II
This course is a continuation of Advanced Medical Nutrition I; and review of the pathophysiology and the application of the nutritional care process in the treatment of more complex human disease and conditions.
Semester Credit Hours: 3.0
Prerequisites: Advanced Medical Nutrition Therapy I

NTDT 4360 - Current Issues in Nutrition
This course is an in-depth discussion and analysis of emerging trends, concepts, and controversies in nutritional sciences, including application of evidence-based principles in the discussion.
Semester Credit Hours: 3.0
Prerequisites: must have senior or graduate standing

NTDT 5091 - Independent Study
The course is comprised of independent reading, research, discussion, project and/or writing under the guidance of a faculty member. May be repeated for credit.
Semester Credit Hours: 1.0-3.0
Prerequisites: Advanced Human Nutrition or equivalent course

NTDT 5310 - Public Health Nutrition and Policy
This course covers concepts in nutritional epidemiology and public policy; and community-based interventions, resources, and research.
Semester Credit Hours: 3.0

NTDT 5320 - Nutrition Pathophysiology
This course covers concepts related to nutrigenomics, immunology, pharmacology, fluid and electrolyte balance, acid-base balance, response to injury, complex diseases, and metabolic aberrations.
Semester Credit Hours: 3.0

NTDT 5330 - Nutritional Supplements and Functional Foods
This course covers the fundamentals of complementary and alternative medicines, nutritional supplement, ergogenics, herbs, and functional foods; and issues related to their use in health and physical performance.
Semester Credit Hours: 3.0

NTDT 5340 - Integration of Metabolism
This course is an in-depth study of the metabolism of nutrients, energy utilization at the cellular level, and role of coenzymes and cofactors.
Semester Credit Hours: 3.0
Prerequisites: Advanced Human Nutrition or equivalent course

NTDT 5890 - Advanced Dietetics Practicum I
This course covers supervised practice in dietetics in different settings including acute and long term care facilities, rehabilitation and outpatient clinics, community programs and foodservice operations; includes weekly seminar. Practicum fee.
Semester Credit Hours: 0.5-7.0
Prerequisites: must have successfully completed all dietetics knowledge core requirements and be in good academic standing

NTDT 5891 - Advanced Dietetics Practicum II
This course is an advanced supervised practice in dietetics with culminating experiences leading to entry-level competency; includes weekly seminar. Practicum fee.
Semester Credit Hours: 0.5-7.0
Prerequisites: Advanced Dietetics Practicum I; must be in good academic standing

^TOP / SHP Programs

^TOP / SHP Programs
Emergency Health Sciences

- Programs in the Department of Emergency Health Sciences
- Bachelor of Science in Emergency Health Sciences
- Application and Admission
- General Policies and Information
- Program Curricula
- Course Descriptions

The Profession

Paramedics and 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. Through performance of patient assessments and providing medical care, their goal is to prevent and reduce mortality and morbidity due to illness and injury. Paramedics primarily provide care to emergency patients in an out-of-hospital setting.

Paramedics are expected to possess the knowledge, skills, and attitudes consistent with the expectations of the public and the profession. Paramedics are expected to recognize that they are an essential component of the continuum of care and serve as linkages among health resources. Paramedics are expected to strive to maintain high-quality, reasonable-cost health care by delivering patients directly to appropriate facilities. As advocates for patients, paramedics are expected to seek to be proactive in affecting long-term health care by working in conjunction with other provider agencies, networks, and organizations.

The emerging roles and responsibilities of the Paramedic include public education, health promotion, and participation in injury and illness prevention programs. As the scope of service continues to expand, the Paramedic will function as a facilitator of access to care, as well as an initial emergency medical treatment provider.

Programs in the Department of Emergency Health Sciences

The Department of Emergency Health Sciences offers certificate programs for EMT-Basic and EMT-Paramedic that meet or exceed national curriculum standards. The department also offers a Bachelor of Science in Emergency Health Sciences degree completion 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). 4101 W. Green Oaks Blvd., Suite 305-599, Arlington, Texas 76016, and by the Texas Department of Health, Bureau of Emergency Management, 1100 W. 49th Street, Austin, Texas 78756-3199.

EMT-Basic

The program includes classroom instruction covering Basic Life Support knowledge and skills criteria, and clinical and field internship. Successful completion of the course requirements prepares the student for the National Registry of EMT certification examination.

EMT-Paramedic

The program includes classroom instruction covering anatomy, physiology, patient assessment, advanced airway shock/trauma management, cardiovascular disease recognition and management, advanced treatment protocols for trauma, medical and special patient emergencies, and clinical and field internship. Graduates of the program are eligible to take the NREMT Paramedic certification examination.

Note: EMT-Basic certified applicants who have successfully completed the first two semesters of the Paramedic program may apply for state or National Certification at the EMT-Intermediate Level.

Bachelor of Science in Emergency Health Sciences

Paramedics who have earned a 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 offered as an online program.

The baccalaureate degree offers additional opportunities to practice in the field of pre-hospital emergency medical technology in administration, teaching, or advanced level practice.

The objective of the baccalaureate degree 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 a more enlightened leadership role within the community and help provide them with an enhanced capability to facilitate the delivery of EMS and emergency/community health services. The EHS degree provides the graduate with the opportunity to gain knowledge and skills necessary to assume positions of responsibility in the Emergency Medical Services provision to political entities, educational institutions, and private enterprises. Generally, the EHS degree program provides the graduate with information on how to manage and direct EMS organizations, deliver educational and regulatory information to many and varied communities of interest and students, and they may satisfy disaster management/planning requirements for localities as emergency managers.

The purpose of the Emergency Health Sciences degree is to help the graduate assume broader positions of responsibility in a variety of health care, research, business, community and educational settings, and to adapt to new rules precipitated by a changing health care delivery environment.
Application and Admission

Application for admission to Emergency Health Sciences certificate and degree programs may be completed at https://www.applytexas.org/adappc/commonapp.WBX. Detailed information about application and admission is available from the Health Professions Welcome Center at (866) 802-6288 (toll-free) or (210) 567-8744, and online at http://studentservices.uthscsa.edu/prospects_apply_ah.aspx.

Completion of the Texas Success Initiative (TSI) is not required for the EMT-Basic and EMT-Paramedic certificate programs. Requirements are listed below.

Admission Requirements

EMT-Basic

• 18 years of age or older by the course completion date
• High school diploma from an accredited school, or a GED by the course completion date
• Current CPR certification

EMT-Paramedic

• Current Texas or national certificate as an EMT-Basic; applicants holding national certificates must apply to the Texas Department of State Health Services for an equivalency certificate
• 18 years of age or older by the program completion date
• High school diploma from an accredited school, or a GED by the program completion date
• Current CPR certification

Bachelor of Science in Emergency Health Sciences

• Current Texas or national certification as an EMT-Paramedic (minimum of 30 semester credit hours in EMT-Basic and EMT-Paramedic coursework)
• Completion of the Texas Core Curriculum (see “Texas Core Curriculum” in the introductory section of this Catalog) at another Texas public college or university, or 42 semester credit hours of coursework fulfilling the core curriculum with a minimum grade of C in each course; some core curriculum courses may be taken concurrently with the degree program, with faculty approval
• Cumulative grade point average of at least 2.0 in all college coursework

Application Deadlines

The applications, copy of current state or national EMT (for application to the Paramedic program) or Paramedic certificate (for application to the bachelor's degree program), and official, sealed transcripts from high schools and/or colleges/universities attended must be submitted to the Registrar by the dates below:

• June 1 for August enrollment (fall semester)
• November 1 for January enrollment (spring semester)
• March 1 for May enrollment (summer semester), EMT Basic and B.S. degree-seeking applicants only

Applications for certificate and degree programs are reviewed as they are received.

Application Review

The Emergency Health Sciences Admissions Committee reviews applications and admits students based on application review. Applicants are notified by mail of their acceptance or non-acceptance.

General Policies and Information

Advancement, Probation, and Dismissal

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 of The University of Texas System. Copies of the regulations are available from the Office of Student Services or from the department chair.

A satisfactory rate of progress toward the degree or certificate is determined by the student’s advisor, preceptor (where applicable), program director, and Committee on Allied Health Studies according to the standards described below and in published course syllabi and course manuals. 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 action.

1. Performance Review

A student’s performance is regularly reviewed by the course director and program director. The course director determines whether the student is progressing satisfactorily or whether a warning letter from the program director is indicated. Letters specify courses in which the student is performing unsatisfactorily and require that the student meet with the course director to assist in remediation strategies. Students are responsible for arranging instructor counseling and assistance in remedying any academic deficiencies.

2. Promotion Recommendations

At semester’s end or at other designated points in the curriculum, the program director determines the student’s promotion status. In making these determinations, the program director evaluates several aspects of the student’s performance: (1) course grade(s), (2) attendance record, (3) professional behaviors, and (4) psychomotor skill development. The program director may assess extenuating circumstances that have affected student progress. The program director’s recommendations will be forwarded to the department chair. Students may receive the following progression designations:

Unconditional Advancement - A student may be considered for unconditional advancement if the student:
A. achieves a minimum grade-point average of 2.0 for each semester;
B. successfully completes all prescribed courses and semester requirements;
C. earns a minimum grade of C, P (Pass), or S (Satisfactory) in all courses; and
D. exhibits professional behavior during all phases of the program.

Probationary Advancement - A student may be considered for advancement while on probation if the student:

A. has withdrawn from a prescribed course in the curriculum, with the approval of the department chair, but meets all other conditions for Unconditional Advancement;
B. receives an unsatisfactory grade in any course in the curriculum;
C. receives an I grade in any course(s); or
D. receives an unacceptable rating for Professional Behavior.

A student performing at an unsatisfactory level will receive written notification of his/her status from the department chair. The student must earn a satisfactory grade in each course in order to remain in the program. A student who receives an unsatisfactory grade in any course may be required to repeat that course.

Dismissal - Dismissal from the program may be recommended if a student receives an unsatisfactory grade(s) in:

A. two or more courses in one semester;
B. a course being repeated or remediated;
C. any course taken while on probation;
D. if the semester GPA falls below 2.0; or
E. if the student demonstrates serious unprofessional behaviors with faculty, staff, peers, or patients.

The program director will consider all areas listed above under Promotions Recommendations. The program director has the right to make alternate promotion recommendations deemed appropriate.

Advisement

Program directors, course directors, and faculty serve as student advisors. Advisors assist students in solving problems and/or finding alternative options; provide advice and opinions, facts, or information; and help students understand school and university policies. 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. A student may choose her/his advisor and may change advisors on a yearly basis, or at the discretion of the department chair.

Attendance

Attendance for all classes, lectures, laboratory, and skills are mandatory and attendance will be taken each class. Verification of the reason for the absence may be required. Students are responsible for notifying a course faculty member if they are going to be tardy or absent from class at any time. This notification should be done prior to the beginning of the class or clinical assignment and should be done each day of absence or tardiness. Excused absences are to be handled on an individual basis by the course director, EMS course coordinator, or department chair, but are generally limited to the following: illness, death or illness in the immediate family, major personal problem/issue. Unexcused absences, excessive excused absences, or excessive tardiness may be considered sufficient cause for failure. Other attendance requirements may be established by the instructor for individual courses and are outlined in course syllabi and course manuals.

Auditing Courses

Certificate and degree program courses are available for audit for the purpose of obtaining continuing education hours for EMT recertification requirements. Auditors are authorized only to sit in on program lectures; they may not attend skills practice labs, clinical, or ambulance internships. Registration is processed through the Registrar’s office. The symbol AU is entered on the student’s official transcript, upon successful completion of the course.

Credit by Examination

The Department of Emergency Health Sciences offers two categories of students the opportunity to obtain academic credit by examination; (1) certified/licensed EMS personnel who completed EMT-Basic through EMT-Paramedic coursework at the Health Science Center program prior to its awarding academic credit, and (2) students admitted to the EHS Bachelor of Science degree program. The credit-by-examination process allows one to enroll in the course, pay the required examination fees, and schedule the examination date(s). The examination consists of the final written examination from the corresponding course and/or a verification of skill proficiency, and/or a verification of previous professional experience to assist with granting credit for clinical courses.

Procedure for Obtaining Credit by Examination. Students who wish to obtain credit by examination should:

1. Submit an application and application fee to the Health Professions Registrar’s Office, and indicate on the application that the applicant wishes to obtain credit by examination.
2. Select the courses and credit hours from the list below.
3. Contact Department of Emergency Health Sciences at (210) 567-8760 to verify past enrollment and to schedule examination dates and times.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSP 1160</td>
<td>1.0</td>
</tr>
<tr>
<td>EMSP 1161</td>
<td>1.0</td>
</tr>
<tr>
<td>EMSP 1162</td>
<td>1.0</td>
</tr>
<tr>
<td>EMSP 1334</td>
<td>3.0</td>
</tr>
<tr>
<td>EMSP 1355</td>
<td>3.0</td>
</tr>
<tr>
<td>EMSP 1356</td>
<td>3.0</td>
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<tr>
<td>EMSP 1401</td>
<td>5.0</td>
</tr>
<tr>
<td>EMSP 2160</td>
<td>1.0</td>
</tr>
</tbody>
</table>
Previous professional employment can potentially be accepted for EHS clinical courses. 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.

**Dropping Courses**

See “Adding/Dropping Courses” under “General Academic Policies” in this Catalog for information on limitations on dropping courses.

**Graduation Requirements**

The Certificate in EMT-Basic, Certificate in EMT-Paramedic, or Bachelor of Science in Emergency Health Sciences is awarded upon the satisfactory completion of prescribed academic programs, recommendation of the Emergency Health Sciences Committee of Allied Health Studies, School of Health Professions Allied Health Faculty Council, 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 cumulative GPA of 2.0 in the certificate or bachelor’s of science degree program. Completion of the total unit requirement with passing grades does not necessarily assure candidates a recommendation for graduation. The Faculty Council may refuse to recommend any student who has not:

- met all financial indebtedness to the Health Science Center;
- independently done all her/his work in the school’s facilities;
- exhibited those physical, ethical, and mental qualities necessary for a career as an EMS professional.

Certificates or diplomas are awarded in formal public ceremonies held by the Health Science Center, typically at the end of the spring semester.

In addition to the requirements above, an official Department of Emergency Health Sciences Completion Certificate is required for graduates of the EMT-Basic and EMT-Paramedic program to be eligible for state and/or national EMS certification examinations or for proof of continuing education.

**Professional Attire**

Specific requirements for professional attire are listed in course syllabi and course manuals. Health Science Center identification badges are to be worn while on campus for any reason and in all clinical/field rotations. The following general policies apply:

For both clinical and field internships, watches with a sweep second hand, digital watches, and wedding bands are allowed. NO other jewelry is to be worn. Name tags issued by the Health Science Center are to be worn in clear view at all times. Male students are to be clean-shaven, or beard neatly trimmed. Long hair must be secured and off the collar. Fingernails should be trimmed and plain in appearance.

**Clinical Internship**

All EHS students must observe the following dress code during clinical (hospital) internships. Color-designated scrubs, purchased by the student, are to be worn during all rotations. Students reporting to rotations inappropriately dressed will be sent home immediately and will have to reschedule the missed rotation.

**Field Internship**

EHS students are to observe the following dress code during field (ambulance) internships. San Antonio Fire Department students will wear SAFD uniforms. All other students wear a buttoned, plain white shirt; dark blue or black trousers; and sturdy, closed-toe, dark-colored shoes, preferably black. No high heels, sandals, tennis shoes, T-shirts, blue jeans, scrubs, or military uniforms are to be worn in the field. Uniforms from other EMS providers are not allowed.

**Program Costs**

Program costs for the certificate and degree programs are shown below. All figures are approximate.

<table>
<thead>
<tr>
<th>Program</th>
<th>Tuition and Fees</th>
<th>Health Insurance*</th>
<th>Other Costs**</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMT-Basic</td>
<td>$1,200</td>
<td>$433</td>
<td>$450</td>
</tr>
<tr>
<td>EMT-Paramedic</td>
<td>$5,000</td>
<td>$2,013</td>
<td>$950</td>
</tr>
<tr>
<td>Bachelor of Science</td>
<td>$6,700</td>
<td>n/a</td>
<td>$400</td>
</tr>
</tbody>
</table>

* Students who provide proof of health insurance that meets state requirements are not required to pay the health insurance fee.

** Other costs include textbooks, examination fees, equipment, etc.

An Out-of-State Instructional Fee of $200.00 per semester credit hour is charged to non-resident students living outside of Texas who are enrolled in online courses offered in the Bachelor of Science degree program. Regular tuition is not charged.

**Program Curricula**

- EMT-Basic
- EMT-Paramedic
- Bachelor of Science in Emergency Health Sciences
- Course Descriptions
EMT-Basic

The EMT-Basic certificate program is offered during spring and summer semesters. Classes meet for lectures and skills practice from 1:00 to 5:00 p.m., three days per week. In addition, 48 hours of clinical rotations are required during the semester.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSP 1160</td>
<td>EMT-Basic Clinical</td>
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<tr>
<td>EMSP 1401</td>
<td>EMT-Basic</td>
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</tr>
<tr>
<td>Program Total</td>
<td></td>
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</tr>
</tbody>
</table>

EMT-Paramedic

The EMT-Paramedic certificate program consists of 33 semester credit hours and is offered with full-time and part-time options.

Full-Time Option – Begins in fall semester and ends spring semester. Classes meet Tuesday, Wednesday, and Thursday from 8:00 a.m. to 5:00 p.m.; clinical rotations are scheduled 8:00 am to 4:00 p.m. or 4:00 p.m. to 12:00 a.m. on Monday and Friday (some weekends are available if needed).*

*Class schedules may vary for clinical vs. classroom assignments.

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSP 1161 - Paramedic Clinical</td>
<td>1.0</td>
</tr>
<tr>
<td>EMSP 1162 - Paramedic Clinical II</td>
<td>1.0</td>
</tr>
<tr>
<td>EMSP 1334 - Introduction to Advanced Practice</td>
<td>3.0</td>
</tr>
<tr>
<td>EMSP 1356 - Airway Management and Patient Assessment</td>
<td>3.0</td>
</tr>
<tr>
<td>EMSP 2248 - Emergency Pharmacology</td>
<td>2.0</td>
</tr>
<tr>
<td>EMSP 2301 - Anatomy &amp; Physiology for Paramedic Practice</td>
<td>3.0</td>
</tr>
<tr>
<td>EMSP 2444 - Cardiology</td>
<td>4.0</td>
</tr>
<tr>
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<td>17.0</td>
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</table>

<table>
<thead>
<tr>
<th>Semester Two</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSP 1355 - Trauma Management</td>
<td>3.0</td>
</tr>
<tr>
<td>EMSP 2238 - EMS Operations</td>
<td>3.0</td>
</tr>
<tr>
<td>Semester Total</td>
<td>6.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSP 1162 - Paramedic Clinical II</td>
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</tr>
<tr>
<td>EMSP 2248 - Emergency Pharmacology</td>
<td>2.0</td>
</tr>
<tr>
<td>EMSP 2444 - Cardiology</td>
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<tr>
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<table>
<thead>
<tr>
<th>Semester Four</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>EMSP 2160 - Paramedic Clinical III</td>
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<tr>
<td>EMSP 2161 - Paramedic Clinical IV</td>
<td>1.0</td>
</tr>
<tr>
<td>EMSP 2243 - Assessment-Based Management</td>
<td>2.0</td>
</tr>
<tr>
<td>EMSP 2330 - Special Populations</td>
<td>3.0</td>
</tr>
<tr>
<td>EMSP 2334 - Medical Emergencies</td>
<td>3.0</td>
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<tr>
<td>Semester Total</td>
<td>10.0</td>
</tr>
<tr>
<td>Program Total</td>
<td>33.0</td>
</tr>
</tbody>
</table>

Part-Time Option – The part-time option consists of 33 semester credit hours. Students may enroll in the full-time courses as part-time students. This option takes four semesters to complete. Courses may be offered in a different sequence than listed below.

Part-time courses offered to contracted fire department and EMS services off-campus may be open to other students on a space-available basis. These courses generally take one year to complete and meet several weekends a month.

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSP 1161 - Paramedic Clinical I</td>
<td>1.0</td>
</tr>
<tr>
<td>EMSP 1334 - Introduction to Advanced Practice</td>
<td>3.0</td>
</tr>
<tr>
<td>EMSP 1356 - Airway Management and Patient Assessment</td>
<td>3.0</td>
</tr>
<tr>
<td>EMSP 2301 - Anatomy &amp; Physiology for Paramedic Practice</td>
<td>3.0</td>
</tr>
<tr>
<td>Semester Total</td>
<td>10.0</td>
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<table>
<thead>
<tr>
<th>Semester Two</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSP 1355 - Trauma Management</td>
<td>3.0</td>
</tr>
<tr>
<td>EMSP 2238 - EMS Operations</td>
<td>3.0</td>
</tr>
<tr>
<td>Semester Total</td>
<td>6.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Credit Hours</th>
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<tbody>
<tr>
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<td>1.0</td>
</tr>
<tr>
<td>EMSP 2248 - Emergency Pharmacology</td>
<td>2.0</td>
</tr>
<tr>
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<td>4.0</td>
</tr>
<tr>
<td>Semester Total</td>
<td>7.0</td>
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</table>

<table>
<thead>
<tr>
<th>Semester Four</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSP 2160 - Paramedic Clinical III</td>
<td>1.0</td>
</tr>
<tr>
<td>EMSP 2161 - Paramedic Clinical IV</td>
<td>1.0</td>
</tr>
<tr>
<td>EMSP 2243 - Assessment-Based Management</td>
<td>2.0</td>
</tr>
<tr>
<td>EMSP 2330 - Special Populations</td>
<td>3.0</td>
</tr>
<tr>
<td>EMSP 2334 - Medical Emergencies</td>
<td>3.0</td>
</tr>
<tr>
<td>Semester Total</td>
<td>10.0</td>
</tr>
<tr>
<td>Program Total</td>
<td>33.0</td>
</tr>
</tbody>
</table>

Bachelor of Science in Emergency Health Sciences

The program includes courses required for admission (see Application and Admission) and emergency health sciences courses. The entire curriculum consists of 124 semester credit hours.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSP 3001</td>
<td>Foundations of Emergency Health Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>EMSP 3003</td>
<td>Critical Care Medicine</td>
<td>3.0</td>
</tr>
</tbody>
</table>

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 from the courses listed below.

^TOP / SHP Programs

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMSP 3001</td>
<td>Foundations of Emergency Health Sciences</td>
<td>3.0</td>
</tr>
<tr>
<td>EMSP 3003</td>
<td>Critical Care Medicine</td>
<td>3.0</td>
</tr>
</tbody>
</table>
EMSP 3004 - Pharmacology I for EMS Providers 3.0
EMSP 3006 - Electrocardiology in Emergency Medical Sciences 3.0
EMSP 3007 - Human Diseases 3.0
EMSP 3011 - Medical Informatics 3.0
EMSP 3012 - Behavioral Medicine and Psychopathology 3.0
EMSP 3013 - Professional Orientation & Legal Foundations 3.0
EMSP 3031 - Directed Study 1.0–4.0
EMSP 3041 - Current Research in Emergency Health Sciences 3.0
EMSP 4001 - Physical Examination and History Taking 3.0
EMSP 4002 - Pathophysiology for EMS Providers 3.0
EMSP 4003 - Flight Medicine 3.0
EMSP 4004 - Management of Disasters and Hazardous Materials 3.0
EMSP 4005 - EHS Systems Management and Budgeting 3.0
EMSP 4006 - Educational Issues in Emergency Health Sciences 3.0
EMSP 4007 - Human Resource Development 3.0
EMSP 4008 - Leadership Development 3.0
EMSP 4012 - Pharmacology II for EMS Providers 3.0
EMSP 4021 - Internship 6.0

Emergency Health Sciences Course Descriptions

EMSP 1149 - Pre-Hospital Trauma Life Support
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. Semester Credit Hours: 1.0

EMSP 1160 - EMT-Basic Clinical
This course is a method of instruction providing detailed education, training, and work-based experience and direct patient/client care at a clinical site. Semester Credit Hours: 1.0

EMSP 1161 - Paramedic Clinical I
This course is a method of instruction providing detailed education, training, and work-based experience and direct patient/client care at a clinical site. Semester Credit Hours: 1.0

EMSP 1162 - Paramedic Clinical II
This course is a method of instruction providing detailed education, training, and work-based experience and direct patient/client care at a clinical site. Semester Credit Hours: 1.0
Prerequisites: EMSP 1161

EMSP 1334 - Introduction to Advanced Practice
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. Semester Credit Hours: 3.0

EMSP 1355 - Trauma Management
This course is a detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with traumatic injuries and to safely manage the scene of an emergency. At the completion of this module, the student will be required to integrate the pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the trauma patient. Semester Credit Hours: 3.0

EMSP 1356 - Airway Management and Patient Assessment
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. Semester Credit Hours: 3.0

EMSP 1401 - EMT-Basic
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. Semester Credit Hours: 5.0

EMSP 2135 - Advanced Cardiac Life Support
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. Semester Credit Hours: 1.0

EMSP 2160 - Paramedic Clinical III
Semester Credit Hours: 1.0
Prerequisites: EMSP 1162

EMSP 2161 - Paramedic Clinical IV
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. Semester Credit Hours: 1.0
EMSP 2238 - EMS Operations
This is a course of study to prepare the paramedic to safely manage medical incidents, rescue situations, hazardous materials, and crime scenes.
Semester Credit Hours: 3.0

EMSP 2243 - Assessment-Based Management
This course is the capstone course of the EMSP program. Designed to provide for teaching and evaluating comprehensive assessment-based patient care management. At the completion of this module, the student will be required to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for patients with common complaints.
Semester Credit Hours: 2.0

EMSP 2248 - Emergency Pharmacology
This course is a comprehensive course covering all aspects of the utilization of medications in treating emergencies. The course is designed to compliment 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.
Semester Credit Hours: 2.0

EMSP 2301 - Anatomy & Physiology for Paramedic Practice
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.
Semester Credit Hours: 3.0

EMSP 2330 - Special Populations
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.
Semester Credit Hours: 3.0

EMSP 2334 - Medical Emergencies
This course is a detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with medical emergencies. At the completion of this module, students will be required to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the medical patient.
Semester Credit Hours: 3.0

EMSP 2444 - Cardiology
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. At the completion of this module, the student will be required to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the cardiac patient.

EMSP 3001 - Foundations of Emergency Health Sciences
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.
Semester Credit Hours: 3.0

EMSP 3003 - Critical Care Medicine
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.
Semester Credit Hours: 3.0

EMSP 3004 - Pharmacology I for EMS Providers
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.
Semester Credit Hours: 3.0

EMSP 3006 - Electrocardiology in Emergency Medical Sciences
A study of the fundamentals of electrocardiology, 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.
Semester Credit Hours: 3.0

EMSP 3007 - Human Diseases
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.
Semester Credit Hours: 3.0

EMSP 3011 - Medical Informatics
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.
Semester Credit Hours: 3.0

EMSP 3012 - Behavioral Medicine and Psychopathology
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.

Semester Credit Hours: 3.0

**EMSP 3013 - Professional Orientation & Legal Foundations**
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.

Semester Credit Hours: 3.0

**EMSP 3031 - Directed Study**
This course is available to the learner to allow for a voluntary course of independent study in a clinical/advanced provider concentration.

Semester Credit Hours: 1.0–4.0

**EMSP 3041 - Current Research in Emergency Health Sciences**
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.

Semester Credit Hours: 3.0

**EMSP 3100 - Orientation to Online Learning**
This course is designed to provide the student with necessary information, tools, and strategies to enhance and facilitate learning at a distance at the Health Science Center.

Semester Credit Hours: 1.0

**EMSP 4001 - Physical Examination and History Taking**
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.

Semester Credit Hours: 3.0

**EMSP 4002 - Pathophysiology for EMS Providers**
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.

Semester Credit Hours: 3.0

**EMSP 4003 - Flight Medicine**
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.

Semester Credit Hours: 3.0

**EMSP 4004 - Management of Disasters and Hazardous Materials**
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.

Semester Credit Hours: 3.0

**EMSP 4005 - EHS Systems Management and Budgeting**
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.

Semester Credit Hours: 3.0

**EMSP 4006 - Educational Issues in Emergency Health Sciences**
This course analyzes educational and training needs relating to EMS agencies. Principles of adult teaching and learning are presented.

Semester Credit Hours: 3.0

**EMSP 4007 - Human Resource Development**
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.

Semester Credit Hours: 3.0

**EMSP 4008 - Leadership Development**
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.

Semester Credit Hours: 3.0

**EMSP 4009 - Pediatric Advanced Life Support (PALS)**
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.

Semester Credit Hours: 1.0

**EMSP 4012 - Pharmacology II for EMS Providers**
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.
Semester Credit Hours: 3.0

**EMSP 4021 – Internship**
This course is a semester internship/capstone experience by arrangement.
Semester Credit Hours: 6.0
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 client in the performance of activities that provide meaning to her or his life.

Occupational therapists serve clients of all ages in a variety of settings including rehabilitation facilities, long-term care facilities, public schools, psychiatric hospitals, day care facilities, sheltered workshops, community agencies, and industrial sites.

Master of Occupational Therapy Program

Traditional MOT

The Master of Occupational Therapy (MOT) is a 30-month program that begins in the summer and consists of 107 semester credit hours, including 20 semester hours (6 months) of full-time clinical fieldwork. A baccalaureate degree is NOT required for admission to the program. Applicants without a baccalaureate degree must complete 27 semester credit hours of Texas Core Curriculum requirements (see Texas Core Curriculum in the introductory section of the Catalog) and 53 semester credit hours of MOT program prerequisites. Some coursework may be waived for students who are Certified Occupational Therapy Assistants (COTAs) and is determined on an individual basis.

BSOT to MOT

The BSOT to MOT (Master of Occupational Therapy) program is an advanced standing option for professional Occupational Therapists (OTR or LOT) who have a Bachelor’s degree in occupational therapy (BSOT) and wish to earn an entry-level MOT degree. Students can select a part-time or full-time plan that may begin at any semester. Courses are taken on the Health Science Center campus and through Web-based technology. Students transfer prerequisite and professional BSOT courses into a program and take an additional 30 credits (core and elective courses).

National Certification

Graduates of the MOT program are eligible to take the national certification examination administered by the National Board for Certification in Occupational Therapy (NBCOT) and to apply for licensure that is required for practice in most states. After successful completion of this examination, the individual will be a Registered Occupational Therapist (OTR). A felony conviction may affect a graduate’s ability to sit for the NBCOT certification examination or to attain state licensure.

The MOT program is accredited through the Accreditation Council for Occupational Therapy Education (ACOTE). For further information about the accreditation process contact:

American Occupational Therapy Association
4720 Montgomery Lane/PO Box 31220
Bethesda, MD 20824-1220
Telephone: (301) 652-2682
• Knowledge of occupational therapy

Admission Requirements
Application requirements for the MOT program include the following:

• Prerequisite grade point average (GPA) of at least 3.0
• Knowledge and understanding of occupational therapy gained through a minimum of 20 hours volunteer and/or observation under the general supervision of a registered occupational therapist
• Two letters of reference
• Completion of Texas Core Curriculum coursework with a grade of C or better (See “Texas Core Curriculum” in the introductory section of the Catalog.)
• Completion of program prerequisites with a grade of C or better (see prerequisite list below)
• Interviews with occupational therapy faculty

Program Prerequisites
The courses listed below must be completed before initial enrollment. Students who wish to receive the Bachelor of Science in Health Care Sciences (BS HCS) after the first year of coursework must complete the Texas Core Curriculum requirements also. All Core Curriculum and program prerequisite courses must be completed with a grade of C or better. Further information about the BS HCS and the Core Curriculum is available in this Catalog. Some program prerequisites will satisfy Texas Core Curriculum requirements. Applicants may submit transcripts for an unofficial evaluation of core curriculum and program prerequisite coursework to the Health Professions Welcome Center. For further information, contact the Welcome Center at (866) 802-6288 (toll-free), (210) 567-8744.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Anatomy with lab or Anatomy &amp; Physiology</td>
<td>4</td>
</tr>
<tr>
<td>Human Physiology with lab or Anatomy &amp; Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>General Biology with lab</td>
<td>4</td>
</tr>
<tr>
<td>General Chemistry with lab</td>
<td>4</td>
</tr>
<tr>
<td>Physics or Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>Psychology (introduction)</td>
<td>3</td>
</tr>
<tr>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Sociology and/or Anthropology</td>
<td>6</td>
</tr>
<tr>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>English (technical writing)</td>
<td>3</td>
</tr>
<tr>
<td>Medical Terminology</td>
<td>1</td>
</tr>
<tr>
<td>Electives*</td>
<td>9</td>
</tr>
<tr>
<td><strong>Program Prerequisite Total</strong></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>

*Recommended elective courses include: Leadership Skills, Public Health, Human Sexuality, Economics, Humanities, Fine Arts, Foreign Language, and Philosophy. Specifically excluded are remediation course work, work from technical institutions, or programs and other course work deemed inappropriate by the department.

General Policies and Information

Advancement, Probation, and Dismissal
Continuation as an Occupational Therapy student is dependent on maintenance of a minimum cumulative grade point average of 3.0 (B) for all courses. A student whose cumulative grade point average falls below 3.0 will be subject to academic probation. 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 or continues on probation may also be subject to dismissal. All decisions concerning probation or dismissal will be based on recommendations from the Committee on Allied Health Studies. The Committee may recommend: dismissal, academic probation, repetition of the course when next offered, repetition of the year/semester, or other actions as deemed appropriate. Under no circumstances will a student on probation be awarded a degree.

Attendance
Attendance at all lectures, laboratories, field trips, and class-related events is strongly recommended in order for the student to successfully complete this program. However, mandatory attendance for a given course is the prerogative of the instructor who will announce the manner in which absences will affect the student’s grade.

Faculty Advisors
Each student in the program is assigned an Academic Advisor. The student has the right to request a different faculty advisor if the student feels it is in her/his best interest.

The Faculty Advisor is available by appointment to discuss academic problems and to suggest possible remedies. (The student will confer with the instructor prior to making an appointment with the advisor.)

The advisor will be able to acquaint students with the available student services and, if appropriate, to refer the student to such services. The advisor will follow the student’s academic progress and be available for consultation at preregistration and registration.

Grades in Fieldwork Courses
Some Level I Fieldwork courses and both of the Level II Fieldwork courses are graded S (Satisfactory) or U (Unsatisfactory). Clinical grades are not used in calculating the grade point average. Level II fieldwork experiences are graded on a satisfactory/unsatisfactory basis according to the student’s performance, judgment, and attitude as measured by the on-site supervisor using the Fieldwork Performance Evaluation for the Occupational Therapy Student. Criterion scores, as suggested by the American Occupational Therapy Association, are used to determine satisfactory performance.
If a student on Level II fieldwork receives a score below the criterion score on the Fieldwork Performance Evaluation for the Occupational Therapy Student, the student will receive an unsatisfactory grade for the affiliation. The student who fails any Level II affiliation may be subject to dismissal from the program.

**Occupational Therapy Fieldwork**

Fieldwork is an important part of the educational process for becoming an occupational therapist and represents that part of the program during which students have the opportunity to learn clinical skills through observation or experiential learning (Level I Fieldwork); or to apply understanding of theory and techniques through extended, supervised, and evaluated performance (Level II Fieldwork). In either case, these experiences occur away from the Health Science Center at affiliated clinical institutions/sites.

The Academic Fieldwork Coordinator maintains contact with the fieldwork facilities to support links between the didactic and fieldwork aspects of the curriculum. The coordinator assigns Satisfactory/Unsatisfactory grades for Level II experiences based on the student's performance, judgment, and attitude as measured by the on-site supervisor using the Fieldwork Performance Evaluation.

The majority of Level I and Level II Fieldwork sites are located within the state of Texas. Notebooks on each fieldwork facility are maintained by the department and can be reviewed by students on Level II affiliation. Notebooks describe the setting, objectives, philosophies, and types of patients seen in each facility.

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 assigns eligible students to specific facilities for Level II fieldwork experiences.

During Level I Fieldwork, 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. 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.

Level II Fieldwork experiences, which follow the completion of prerequisite academic coursework, are completed at sites assigned by the Academic Fieldwork Coordinator. Students must write and mail a letter confirming the fieldwork experience assignment dates to the Fieldwork Supervisor at least one month in advance of the starting date and must telephone a confirmation two weeks before the starting day.

The student also is responsible for making any required living arrangements, obeying policies and procedures of the facility providing the fieldwork experience, submitting required assignments and evaluations, etc. Specific details are available from the Academic Fieldwork Coordinator.

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. While students are given an opportunity to express their preferences for location of placements, the program cannot grant assurances that students will be placed in their setting of choice. Students should be prepared to incur expenses for transportation, food, and lodging during required fieldwork assignments.

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.

**Principles of 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, 2005). The Occupational Therapy Department at the Health Science Center also subscribes to this ethical code and expects the behaviors of matriculating students to be consistent with these principles.

**Professional Attire**

Appropriate professional attire is expected to be worn by students at all times, particularly when visiting fieldwork sites or interacting with visitors or patients. Discretion as to choice of attire is determined by the student. Name tags will be worn in all student roles. Dress codes specified by instructors and fieldwork centers take precedence over general department guidelines.

**Program Costs**

Total costs for in-state tuition and fees, textbooks, equipment, scrubs, parking permits, health and liability insurance, etc., are approximately $28,858. The full-time clinical fieldwork experiences included in the curriculum may require that students locate outside of San Antonio for the duration of the two three-month 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.

Non-resident students are subject to additional tuition costs, which may be found under “Financial Information” in this Catalog.

**Standards of Practice**

The American Occupational Therapy Association (AOTA) 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 promulgated by other agencies, whether volun-
Program Curricula

- Master of Occupational Therapy Curriculum
- BSOT to MOT Curriculum
- Course Descriptions

Master of Occupational Therapy Curriculum

The Master of Occupational Therapy curriculum (professional phase) consists of 107 semester credit hours taken over 9 semesters.

| Preprofessional Requirements | 80 hours |
| Professional Requirements    | 107 hours |
| Total                        | 187 hours |

<table>
<thead>
<tr>
<th>First Year</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer Semester</td>
<td></td>
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<tr>
<td>OCCT 5001 - Theoretical Foundations in Occupational Therapy</td>
<td>2.0</td>
</tr>
<tr>
<td>CSBL 5013 - Gross Anatomy</td>
<td>6.0</td>
</tr>
<tr>
<td>OCCT 5091 - Special Topics (any semester)</td>
<td>1.0</td>
</tr>
<tr>
<td>Semester Total</td>
<td>9.0</td>
</tr>
</tbody>
</table>

| Fall Semester |          |
| OCCT 5007 - Occupational Justice and Participation | 1.0 |
| OCCT 5010 - Human Occupation Across the Life Span | 3.0 |
| OCCT 5012 - Application of Neural Systems to Occupation | 4.0 |
| OCCT 5013 - Applied Biomechanics of Movement | 3.0 |
| OCCT 5014 - Professional Communication in Occupational Therapy | 2.0 |
| OCCT 5023 - Research I: Assessment and Research Statistics | 3.0 |
| OCCT 5070 - Level I Fieldwork: Life Span | 1.0 |
| Semester Total | 17.0 |

| Spring Semester |          |
| OCCT 5011 - Research II: Intro. to Research & Design | 3.0 |
| OCCT 5020 - Occupational Therapy Process: Neonate - Preschool | 4.0 |
| OCCT 5021 - Service Delivery Systems I | 2.0 |
| OCCT 5022 - Environmental Technologies I | 2.0 |
| OCCT 5024 - Clinical Medicine I | 1.0 |
| OCCT 5071 - Level I Fieldwork: Neonatal—Preschool | 1.0 |
| OCCT 6026 - Psychosocial Components of Occupational Therapy | 4.0 |
| Semester Total | 17.0 |

| Second Year |          |
| Summer Semester |          |
| OCCT 5025 - General Pathology | 3.0 |
| OCCT 6027 - Health Care Management | 3.0 |
| Semester Total | 6.0 |

| Fall Semester |          |
| OCCT 6027 - Health Care Management | 4.0 |
| OCCT 6021 - Service Delivery Systems II | 2.0 |
| OCCT 6022 - Environmental Technologies II | 3.0 |
| OCCT 6037 - Occupational Therapy Process: Adult Neuromuscular Dysfunctions | 4.0 |
| OCCT 6045 - Clinical Medicine III | 1.0 |
| OCCT 6070 - Level I Fieldwork: School Age | 1.0 |
| OCCT 6076 - Level I Fieldwork: Adult Neuromuscular Dysfunction | 1.0 |
| Semester Total | 16.0 |

| Spring Semester |          |
| OCCT 5005 - The Role of Occupational Therapy in Low-Vision Rehabilitation | 3.0 |
| OCCT 6024 - Clinical Medicine II | 1.0 |
| OCCT 6030 - Occupational Therapy Process: Adult Biomechanical Dysfunction | 4.0 |
| OCCT 6031 - Service Delivery Systems III | 3.0 |
| OCCT 6032 - Environmental Technologies III | 2.0 |
| OCCT 6034 - Professional Issues | 1.0 |
| OCCT 6069 - Level II Fieldwork: Seminar | 1.0 |
| OCCT 6077 - Level I Fieldwork: Adult Biomechanical Dysfunction | 1.0 |
| Semester Total | 16.0 |

| Third Year |          |
| Summer Semester |          |
| OCCT 5073 - Community Project | 6.0 |
| Semester Total | 6.0 |

| Fall Semester |          |
| (12 weeks) |          |
| OCCT 6073 - Level II Fieldwork: Developmental Dysfunction | 10.0 |
| OCCT 6074 - Level II Fieldwork: Adult Disabilities | 10.0 |
| Semester Total | 10.0 |

| Spring Semester |          |
| OCCT 6073 - Level II Fieldwork: Developmental Dysfunction | 10.0 |
| OCCT 6074 - Level II Fieldwork: Adult Disabilities | 10.0 |
| Semester Total | 10.0 |
| Program Total | 107 |

BSOT to MOT Curriculum

Students in the BSOT to MOT program transfer prerequisite and professional BSOT courses into the program and complete an additional 15 semester credit hours of occupational therapy core and 15 semester credit hours of elective courses. This program is for Occupational Therapists (OTR or LOT) only. BSOT to MOT core courses are listed below. Elective courses may be selected from other courses included in the MOT curriculum, with approval from faculty.
BSOT to MOT Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>OCCT 5007</td>
<td>Occupational Justice and Participation</td>
<td>1.0</td>
</tr>
<tr>
<td>OCCT 5011</td>
<td>Research II: Intro. to Research &amp; Design</td>
<td>3.0</td>
</tr>
<tr>
<td>OCCT 5023</td>
<td>Research I: Assessment and Research Statistics</td>
<td>3.0</td>
</tr>
<tr>
<td>OCCT 5073</td>
<td>Community Project</td>
<td>6.0</td>
</tr>
<tr>
<td>OCCT 6035</td>
<td>Concepts and Practices in Teaching</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Core Courses Total</strong></td>
<td></td>
<td><strong>15.0</strong></td>
</tr>
</tbody>
</table>

Occupational Therapy Course Descriptions

**INTD 5066 - Laughter is the Best Medicine: An Interdisciplinary Elective about Humor, Healing, and Healthcare**
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.

*Semester Credit Hours: 1.0*

**CSBL 5013 - Gross Anatomy**
This course will cover dissection and regional study of human gross anatomy with emphasis on anthroplogy, osteology, gross neuromuscular and vascular anatomy, regional and general relationships between structures, and applied anatomy relevant to the practice of occupational therapy. Human materials fee: $500. Laboratory fee: $30.

*Semester Credit Hours: 6.0*

**OCCT 5001 - Theoretical Foundations in Occupational Therapy**
This course is an overview of the critical issues of occupational therapy. This course includes the history, frames of references, current trends, and legislative concerns that impact practice.

*Semester Credit Hours: 2.0*

**OCCT 5005 - The Role of Occupational Therapy in Low-Vision Rehabilitation**
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.

*Semester Credit Hours: 3.0*

**OCCT 5007 - Occupational Justice and Participation**
This course traces the development of an occupational justice approach to health and well being from an international perspective. The student will have the opportunity to explore ways to enable participation in occupation, within a sociopolitical context.

*Semester Credit Hours: 1.0*

**OCCT 5010 - Human Occupation across the Life Span**
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.

*Semester Credit Hours: 3.0*

**OCCT 5011 - Research II: Intro. to Research & Design**
The purpose of this lecture course is to introduce the student to the purpose of research and designs appropriate for answering research questions in practice settings. Topics include quantitative and qualitative designs.

*Semester Credit Hours: 3.0*

**OCCT 5012 - Application of Neural Systems to Occupation**
This course is a study of the structure and function of the human nervous system, with particular emphasis on the application of theoretical concepts to treatment techniques practiced in occupational therapy. Clinical cases are an integral part of the course, and are discussed using the neuroscience principles being studied.

*Semester Credit Hours: 4.0*

**OCCT 5013 - Applied Biomechanics of Movement**
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.

*Semester Credit Hours: 3.0*

**OCCT 5014 - Professional Communication in Occupational Therapy**
This course is 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. Lecture, videotapes, and experiential activities will be used.

*Semester Credit Hours: 2.0*

**OCCT 5020 - Occupational Therapy Process: Neonate - Preschool**
This course is a study of occupational therapy practice with neonates up to preschool age children and their families. Early interventions, to promote the engagement of young children and their families in occupation to support participation in a variety of contexts, are examined. Emphasis is placed on family-centered theories and practice.

*Semester Credit Hours: 4.0*
OCCT 5021 - Service Delivery Systems I
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. 
*Semester Credit Hours: 2.0*

OCCT 5022 - Environmental Technologies I
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.
*Semester Credit Hours: 2.0*

OCCT 5023 - Research I: Assessment and Research Statistics
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 have the opportunity to develop skill in selecting and using the most appropriate standardized assessment for a given purpose.
*Semester Credit Hours: 3.0*

OCCT 5024 - Clinical Medicine I
This course is an overview of the manifestations of developmental disabilities in pediatric patients and their medical and surgical management.
*Semester Credit Hours: 1.0*

OCCT 5025 - General Pathology
Included in this course are general concepts and diseases specific to organ systems of the body with emphasis placed on those pathologies encountered in clinical occupational therapy practice.
*Semester Credit Hours: 3.0*

OCCT 5070 - Level I Fieldwork: Life Span
This course is an opportunity for the student to observe, identify, and associate areas of occupation, performance skills, performance patterns, client factors, activity demands, and contexts with age-specific populations through visits to community settings. Practicum fee: $10.
*Semester Credit Hours: 1.0*

OCCT 5071 - Level I Fieldwork: Neonatal—Preschool
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. Practicum fee: $10.
*Semester Credit Hours: 1.0*

OCCT 5073 - Community Project
The student will be required to develop a proposal for the provision of occupational therapy services. This proposal may include a needs assessment, description of service(s), role of OT and others, funding sources, and program evaluation plan.
*Semester Credit Hours: 6.0*

OCCT 5091 - Special Topics
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, spring, or summer sessions.
*Semester Credit Hours: 1.0–6.0*

OCCT 6020 - Occupational Therapy Process: School Age
This course is a study of occupational therapy practice with school-aged children. Occupational therapy assessment and intervention are examined in relationship to the child’s engagement in occupation to support participation in the home, school, and community contexts. Performance skills and patterns, activity demands and client factors are discussed, with the following highlighted: sensory integration, motor skills, behavior management, prehension and handwriting, activities of daily living, school tasks, and transitional skills.
*Semester Credit Hours: 4.0*

OCCT 6021 - Service Delivery Systems II
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.
*Semester Credit Hours: 2.0*

OCCT 6022 - Environmental Technologies II
This course explores the assistive technologies available for use by individuals with disabilities so they may pursue educational, vocational, and recreational occupations. Included are computer input/output technologies, augmentative and alternative communication systems, aids for persons with sensory impairments, and electronic aids to daily living.
*Semester Credit Hours: 3.0*

OCCT 6024 - Clinical Medicine II
Clinical manifestations of adult biomechanical disorders will be presented. The medical and surgical management for these conditions will be described.
*Semester Credit Hours: 1.0*

OCCT 6026 - Psychosocial Components of Occupational Therapy
The goals of this course are to provide an understanding of psychiatric disease classification and the diagnosis and management of psychosocial conditions. Students will have the opportunity to 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.
*Semester Credit Hours: 4.0*

OCCT 6027 - Health Care Management
This course is intended to provide the graduate student with an opportunity to assume supervisory, administrative, or man-
agement 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.
Semester Credit Hours: 3.0

OCCT 6030 - Occupational Therapy Process: Adult Biomechanical Dysfunction
This course is a study of the theories and approaches of occupational therapy assessment and intervention for adults with musculoskeletal disorders. Areas of occupation, performance skills, performance patterns, client factors, and contexts are examined.
Semester Credit Hours: 4.0

OCCT 6031 - Service Delivery Systems III
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.
Semester Credit Hours: 3.0

OCCT 6032 - Environmental Technologies III
This course will include the biomechanical and compensatory considerations for the human body and environmental interfacing across the life span. Included are seating and positioning systems, technologies for personal mobility, and work environment interfaces.
Semester Credit Hours: 2.0

OCCT 6034 - Professional Issues
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.
Semester Credit Hours: 1.0

OCCT 6035 - Concepts and Practices in Teaching
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.
Semester Credit Hours: 2.0

OCCT 6037 - Occupational Therapy Process: Adult Neuromuscular Dysfunctions
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.
Semester Credit Hours: 4.0

OCCT 6045 - Clinical Medicine III
Clinical manifestations of adult neuromuscular disorders will be presented. The medical and surgical management for these conditions will be described.
Semester Credit Hours: 1.0

OCCT 6069 - Level II Fieldwork: Seminar
This course will focus on the transition from classroom to Level II Fieldwork experiences. Students will have the opportunity to identify Level II fieldwork expectations, explore professional behaviors and ethics, review AOTA, NBCOT, and the State of Texas licensure requirements, and begin preparation for job searches.
Semester Credit Hours: 1.0

OCCT 6070 - Level I Fieldwork: School Age
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. This course is the third in a series of fieldwork courses that allow students to experience community and public school programs and observe occupational therapy for children with disabilities ages 4–21 years. It is taught in the second year of the program, concurrent with the OT Process: School Age, & Service Delivery II. Practicum fee: $10.
Semester Credit Hours: 1.0

OCCT 6073 - Level II Fieldwork: Developmental Dysfunction
This course is a three-month fieldwork placement in an occupational therapy setting where the student will have the opportunity to gain competence in providing occupational therapy services to individuals with developmental disabilities. Practicum fee: $10.
Semester Credit Hours: 10.0

OCCT 6074 - Level II Fieldwork: Adult Disabilities
This course is a three-month fieldwork placement in an occupational therapy setting where the student will have the opportunity to gain competence in providing occupational therapy services to adults with disabilities. Practicum fee: $10.
Semester Credit Hours: 10.0

OCCT 6075 - Level I Fieldwork: Elective
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.
Semester Credit Hours: 1.0

OCCT 6076 - Level I Fieldwork: Adult Neuromuscular Dysfunction
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.
Semester Credit Hours: 1.0
OCCT 6077 - Level I Fieldwork: Adult Biomechanical Dysfunction
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.
Semester Credit Hours: 1.0
Doctor of Physical Therapy Program

The Doctor of Physical Therapy program (DPT) begins in the fall semester and consists of 101 semester credit hours taken over 7 semesters (30 months). The program includes 30 weeks of full-time clinical affiliations and a 4-week specialty clinical internship. Graduates 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. A license to practice physical therapy in Texas is contingent on successful completion of these examinations. The program is accredited by the Commission on Accreditation in Physical Therapy (CAPTE), 1111 N. Fairfax Street, Alexandria, Virginia 22314.

Application and Admission

The application for admission may be completed at https://www.applytexas.org. Detailed information about application and admission is available at http://studentservices.uthscsa.edu/prospects_ah_programs_pt.aspx. Applications for fall entry are accepted between August 15 and November 1. A completed application, the application fee, official transcripts from each college or university attended, test scores, and other supporting documents must be submitted to the Registrar by the application deadline (address below). The completed application, official transcripts, and all supporting materials must be on file before the application can be processed. It is the applicant's responsibility to verify that all documents have been received by the Registrar before the application deadline.

Admission Factors

The following factors are considered when selecting students for the DPT program:

- academic achievement
- employment history
- extracurricular activities, and/or community service activities
- personal statement
- health care field preparation
- knowledge of health care environment
- preparation for a career in physical therapy
- analytical and problem-solving skills
- communication and interpersonal skills
- personal traits (i.e., maturity, leadership potential, time management skills)
- writing skills
- broad life experiences, e.g., international travel, exposure to other cultures, lived or worked outside the U.S.
- Texas resident or permanent resident alien
- race/ethnicity

Admission Requirements and Prerequisites

A baccalaureate degree is not required for admission. Application and admission requirements include:

- Completion of Core Curriculum requirements for applicants who have not completed a bachelor’s degree (for exception, see “Bachelor of Science in Health Care Sciences” below)
- Completion of all program prerequisites with overall grade point average (GPA) of at least 3.0 (on a 4-point scale)
- Science/math GPA of at least 3.0
- Completion of a medical terminology course (online or at a college/university)
- Knowledge and understanding of physical therapy gained through a minimum of 50 hours observation, volunteering, or employment in a physical therapy setting documented using the Documentation of Experience form, available at http://studentservices.uthscsa.edu/prospects_ah_programs_pt.aspx.
- Two letters of reference (at least one letter from a licensed physical therapist using the Reference Form, available at the Web site above)
- Personal statement addressing the applicant’s goal of becoming a physical therapist (one page typed, single space)
- Personal résumé including previous work experience, honors and awards, extracurricular activities, and community service experience
- Graduate Record Examination (GRE) scores must be submitted; used only for program development purposes, but not for making admissions decisions
- Foreign-educated students only: Transcripts from foreign colleges/universities must be evaluated by an approved credentialing organization. Go to the Health Professions Welcome Center and select “International Students” from the left menu.
- TOEFL (Test of English as a Foreign Language) scores required for applicants from countries where English is not the native language; minimum score of 560 (paper test), 220 (computer), or 68 (Internet)
Applicants without a baccalaureate degree must complete at least 90 semester credit hours of core curriculum requirements, electives, and program prerequisites. At least 30 of these credit hours must be from a four-year university. In addition, students without a baccalaureate degree must have a minimum of 6 of these credit hours of junior or higher level (300-400 level) courses in a subject area (e.g., biology, chemistry, history). The Texas Core Curriculum consists of 42 semester credit hours. Some courses that satisfy core curriculum requirements may also be used to satisfy program prerequisites. All applicants must complete the program prerequisites; some program prerequisites will satisfy core curriculum requirements.

**Bachelor of Science in Health Care Sciences**

Students admitted to the DPT program will receive a Bachelor of Science in Health Care Sciences (BS HCS) after successful completion of Texas Core Curriculum requirements, program prerequisites, and program curriculum requirements. Students who do not wish to receive the BS HCS must submit a “Request for Waiver of State Required Prerequisites” to the Registrar by the 12th day (census day) of their first term in the program. The BS HCS will be awarded with the doctoral degree at the completion of the DPT program. A student who withdraws from the DPT program may be awarded the BS HCS on the first published commencement date following withdrawal if (1) the student successfully completed program requirements in the first two semesters and (2) the faculty certifies the student to receive the degree.

**Program Prerequisites**

Applicants without a baccalaureate degree must complete the Texas Core Curriculum (see “Texas Core Curriculum” in the introductory section of this Catalog) that consists of 42 semester credit hours. Some courses that satisfy core curriculum requirements may also be used to satisfy program prerequisites.

All applicants must complete the program prerequisites below; some program prerequisites will satisfy core curriculum requirements.

<table>
<thead>
<tr>
<th>Program Prerequisites</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Biology with labs (for science majors)</td>
<td>8</td>
</tr>
<tr>
<td>Human Anatomy with lab (for science majors)</td>
<td>4</td>
</tr>
<tr>
<td>Human Physiology with lab (for science majors)</td>
<td>8</td>
</tr>
<tr>
<td>General Chemistry with lab (for science majors)</td>
<td>8</td>
</tr>
<tr>
<td>General Physics with labs (for science majors)</td>
<td>3</td>
</tr>
<tr>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Developmental Psychology (Lifespan)</td>
<td>3</td>
</tr>
<tr>
<td>General Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Speech</td>
<td>3</td>
</tr>
<tr>
<td>Statistics (Math or Psychology based)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total DPT Program Prerequisite Credit Hours</strong></td>
<td><strong>58</strong></td>
</tr>
</tbody>
</table>

Individuals are advised to seek counseling about coursework from the Health Professions Welcome Center to meet department requirements well in advance of applying to the program. Contact information is SHPwelcome@uthscsa.edu, 1-866-802-6288 or 210-567-8744. All prerequisites must be completed by the end of the spring semester prior to starting the program.

*Botany, ecology, or environment exclusively are NOT acceptable

Separate Human Anatomy and Human Physiology are recommended, but combined A&P I and II courses totaling 8 credit hours is acceptable. An additional upper-level Human Physiology course is recommended if combined A&P is taken.

Some DPT program prerequisite courses may satisfy the baccalaureate degree core curriculum requirements. 27 hours core curriculum and 63 hours prerequisite requirements must be completed to be eligible for BS in Health Care Sciences degree.

**General Policies and Information**

**Advancement, Probation, and Dismissal**

Continuation as a Physical Therapy student is dependent on maintenance of a minimum grade point average of 3.0 (B) for all courses taken while enrolled in the program. A student whose cumulative grade point average falls below 3.0 will be subject to academic probation. 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 will also be subject to probation or dismissal. The Committee on Allied Health Sciences may recommend: dismissal, academic probation, repetition of the course when next offered, repetition of the year, or other actions as deemed appropriate. If repetition of a course when next offered is recommended, the student may not continue taking subsequent courses in the curriculum until that course is successfully completed. The student who has been dismissed may be readmitted for further study by petition from the CAHS. 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**

Attendance at all scheduled classes, laboratories, and clinical sessions is required. Excused absences may be granted in such cases as illness or personal emergency. Verification of the reason for the absence may be required. 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 sequence of courses in the curriculum be adhered to. 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 prior 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 electives) 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 stated criteria may result in one of the following grades:

I (Incomplete) – Student performance is satisfactory on accepted 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 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 grades of I or U 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

Total costs for in-state tuition and fees, books, parking permits, health and liability insurance, laptop computer, etc. are approximately $21,000. In addition, costs for other expenses, such as textbooks, course manuals, and supplies, are approximately $1,900 for the entire program. Travel and living expenses for local and out-of-town clinical experiences are not included in this estimate. All students are required to have a laptop upon matriculation. Approximate cost of an appropriate computer is $1,000.

Non-resident students are subject to additional tuition costs, which may be found under Financial Information in this Catalog.

Doctor of Physical Therapy Curriculum

Course Descriptions

<table>
<thead>
<tr>
<th>First Year</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall Semester</strong></td>
<td></td>
</tr>
<tr>
<td>PHYT 7001 - Clinical Foundations I</td>
<td>4.0</td>
</tr>
<tr>
<td>PHYT 7005 - Therapeutic Exercise Science</td>
<td>4.0</td>
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^TOP / SHP Programs

Spring Semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
</tr>
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<tbody>
<tr>
<td>PHYT 7009 - Neuroscience I</td>
<td>3.0</td>
</tr>
<tr>
<td>PHYT 7014 - Systematic Reasoning and Scientific Investigation</td>
<td>3.0</td>
</tr>
<tr>
<td>PHYT 7017 - Cells, Systems, and Disease</td>
<td>3.0</td>
</tr>
<tr>
<td>PHYT 8022 - Professional Issues and Clinical Decision Making I</td>
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Semester Total 19.0

Second Year

Fall Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>PHYT 7018 - Pharmacological Principles in Physical Therapy</td>
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<tr>
<td>PHYT 8002 - Management of the Patient with Musculoskeletal Dysfunction I</td>
<td>5.0</td>
</tr>
<tr>
<td>PHYT 8007 - Orthotics in Rehabilitation</td>
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<tr>
<td>PHYT 8011 - Electrophysical Agents in Rehabilitation</td>
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<tr>
<td>PHYT 8108 - Management of the Patient with Neurovascular Dysfunction</td>
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<tr>
<td>PHYT 8130 - Movement Science II</td>
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Semester Total 17.5

Spring Semester

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<th>Course</th>
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<tbody>
<tr>
<td>PHYT 8012 - Prosthetics in Rehabilitation</td>
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</tr>
<tr>
<td>PHYT 8013 - Management of the Patient with Cardiopulmonary Dysfunction</td>
<td>3.0</td>
</tr>
<tr>
<td>PHYT 8114 - Management of the Patient with Musculoskeletal Dysfunction II</td>
<td>5.0</td>
</tr>
<tr>
<td>PHYT 8116 - Management of the Patient with Neurovascular Dysfunction II</td>
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</tr>
<tr>
<td>PHYT 8222 - Professional Issues &amp; Clinical Decision Making III</td>
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Semester Total 18.5

Summer Semester

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>PHYT 7021 - Clinical Experience I</td>
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<tr>
<td>PHYT 8021 - Clinical Experience II</td>
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Semester Total 10.0

Third Year

Fall Semester

<table>
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<th>Course</th>
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<tbody>
<tr>
<td>PHYT 8121 - Clinical Experience III</td>
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Semester Total 5.0

Spring Semester

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<tr>
<th>Course</th>
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<tr>
<td>CSBL 8010 - Anatomy II</td>
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<tr>
<td>PHYT 8075 - Human Development across the Lifespan</td>
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<tr>
<td>PHYT 8102 - Systematic Reasoning and Scientific Investigation II</td>
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<tr>
<td>PHYT 8106 - Principles of Administration in Physical Therapy</td>
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<tr>
<td>PHYT 8112 - Management of the Complex Patient</td>
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</table>

Semester Total 13.0

Semester Total 19.0

Campus and Clinical Experience (i.e., Clinical I, Clinical II, Clinical III, and clinical electives) are graded S (Satisfactory) or U (Unsatisfactory). Clinical grades are not used in calculating the grade point average.
**Physical Therapy Course Descriptions**

**CSBL 7014 - Anatomy I**
This course provides the basic principles of human anatomy. Students have the opportunity to learn human anatomy as it relates to function through the study of bones, cadaver sections, models, atlas drawings and photographs, and their own bodies. Concentration is on osteology, radiology, arthrology, neuromuscular, vascular, and basic systems anatomy as they apply to physical therapy. **Laboratory fee: $30.**

_Semester Credit Hours: 5.0_

**CSBL 8010 - Anatomy II**
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. **Human materials fee: $500. Laboratory fee: $30.**

_Semester Credit Hours: 2.0_

**PHYT 7001 - Clinical Foundations I**
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.

_Semester Credit Hours: 4.0_

**PHYT 7005 - Therapeutic Exercise Science**
The goal of this course is to introduce the student to the basic principles of therapeutic exercise 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, cardiovascular 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.

_Semester Credit Hours: 4.0_

**PHYT 7009 - Neuroscience I**
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.

_Semester Credit Hours: 3.0_

**PHYT 7011 - Clinical Foundations II**
This course is a continuation of Clinical Foundations I, providing further introduction to the fundamental concepts of physical therapy practice including basic clinical screening systems review, and introductory physical therapy skills. The course takes a regional approach in introducing examination and treatment techniques/procedures physical therapists use to manage patients. The course covers principles of diagnostic tests and measures to include range of motion measurement, muscle length assessment, detailed muscle function with specific muscle testing, functional outcome measures, and principles of selected interventions to include proprioceptive neuromuscular facilitation (PNF). The course will continue to lay the foundation for clinical reasoning and decision-making in the interdisciplinary approach to care. The students are given the opportunity to practice fundamental skills involved in the management of patients with a wide range of clinical problems.

_Semester Credit Hours: 4.0_

**PHYT 7012 - Movement Science I**
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.

_Semester Credit Hours: 4.0_

**PHYT 7014 - Systematic Reasoning and Scientific Investigation**
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 rehabili-
PHYT 7017 - Cells, Systems, and Disease
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.
Semester Credit Hours: 3.0

PHYT 7018 - Pharmacological Principles in Physical Therapy
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 for physical therapy treatments.
Semester Credit Hours: 2.0

PHYT 7019 - Neuroscience II
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 neuropharmacology. 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.
Semester Credit Hours: 2.5

PHYT 7021 - Clinical Experience I
Clinical Experiences I, II, and III 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. Practicum fee: $10.
Semester Credit Hours: 5.0

PHYT 8002 - Management of the Patient with Musculoskeletal Dysfunction I
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 and lower extremities. 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.
Semester Credit Hours: 1.5

PHYT 8007 - Orthotics in Rehabilitation
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.
Semester Credit Hours: 1.5

PHYT 8011 - Electrophysical Agents in Rehabilitation
This course includes the physical principles, physiological effects, therapeutic uses, and practical application of therapeutic heat and cold mechanical energy, including soft tissue massage.
Semester Credit Hours: 2.5

PHYT 8012 - Prosthetics in Rehabilitation
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.
Semester Credit Hours: 1.5

PHYT 8013 - Management of the Patient with Cardiopulmonary Dysfunction
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 cardi-
ovaascular 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.

Semester Credit Hours: 3.0

**PHYT 8021 - Clinical Experience II**

Clinical Experiences I, II, and III 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. Practicum fee: $10.

Semester Credit Hours: 5.0

**PHYT 8022 - Professional Issues and Clinical Decision Making I**

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.

Semester Credit Hours: 2.0

**PHYT 8075 - Human Development across the Lifespan**

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.

Semester Credit Hours: 2.0

**PHYT 8102 - Systematic Reasoning and Scientific Investigation II**

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 I, and gives the student the support to experience and complete an extensive Critically Appraised Topic document. The student produces either a written proposal for a research study 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.

Semester Credit Hours: 2.0

**PHYT 8106 - Principles of Administration in Physical Therapy**

Emphasis is on current trends and issues in the administration of clinical PT departments which affect technical and professional personnel. The course is designed to place emphasis on communication, motivation, leadership, and supervision of professionals and staff for the benefit of patient care. Activities include design of a PT management project and a business plan. This course will teach the skills necessary to become an entry level supervisor in a physical therapy or combined rehabilitation services department in either an institution or a stand-alone clinic. Topics include planning budgeting and staffing. Emphasis will be placed on developing leaders rather than managers.

Semester Credit Hours: 2.0

**PHYT 8108 - Management of the Patient with Neuromuscular Dysfunction I**

This course is designed to allow the student to develop the skills necessary to perform examination, evaluation, diagnosis, prognosis, and the development of comprehensive treatment plan of care for patients with neuromuscular dysfunction. Emphasis will be 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. The topics will be presented from a 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.

Semester Credit Hours: 5.0

**PHYT 8112 - Management of the Complex Patient**

This course gives the student the opportunity to practice examination techniques with a systems approach to the patient with complex problems. Physical therapy primary care for orthopaedic conditions and triage will be emphasized. Opportunities to practice screening for conditions requiring referral are practiced within this course and interdisciplinary opportunities are included with allied health professionals in the area of wellness and health promotion. The Guide to Physical Therapy Practice is used to assist with patient management scenarios with continued practice with diagnosis and prognosis to include plan of care. The student generates a case study to be presented to the class.

Semester Credit Hours: 3.0

**PHYT 8114 - Management of the Patient with Musculoskeletal Dysfunction II**

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. 

Semester Credit Hours: 5.0

**PHYT 8116 - Management of the Patient with Neuromuscular Dysfunction II**

This course is a continuation of Management of the Patient with Neuromuscular Dysfunction I, 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 is 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. 

Semester Credit Hours: 5.0

**PHYT 8122 - Professional Issues & Clinical Decision Making II**

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. 

Semester Credit Hours: 2.0

**PHYT 8130 - Movement Science II**

The course will examine how humans learn and acquire skills, as well as the mechanisms that are used to control skillful 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. 

Semester Credit Hours: 2.0

**PHYT 8221 - Clinical Internship**

This course is a four-week clinical internship 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. Practicum fee: $10. 

Semester Credit Hours: 2.0

**PHYT 8222 - Professional Issues & Clinical Decision Making III**

This course prepares students for their clinical experiences. Students will complete all required certifications and learn to use the clinical evaluation tool (PT MACS). Particular emphasis will be placed on satisfactory passing criteria for skills outlined in the PT MACS, and expected entry-level physical therapy skill performance. 

Semester Credit Hours: 1.0
Physician Assistant Studies

- Master of Physician Assistant Studies Program
- Application and Admission
- General Policies and Information
- Program Curriculum
- Course Descriptions

Philosophy and Rationale

The American Academy of Physician Assistants defines physician assistant as a health professional licensed or credentialed, in the case of those employed by the federal government, to practice medicine with physician supervision. Physician assistants (PAs) are qualified by graduation from an accredited physician assistant educational program and/or certification by the National Commission on Certification of Physician Assistants. Within the physician/PA relationship, physician assistants exercise autonomy in medical decisions and provide a broad range of diagnostic and therapeutic services. The clinical role of physician assistants includes primary and specialty care in medical and surgical practice in rural and urban areas. Physician assistant practice is centered on patient care and may include educational, research, and administrative activities.

The mission of The UT Health Science Center San Antonio Department of Physician Assistant Studies is to prepare primary health care providers who will contribute to the improvement of the mental, social, and physical well being of the underserved and vulnerable people of South Texas. This mission will be accomplished through culturally appropriate, socially relevant education, service, and scholarship.

The vision of the Health Science Center Department of Physician Assistant Studies is to be a recognized leader in primary health care education, scholarship, and service. This vision includes the education and training of competent and caring primary 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.

Master of Physician Assistant Studies Program

The Physician Assistant Studies program is an intense didactic and clinical program designed to prepare primary care physician assistants to meet the needs of the people of South Texas. The program begins fall semester and runs continuously for 33 months. The didactic component of the curriculum is 21 months long and consists of classroom, laboratory, and clinical preparation. This instruction is designed to prepare the student to successfully complete the 12 months of supervised clinical practice and, ultimately, for practice as a physician assistant. The supervised clinical practice phase is oriented to primary care and occurs in sites throughout South Texas. All students must complete a minimum of two rural rotations and must be prepared to assume the expense for this activity.

With the approval of the faculty, students who successfully complete the full 33-month MPAS program are awarded a Master of Physician Assistant Studies degree. Graduates are eligible to sit for the Physician Assistant National Certifying Exam (PANCE) 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), 12000 Findley Road, Suite 240, Duluth, GA, 30097; phone (770) 476-1224, fax (770) 476-1738.

Application and Admission

Information about application and admission to the program is available from the Health Professions Welcome Center and the Registrar at http://studentservices.uthscsa.edu/prospects_ah_programs_pa.s.aspx. Applications are accepted between May 1 and October 1 for enrollment the following fall semester. All required application information and documents must be submitted to the Centralized Application Service for Physician Assistants (CASPA) by October 1. Official transcripts should be sent directly to CASPA. Applicants may obtain further information and submit applications through CASPA at https://portal.caspaonline.org. An additional supplemental application must be submitted directly to the Health Science Center Registrar by October 1.

Applicants who are completing coursework in the fall semester of the application period must submit to CASPA an official transcript showing that the coursework is in progress by the October 1 deadline. If selected for an interview, applicants should bring a copy of their transcript with fall grades annotated.

Prior-year applicants must submit a new application. Questions about re-application should be directed to the Registrar and/or CASPA.

Admission Factors

A limited number of applicants are invited for a personal interview. Factors used for selecting applicants to be interviewed include:

- Awards and honors
- Bilingual skills
- Health care experience
- Knowledge of and commitment to the physician assistant profession
- Leadership
- Physician assistant shadow time
- Primary care/South Texas oriented
- Race/ethnicity
- Research background
- Scholastic achievements
- Service/volunteerism
- Work experience
- Written communication skills

Out-of-state applicants should be aware that priority is given to applicants who best meet the program mission.

**Admission Requirements**

Admission requirements for the [Master of Physician Assistant Studies](http://www.uthscsa.edu/shp/pa) program are listed below. Applicants who meet minimum requirements should be aware that the selection process usually involves choosing among highly qualified applicants, rather than between qualified and unqualified applicants.

- Successful completion of Texas Core Curriculum requirements (For applicants without a baccalaureate degree from a Texas public college or university, see “Texas Core Curriculum” in the introductory section of this Catalog.)
- Successful completion of program prerequisites (see “Program Prerequisites” below)
- Minimum overall grade point average (GPA) of 2.75
- Minimum GPA of 2.75 for all prerequisites, science coursework, and last 30 semester credit hours of college work (excluding technical courses)
- Proof of current American Heart Association Basic Life Support certification (if admitted)
- Personal statements: one personal statement is required as part of the CASPA application; a separate statement is required as part of the Health Science Center supplemental application.
- Two letters of reference submitted as part of the CASPA application

**Program Prerequisites**

Applicants without a baccalaureate degree must complete 90 semester credit hours of Texas Core Curriculum requirements and program prerequisites. The Texas Core Curriculum consists of at least 42 semester credit hours (see “Texas Core Curriculum” in the introductory section of this Catalog.). Note that courses that satisfy core curriculum requirements may also be used to satisfy program prerequisites.

All applicants must complete the program prerequisites below. All science prerequisites must be for science majors and include the associated laboratory section. Prerequisites must be completed by the end of fall semester of the application period.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>General Biology I with laboratory</td>
<td>4.0</td>
</tr>
</tbody>
</table>

*Combined Anatomy and Physiology courses totaling 8.0 semester credit hours are acceptable. It is recommended that electives include courses in medical terminology, genetics, biochemistry, virology, histology, cytology, developmental psychology, and other courses that will support physician assistant studies.

**General Polices and Information**

**Advanced Placement**

There is no advanced placement in the physician assistant studies program for academic work completed prior to matriculation or for any type of work or health care experience. No prerequisite coursework may be used for program credit or substitution for a physician assistant studies course. Only students who have been accepted to the program may apply for transfer of credit, credit for experiential learning, or credit by examination.

**Advancement, Probation, and Dismissal**

The Promotions Committee recommends a student’s promotion status based upon (1) course grades, (2) attendance record, and (3) professional behavior. In addition, the committee will assess extenuating circumstances that may have affected a student’s progress on an individual basis.

The grade of C is the minimum acceptable grade during the course of the program. However, to continue in the program [unconditionally](http://www.uthscsa.edu/shp/pa), students must (1) have a cumulative program grade point average of 2.75, (2) successfully complete all prescribed courses and program requirements, (3) earn a grade of at least a C in each course, and (4) receive faculty recommendation.

**Applicant Orientations**

Applicant orientations are offered monthly between April and August. Additional information is available at the department Web site [http://www.uthscsa.edu/shp/pa](http://www.uthscsa.edu/shp/pa). Reservations to attend an orientation may be made by contacting the department by phone at (210) 567-8810 or by e-mail at pastudies@uthscsa.edu. Individual pre-admission counseling is available from the Health Professions Welcome Center at [http://www.uthscsa.edu/shp/pa](http://www.uthscsa.edu/shp/pa).
Attendance

Students are expected to attend every class, laboratory, conference, demonstration, meeting, clinical assignment, etc., that is a component of the curriculum. The once-a-year offering of courses and step-by-step format of the curriculum allow minimal or no opportunity for make-up sessions. The faculty are 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.

Personal illness, immediate family emergency, and a natural disaster are reasons for absence. However, prolonged absences for any reason may not be remediable.

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 will result in faculty review and penalties, including dismissal from the program.

Course grading requirements may include participation and any absence is considered non-participation.

The ability of the graduating physician assistant student is totally dependent on the sum of her/his experiences during the educational and training period. No experience is gained by absence.

Auditing Courses

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.

Computer and PDA Requirement

Students are required to purchase a laptop computer from the Health Science Center Computer Store at matriculation. Students are also required to purchase a PDA during the second year of the program. Cost of both is calculated as a cost of attendance and is included in determination of financial aid eligibility (see “Program Costs” below).

Credit by Examination

No course with a PHAS or INTD prefix may be credited by examination. Other courses are at the discretion of the course director and/or the chair of the department offering the course. The student may be assessed a fee for an examination taken for credit.

Credit for Experiential Learning

Credit for experiential learning for a course in the curriculum requires exacting and well-documented experiences that demonstrate mastery of the learning objectives and skills in the course to be credited. Documentation is required from individuals who have knowledge of the student and who can attest to mastery. Student documentation, alone, is not adequate for credit to be awarded.

Professional Attire

Students are expected to dress in a manner that reflects their maturity and matriculation in a professional course of study. Student dress, as well as conduct, must reflect the professional nature of the PA profession.

During the first year of the program, students spend most of their time in lectures, laboratories, or other activities that do not involve contact with patients. At such times, students are expected to dress comfortably, but in such a way that does not detract from attentiveness and learning. When patient contact is part of the curriculum, either through direct contact or when a patient is brought to a lecture room, students are expected to have a professional appearance and to wear the white clinical jacket with patch and the required student I.D. Course and program faculty should be consulted about proper attire in specific circumstances.

During supervised clinical practice, students are expected to dress as health care professionals and to wear both the white jacket with program patch and the required name tag. For some rotations, other forms of dress may be acceptable (for example, surgery). The faculty should be consulted on any questions about dress on clinical rotations.

During any clinical or patient contact settings, the hair must be worn off the collar and prevented from falling into patient fields.

A sample dress code is available on the Physician Assistant Studies Web site.

Program Costs

Costs for in-state tuition and fees, parking permits, health and liability insurance, etc., are approximately $38,000 for the entire MPAS program. In addition, costs for other expenses, such as textbooks, computer (required to be purchased from the Health Science Center Computer Store), laboratory jackets, equipment lease, etc., are approximately $7,750. Students are expected to have high-speed Internet access (included in the estimates above). Non-resident students are subject to additional tuition costs, which may be found under Financial Information in this Catalog.

Students are responsible for personal expenses incurred in traveling to clinical rotation sites outside of San Antonio throughout South Texas. Such rotations are scheduled periodically throughout the third year. Expenses may include lodging and bus fare and/or automobile mileage. It is estimated that approximately $2500 should be budgeted toward these costs.

Technical Standards

Applicants should review the Student Technical Standards available at the department’s Web site, http://www.uthscsa.edu/shp/pa, or from the department office.
Transfer of Credit

Prerequisites for the Physician Assistant Studies program cannot be used as transfer courses for the courses in the curriculum. A course may be accepted in transfer if it was completed with a grade of C or better at the graduate level at a regionally accredited college or university. The syllabus must be sent directly from the originating school or teacher. The learning objectives, grading requirements, and required skills must be the same as or similar to the course to be credited. The credit hours of the transfer course must be equal or exceed the Health Science Center course. The department chair is responsible for approving transfer of credit.

Individuals allowed to transfer from another physician assistant program must meet the same prerequisites as students in the Health Science Center program, must have been enrolled in a post-baccalaureate physician assistant program, and meet all requirements for admission to the Health Science Center program. The student must be in good standing at the original institution and recommended by the program director or department chair.

Master of Physician Assistant Studies Curriculum

Course Descriptions

The curriculum consists of five semesters of didactic, laboratory, and clinical instruction conducted on the Health Science Center campus. During the final three semesters, students complete 12 four-week supervised clinical practice rotations in San Antonio and throughout South Texas. Rotations are full-time clinical experiences (40+ hours per week) and earn 4.0 semester credit hours each. A pass-fail summative examination is administered during the final fall semester; students must pass the summative examination to qualify for graduation.

<table>
<thead>
<tr>
<th>First Year</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td><strong>Fall Semester</strong></td>
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<tr>
<td>CLSC 5040 - Laboratory Medicine</td>
<td>3.0</td>
</tr>
<tr>
<td>PHAS 5001 - Patient Evaluation I</td>
<td>3.0</td>
</tr>
<tr>
<td>PHAS 5002 - Ethical Considerations in Health Care</td>
<td>1.0</td>
</tr>
<tr>
<td>PHAS 5005 - Clinical Applications in Nutrition</td>
<td>2.0</td>
</tr>
<tr>
<td>PHAS 5006 - Clinical Applications in Physiology for the Health Professional</td>
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</tr>
<tr>
<td>PHAS 5008 - Clinical Human Anatomy</td>
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<td><strong>Semester Total</strong></td>
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<tr>
<td><strong>Spring Semester</strong></td>
<td></td>
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<tr>
<td>CLSC 5041 - Laboratory Medicine - Laboratory</td>
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<tr>
<td>PHAS 5000 - Introduction to the Profession</td>
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<tr>
<td>PHAS 5003 - Behavioral Medicine</td>
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<tr>
<td>PHAS 5004 - Clinical Applications</td>
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<tr>
<td>PHAS 5007 - Pathogenesis of Human Diseases</td>
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<tr>
<td>PHAS 6001 - Cultural Issues in Health</td>
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<td><strong>Summer Semester</strong></td>
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Second Year

<table>
<thead>
<tr>
<th>Fall Semester</th>
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<tr>
<td>INTD 2001 - Introduction to the Clinical Sciences (ICS) I</td>
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<tr>
<td>EMSP 3010 - Basic Cardiac Life Support</td>
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<tr>
<td>PHAS 6003 - Patient Evaluation II</td>
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<tr>
<td>PHAS 6004 - Preventive Medicine/Community Health</td>
<td>3.0</td>
</tr>
<tr>
<td>PHAS 6010 - Pharmacology I</td>
<td>3.0</td>
</tr>
<tr>
<td>PHAS 6011 - Problem-Based Learning II</td>
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</tr>
<tr>
<td>PHAS 6013 - Scientific Inquiry</td>
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<table>
<thead>
<tr>
<th>Spring Semester</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>INTD 2002 - Introduction to the Clinical Sciences (ICS) II</td>
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<tr>
<td>EMSP 2135 - Advanced Cardiac Life Support</td>
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<tr>
<td>PHAS 6014 - Pharmacology II</td>
<td>3.0</td>
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<tr>
<td>PHAS 6015 - Clinical Skills II</td>
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<tr>
<td>PHAS 6016 - Problem-Based Learning III</td>
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</tr>
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</table>

Second Year Summer through Third Year Spring

Supervised Clinical Practice Rotations PHAS 6101–6112:

| PHAS 6101 - Supervised Clinical Practice I - Emergency Medicine | 4.0          |
| PHAS 6102 - Supervised Clinical Practice II - Medical Inpatient Service | 4.0          |
| PHAS 6103 - Supervised Clinical Practice III - Pediatrics | 4.0          |
| PHAS 6104 - Supervised Clinical Practice IV - Primary Care I | 4.0          |
| PHAS 6105 - Supervised Clinical Practice V - Primary Care II | 4.0          |
| PHAS 6106 - Supervised Clinical Practice VI - Primary Care III | 4.0          |
| PHAS 6107 - Supervised Clinical Practice VII - OB/GYN | 4.0          |
| PHAS 6108 - Supervised Clinical Practice VIII - Surgery | 4.0          |
| PHAS 6109 - Supervised Clinical Practice IX - General Elective II | 4.0          |
| PHAS 6110 - Supervised Clinical Practice X - Medical Elective | 4.0          |
| PHAS 6111 - Supervised Clinical Practice XI - Community Medicine Project | 4.0          |
| PHAS 6112 - Supervised Clinical Practice XII - Selective | 4.0          |

Summative Evaluation

<table>
<thead>
<tr>
<th>Supervised Clinical Practice Total</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program Total</strong></td>
<td>124.0</td>
</tr>
</tbody>
</table>
Physician Assistant Studies Course Descriptions

EMSP 3010 - Basic Cardiac Life Support
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. Semester Credit Hours: 0.0

PHAS 5000 - Introduction to the Profession
This course is an overview of the physician assistant profession. The course will provide students with an opportunity to develop an understanding of the profession to include history, social issues, liability, educational philosophy, certification/licensure requirement, and professional concepts/issues. Preclinical experiences will include clinical observations, clinical activity, and exposure to the wide range of physician assistant practices. There is an instructional technology fee for this course. Semester Credit Hours: 2.0

PHAS 5001 - Patient Evaluation I
This course provides the student with an opportunity 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. Clinical fee: $300. There are also instructional technology and leasing fees associated with this course. Semester Credit Hours: 3.0

PHAS 5002 - Ethical Considerations in Health Care
This interdisciplinary course will provide students with an opportunity to develop an understanding of the ethical issues facing allied health professionals. Topics 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 also will be addressed. Collaborative activities and simulated cases will be used to enhance discussion among students. There is an instructional technology fee for this course. Semester Credit Hours: 1.0

PHAS 5003 - Behavioral Medicine
This course provides the student with an opportunity to develop an understanding of human behavior by providing an overview of major behavioral disease processes and differentiation criteria to include disease presentation, physical examination findings, laboratory testing, and therapeutic approaches. There is an instructional technology fee for this course. Semester Credit Hours: 3.0

PHAS 5004 - Clinical Applications
This course provides the student with an opportunity to experience clinical practice and 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 Patient Evaluation I including physical examination, medical history, patient education, documentation, and medical record keeping. Faculty will facilitate laboratory and clinical experience that will focus on assessment of patients and presentation of findings in a variety of settings. Activities will range from observation to participation in patient care. Basic problem solving, group discussion, and literature review will be included. Clinical fee: $300. There are also instructional technology and leasing fees associated with this course. Semester Credit Hours: 4.0

PHAS 5005 - Clinical Applications in Nutrition
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. There is an instructional technology fee for this course. Semester Credit Hours: 2.0

PHAS 5006 - Clinical Applications in Physiology for the Health Professional
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. There are instructional technology and leasing fees associated with this course. Semester Credit Hours: 4.0

PHAS 5007 - Pathogenesis of Human Diseases
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 organs 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. There is an instructional technology fee for this course. Semester Credit Hours: 3.0

PHAS 5008 - Clinical Human Anatomy
This course is a study of the structure and function of the human body to include the study of cells, tissues, and organ systems. Emphasis will be on the interrelationship of the human body systems with clinical correlation through the use of case studies, radiographs, photographs, and drawings. This is an outline class with enhanced virtual laboratory sessions. Additional time may be spent with cadaver prosections, models, or plastinated specimens. There is an instructional technology fee
PHAS 5091 - Special Topics
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.
Semester Credit Hours: 1.0–10.0

PHAS 6001 - Cultural Issues in Health
The student will have an opportunity to develop knowledge and understanding of the topics and issues influencing the health of culturally diverse people with a particular emphasis on the South Texas region. Alternative and complementary health beliefs will be discussed. Medical Spanish will be introduced. There is an instructional technology fee for this course.
Semester Credit Hours: 4.0

PHAS 6002 - Problem-Based Learning I
This course will introduce the student to problem-based learning. The student will have an opportunity to learn and develop problem-based learning skills as they apply to patient problems and health care issues. Types of learning events will include small-group activity, individual study and literature review, and medical problem solving based on student knowledge and comprehension through application, analysis, synthesis, and evaluation. There is an instructional technology fee for this course.
Semester Credit Hours: 1.0

PHAS 6003 - Patient Evaluation II
This course provides the student with an opportunity to experience clinical practice and further develop an appreciation for the art and science of medicine as it relates to physician assistant practice. Students will have the opportunity and will be required to see patients in the hospital setting and become more proficient at performing and reporting the complete medical history and physical examination. There is an instructional technology fee for this course.
Semester Credit Hours: 1.0

PHAS 6004 - Preventive Medicine/Community Health
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 community health, with an emphasis on needs assessment and project development, will be done. There is an instructional technology fee for this course.
Semester Credit Hours: 3.0

PHAS 6010 - Pharmacology I
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. Majors 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. There is an instructional technology fee for this course.

PHAS 6011 - Problem-Based Learning II
This course is a continuation of Problem-Based Learning I. There is an instructional technology fee for this course.
Semester Credit Hours: 3.0

PHAS 6012 - Clinical Skills I
The student will have the opportunity to develop skill and expertise in the clinical techniques generally used by physician assistants. Practical instruction on patient care skills will be provided with direct experiential practice on models. Clinical fee: $300. There are also instructional technology and leasing fees associated with this course.
Semester Credit Hours: 2.0

PHAS 6013 - Scientific Inquiry
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. There is an instructional technology fee for this course.
Semester Credit Hours: 3.0

PHAS 6014 - Pharmacology II
A continuation of Pharmacology I, 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. There is an instructional technology fee for this course.
Semester Credit Hours: 3.0

PHAS 6015 - Clinical Skills II
This course is a continuation of Clinical Skills I. Clinical fee: $300. There are also instructional technology and leasing fees associated with this course.
Semester Credit Hours: 2.0

PHAS 6016 - Problem-Based Learning III
This course is a continuation of Problem-Based Learning I & II. There is an instructional technology fee for this course.
Semester Credit Hours: 1.0

PHAS 6017 - Senior Seminar
The senior seminar includes case reports, presentations, updates, and lectures on relevant topics. Practice issues include personal interaction; dealing with difficult patients (e.g., distressed, demanding, suicidal, physically or mentally challenged, non-English speaking); medical record keeping; and quality assurance. Management issues include office staffing and an introduction to billing and coding. Transition-to-Practice issues
include marketing yourself, the job search, creating a curriculum vitae, contract negotiations, and information on the certification examination and licensing procedures. The Summative Evaluation is conducted during this period of time and includes standardized testing and a standardized patient encounter. Successful completion of the Summative Evaluation is required for graduation from the PA Studies program.

Semester Credit Hours: 2.0

PHAS 6101 - Supervised Clinical Practice I - Emergency Medicine
This is a four-week clinical practicum during which the student will have the opportunity to gain practical experience in emergency and life-threatening conditions and assume patient-care responsibility under the direct supervision of a licensed practitioner. Students will work primarily in emergency medicine but may be required to take call and participate in hospital rounds. This practicum is usually accomplished in a hospital emergency room. Practicum fee: $10.
Semester Credit Hours: 4.0

PHAS 6102 - Supervised Clinical Practice II - Medical Inpatient Service
This is a four-week clinical practicum during which the student will have the opportunity to gain practical experience and assume patient-care responsibility under the direct supervision of a licensed practitioner. Students will work primarily in an inpatient setting as part of the medical team and are required to take call and participate in hospital care plans. This practicum is accomplished in an inpatient internal medicine setting. Practicum fee: $10.
Semester Credit Hours: 4.0

PHAS 6103 - Supervised Clinical Practice III - Pediatrics
This is a four-week clinical practicum during which the student will have the opportunity to gain practical experience in the pediatric population and assume patient-care responsibility under the direct supervision of a licensed practitioner. Students will work primarily in an outpatient setting but may be required to take call and participate in hospital rounds. This practicum is usually accomplished in a pediatric department or clinic but may be held in a rural, inner-city, or family medicine setting. Practicum fee: $10.
Semester Credit Hours: 4.0

PHAS 6104 - Supervised Clinical Practice IV - Primary Care I
This is a four-week clinical practicum during which the student will have the opportunity to gain practical experience in primary care and assume patient-care responsibility under the direct supervision of a licensed practitioner. Students will work primarily in an outpatient setting but may be required to take call and participate in hospital rounds. This practicum is usually accomplished in a rural or inner-city facility, but may be in an internal medicine or family medicine department. Practicum fee: $10.
Semester Credit Hours: 4.0

PHAS 6105 - Supervised Clinical Practice V - Primary Care II
This is a four-week clinical practicum during which the student will have the opportunity to gain practical experience in primary care and assume patient-care responsibility under the direct supervision of a licensed practitioner. Students will work primarily in an outpatient setting but may be required to take call and participate in hospital rounds. This practicum is usually accomplished in a rural or inner-city facility, but may be in an internal medicine or family medicine department. Practicum fee: $10.
Semester Credit Hours: 4.0

PHAS 6106 - Supervised Clinical Practice VI - Primary Care III
This is a four-week clinical practicum during which the student will have the opportunity to gain practical experience in primary care and assume patient-care responsibility under the direct supervision of a licensed practitioner. Students will work primarily in an outpatient setting but may be required to take call and participate in hospital rounds. This practicum is usually accomplished in a rural or inner-city facility, but may be in an internal medicine or family medicine department. Practicum fee: $10.
Semester Credit Hours: 4.0

PHAS 6107 - Supervised Clinical Practice VII - OB/GYN
This is a four-week clinical practicum during which the student will have the opportunity to gain practical experience in obstetrics and gynecology and assume patient-care responsibility under the direct supervision of a licensed practitioner. Students will work primarily in an outpatient setting but may be required to take call and to participate in hospital rounds. This practicum is usually accomplished in a pediatric department or clinic but may be held in a rural, inner-city, or family medicine setting. Practicum fee: $10.
Semester Credit Hours: 4.0

PHAS 6108 - Supervised Clinical Practice VIII - Surgery
This is a four-week clinical practicum during which the student will have the opportunity to gain practical experience in pre- and post-operative care and assume patient-care responsibility under the direct supervision of a licensed practitioner. Students will work both in inpatient and outpatient settings and are expected to take call and to participate in surgical procedures. This practicum is usually accomplished in a surgical department and focuses on general surgical procedures. Practicum fee: $10.
Semester Credit Hours: 4.0

PHAS 6109 - Supervised Clinical Practice IX - General Elective II
This is a four-week clinical practicum during which the student will have the opportunity to gain practical experience and assume patient-care responsibility under the direct supervision of a licensed practitioner. Students will work primarily in an outpatient setting but may be required to take call and participate in hospital rounds. This practicum may be in any general medicine or medical subspecialty, including primary care, or may be in any general surgery or surgical subspecialty. Location depends on the focus the student selects. Practicum fee: $10.
Semester Credit Hours: 4.0
PHAS 6110 - Supervised Clinical Practice X - Medical Elective
This is a four-week clinical practicum during which the student will have the opportunity to gain practical experience and assume patient-care responsibility under the direct supervision of a licensed practitioner. Students will work primarily in an outpatient setting but may be required to take call and participate in hospital rounds. This practicum may be in any general medicine or medical subspecialty, including primary care. Practicum fee: $10.
Semester Credit Hours: 4.0

PHAS 6111 - Supervised Clinical Practice XI - Community Medicine Project
The implementation of the community medicine project developed during didactic course of study, the project should be designed to improve the overall health or well being of a population or community. Students will have the opportunity to go into the community and put their project into action. The project is a group undertaking and requires the group to conduct a needs analysis, prepare and submit a grant proposal, create a Web site in support of the project, create a scientific poster that summarizes the project, present the project to junior PA students, and create a project summary notebook. Students are graded on both an individual and group level based in part on participation, accomplishments, and group dynamics. Practicum fee: $10.
Semester Credit Hours: 4.0

Selective
Selective: A four-week course of instruction selected by faculty (with input from the student) to best meet the needs of the student. Students are considered for one of the following:

PHAS 6112 - Supervised Clinical Practice XII – Selective
This is a four-week course of instruction selected by faculty (with input from the student) to best meet the needs of the student. Students are considered for one of the following:

A. Clinical Research: This course is an expansion of the Scientific Inquiry course taken in the first summer session. It introduces the student to the Clinical Research environment. Students will be involved in the selection and care of patients in Phase II–Phase IV Clinical Studies. Students may review ethical considerations for patient selection, screen patients for study protocol participation, and review and compile clinical results. Students may also be required to analyze clinical research articles and/or clinical data.

B. Geriatrics: This is a four-week clinical practicum during which the student will have the opportunity to gain practical experience in geriatrics and assume patient care responsibility under the direct supervision of a licensed practitioner. Students will work primarily in an outpatient setting but may be required to take call and participate in hospital and/or nursing home rounds. This practicum may be accomplished in either an inpatient or outpatient setting; may also be selected as an elective rotation.

C. Psychiatry: This is a four-week clinical practicum during which the student will have the opportunity to gain practical experience in behavioral medicine and assume patient-care responsibility under the direct supervision of a licensed practitioner. Students will work primarily in an outpatient setting but may be required to take call and participate in hospital rounds. This practicum may be accomplished in either an inpatient or outpatient setting; may also be selected as an elective rotation.

D. Skills Enhancement: This is a four-week rotation based on the improvement of clinical and study skills. Students receive individualized assistance with development of study skills to aid them in the completion of the PA National Certification Examination. The goal is for general problem solving and organizational skills to be enhanced. Clinical skills are polished and test-taking skills are emphasized. Students who fail more than one end of rotation examination during the clinical year may be required to take this selective.

E. South Texas Environmental Education and Research (STEER): This is a four-week practicum in which the student lives and works in the Laredo Community under the direction of STEER faculty and staff. Students are exposed to medical and environmental issues ranging from disparate health care and living conditions, to air and water quality and purification. Students may also receive training with Customs officials on the Texas/Mexico border, wildlife specialists, and complementary and alternative medicine specialists; may also be selected as an elective rotation.

F. Specialty Training: Four-week rotation in a specialty area not normally considered by other students. This rotation may be a one-time offering based on the needs of the student and may occur outside of the usual clinical rotation site area.

G. Teaching: Designed to provide the student with the opportunity to develop an understanding and appreciation for professional and higher education. The student will be given the opportunity to participate in teaching, service, and scholarly activity under the mentorship of the faculty. The opportunity for the level of participation will depend on the timing of the rotation assignment, availability of faculty, and program activity. Directed readings and assignments will allow the student to have the opportunity to develop an understanding of curriculum, course, lecture development, and evaluation. Students will teach selected topics to first- and second-year students; may also be selected as an elective rotation.

Practicum fee: $10.
Semester Credit Hours: 4.0

^TOP / SHP Programs

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Respiratory Care

- Bachelor of Science in Respiratory Care Program
- Application and Admission
- General Policies and Information
- Program Curriculum
- Course Descriptions

Respiratory care, also known as respiratory therapy, is a challenging and exciting health profession responsible for caring for patients with cardiopulmonary system deficiencies. There are a variety of opportunities to practice respiratory care in such areas as critical care, neonatal and pediatric intensive care units, cardiopulmonary diagnostics, alternate site care such as nursing homes, long term acute care hospitals, home care, pulmonary rehabilitation, polysomnography (sleep studies), and disease management.

The respiratory therapist works with diverse patients ranging from newborn and pediatric patients to adults and the elderly. Disease states or conditions often requiring respiratory care include asthma, emphysema, chronic obstructive lung disease, pneumonia, cystic fibrosis, shock, trauma, and postoperative surgical care.

Before graduating, students in the bachelor’s degree program are eligible to sit for the national board exams for the Certified Respiratory Therapy examination (CRT) which is the entry-level to practice respiratory therapy, and the Registered Respiratory Therapist examination (RRT), required for advanced-level respiratory therapy practice. Students are also eligible to take any specialty examinations such as the perinatal/pediatrics and pulmonary function technology examinations.

Bachelor of Science in Respiratory Care Program

The Bachelor of Science in Respiratory Care degree program requires a minimum of 124.5 semester credit hours, including Texas Core Curriculum requirements (see “Texas Core Curriculum” in the introductory section of the Catalog), program prerequisites, respiratory care coursework, and clinical practice. Texas core curriculum requirements and program prerequisites may be completed at any regionally accredited college or university.

The “professional phase” of the program, which consists of respiratory care coursework and clinical practice, is completed at the Health Science Center and affiliated clinical sites. The professional phase is approximately 17 months long. It is dedicated to clinical and academic excellence and includes more than 1,000 hours of in-hospital clinical experiences. As a leadership program in respiratory care, the program is designed to provide graduates with the opportunity to gain the foundation needed to assume professional leadership roles in clinical practice, clinical specialty areas, research, education, and management. Graduates are awarded a Bachelor of Science in Respiratory Care degree. The bachelor’s degree program is accredited by the Committee on Accreditation for Respiratory Care (CoARC), 1248 Harwood Rd., Bedford, Texas 76021-4244, phone (817) 283-2835, fax (817) 354-8519, and the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 35 East Wacker Drive, Suite 1970, Chicago, IL 60601, (312) 553-9355.

Application and Admission

Application for admission to the Bachelor of Science in Respiratory Care program may be completed at https://www.applytexas.org/adappco/commonapp.WBX. Detailed information about application and admission is available from the Health Professions Welcome Center at (866) 802-6288 (toll-free) or (210) 567-8744, and online at http://studentservices.uthscsa.edu/prospects_apply_ah.aspx.

Admission Requirements

Applicants must have completed 42 semester credit hours of Texas Core Curriculum requirements (see “Texas Core Curriculum” in the introductory section of the Catalog) and 26 semester credit hours of program prerequisites (see list of pre-
requisites below). Texas Core Curriculum requirements may be used to satisfy program prerequisites, and program prerequisites may be used to satisfy Texas Core Curriculum requirements. Admission requirements include:

**Admission requirements include:**

- Completion of Texas Core Curriculum requirements with a grade of at least **C** in all courses
- Completion of all Texas Core Curriculum and program prerequisites before fall semester enrollment in the program
- Completion of program prerequisites with a grade of at least **C** in all courses
- Overall grade point average of 2.5 or higher in college/university coursework
- Sophomore standing or higher at the time of application
- Personal interview with program faculty

**Program Prerequisites**

All applicants must complete the program prerequisites below. All science courses must include the associated laboratory section.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy and Physiology I with laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>Anatomy and Physiology II with laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>Chemistry I with laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>General Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>Microbiology with laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td>Physics I with laboratory</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Program Prerequisite Total</strong></td>
<td><strong>26.0</strong></td>
</tr>
</tbody>
</table>

**General Policies and Information**

**Advanced Standing in Respiratory Care**

Individuals holding the **Registered Respiratory Therapist (RRT)** credential awarded by the **National Board for Respiratory Care** (NBRC) are eligible for advanced standing in the **Respiratory Care Program** or are eligible to sit for the RRT credential within one semester of entering the program may apply for the advanced standing program.

Individuals holding the RRT credential may be eligible to receive 41.5 semester credit hours based on the RRT credential. Such individuals must enroll in and complete a minimum of 30 semester hours of coursework at the **Health Science Center**. Individuals holding the RRT credential must apply for admission to the program at least 60 days before the first day of the semester in which they wish to begin coursework at the Health Science Center. All **Texas Core Curriculum** requirements must be completed prior to graduation and all other program requirements apply.

**Advancement, Grades, Promotion, and Dismissal**

All respiratory care courses are taught in a sequential manner and each professional course in the program serves as the prerequisite for the subsequent course. Therefore, courses must be taken in the planned sequence. If a student earns a grade lower than **C**, the student may not be permitted to register for subsequent courses or semesters, and the student may be subject to suspension or dismissal from the program.

**Conduct and Ethics**

Students are expected to conduct themselves at all times in a manner that conforms to the ethics of the profession and instills patient confidence in one’s abilities as a health care practitioner. Irresponsible, unprofessional, or unethical behavior, or failure to follow the instructions of a clinical instructor during clinical practice may result in dismissal from the program. All hospital regulations are to be followed by students when undergoing clinical training in a facility.

**Computer Requirement**

Respiratory care student are required to purchase a laptop computer from the Health Science Center **Computer Store** on matriculation. The cost of the computer is calculated into program costs (see below), and eligible students may receive financial aid to purchase the computer. Students are expected to have high-speed Internet access.

**Correspondence Between Students and Faculty**

1. A schedule of office hours will be noted in each faculty member’s course syllabus.
2. Students are responsible for checking the program bulletin board for current notices.
3. Students will be assigned to a faculty advisor in the fall semester of their junior year. Times for student conferences will be posted.
4. Each student must meet with her/his advisor formally at least once per semester during the academic year. One advisement session will be held during each summer session.
5. A student conference record will be completed and signed by both the faculty member and student following a formal conference.

**Deficiencies, Remediation, Probation and Dismissal Policy**

Student status in the Respiratory Care Program is determined by the department faculty. The faculty review each student’s progress and performance and may decide to (a) continue a student in the program, (b) place the student on probation, (c) suspend the student, or (d) dismiss the student from the program.

*Continuation in the program is dependent on the following requirements:*
• Satisfactory progress in removing any conditions imposed at the time of admission, if applicable
• Maintaining a minimum grade point average of 2.5 (C) or 75% in all respiratory care courses taken while enrolled in the program
• Satisfactory professional behavior

A student may be placed on a remediation learning contract:

• If a student makes a grade of D or F on a course examination other than the final examination
• The learning contract or plan will be created to determine the deficiencies that need to be corrected.
  o The tasks and responsibilities outlined for the student
  o The deadlines for completion, criteria for evaluation, and evaluation methods will be determined. Remediation tasks and evaluation criteria do not have to be identical to the original tasks and criteria.
  o The student’s individual examination grade will not be changed. It is anticipated that the results of successful remediation will be evident when the comprehensive final examination is taken.

A student may be placed on probation:

• Violating provisions listed in the “Guide for Professional Conduct” in the UT Health Science Center Student Guide (School of Health Professions section). These provisions relate to the intellectual, ethical, behavioral, and attitudinal attributes necessary to perform as a respiratory therapy student and health care provider. (Refer to this Catalog for more information.)
• Unsatisfactory progress toward correcting academic or clinical deficiencies
• Violating HIPPA regulations
• Violating the AARC Code of Ethics

A student may be dismissed from the program:

Students may be dismissed from the program due to failure to rectify issues concerning academic performance or professional behaviors. In addition to academic deficiencies, a student may be dismissed for violating provisions listed in the “Guide for Professional Conduct” in this Catalog. These provisions relate to the intellectual, ethical, behavioral, and attitudinal attributes necessary to perform as a respiratory therapy student and health care provider.

Dropping Courses

See “Adding/Dropping Courses” under General Academic Policies in this Catalog for information on limitations on dropping courses.

Grading Model

Grades earned in Respiratory Care courses are based on the following model:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90-100%</td>
</tr>
<tr>
<td>B</td>
<td>80-89%</td>
</tr>
<tr>
<td>C</td>
<td>75-79%</td>
</tr>
<tr>
<td>D</td>
<td>70-74%</td>
</tr>
<tr>
<td>F</td>
<td>Below 70%</td>
</tr>
</tbody>
</table>

Unless otherwise described in a given course syllabus, the minimum satisfactory grade for course credit is 75% (letter grade of C), and all stipulated segments of a course must be passed by this standard.

Graduation Requirements

To graduate from the program, students must:

• Complete all required coursework with a grade point average (GPA) of 2.0 or better
• Complete all required respiratory care professional courses with a grade of C or better
• Successfully complete the Entry Level CRT/RRT Examinations, given by the National Board for Respiratory Care, or an equivalent departmental examination
• Successfully complete a comprehensive end-of-program competency assessment
• Hold current certification in Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS)
• Successfully complete the Neonatal Resuscitation Program (NRP)

Guide for Professional Conduct

Professionalism relates to the intellectual, ethical, behavioral, and attitudinal attributes necessary to perform as a health care provider. Examples of professional behavior are listed in the Guide for Professional Conduct. These examples should be reviewed by the student; however, professional behavior is not limited to these examples. In addition, the student will be expected to:

Attention

1. Demonstrate awareness of the importance of learning by asking pertinent questions, identifying areas of importance in clinical practice, and reporting and recording those areas.

Participation

1. Complete assigned work and prepare for class, laboratory, and clinical objectives prior to attending.
2. Participate in formal and informal discussions, answer questions, report on experiences, and volunteer for special tasks and research.
3. Initiate alteration in patient-care techniques when appropriate via notification of nursing staff and physician.
Dependability and Appearance
1. Attend sessions and be punctual and reliable in completing assignments with minimal instructor supervision.
2. Promote a professional demeanor by appropriate hygiene, grooming, and attire.

Communication
1. Demonstrate a pleasant and positive attitude when dealing with patients by greeting them by name, approaching them in a nonthreatening manner, and setting them at ease.
2. Explain procedures clearly to the patient.
3. Ask patients how they feel and solicit patient comments regarding the patient’s overall condition and response to therapy.
4. Communicate clearly to nursing staff and physicians regarding the patient status, utilizing appropriate charting, oral communication, and the established chain of command.

Organization
1. Display recognition of the importance of interpersonal relationships with other members of the health care team by acting in a cordial and pleasant manner.
2. Work as a team with fellow students, nursing staff, and the physician in providing patient care.
3. Organize work assignments effectively.
4. Collect information from appropriate resources.
5. Correlate respiratory care to overall patient condition.
6. Adapt respiratory care techniques to overcome difficulties.
7. Devise or suggest new techniques for the welfare of the patient or enhance the efficiency of the respiratory care facility.

Safety
1. Verify identity of patients before initiating therapeutic action.
2. Interpret written information and verbal directions correctly.
3. Observe and report significant changes in patient’s condition promptly to appropriate person(s).
4. Act to prevent accidents and injury to patients, personnel, and self.
5. Transfer previously learned theory and skills to new/different patient situations.
6. Request help from faculty/staff when unsure.

Examples of critical errors in professional conduct and judgment include:
1. Failure to place the patient’s welfare as first priority
2. Failure to maintain physical, mental, and emotional composure in all situations
3. Consistent ineffective, inefficient use of time in clinical setting
4. Failure to be honest with patients, faculty, and colleagues

Program Costs
Costs for in-state tuition and fees, parking permits, health and liability insurance, etc., are approximately $15,600 for the entire degree program. In addition, costs for other expenses, such as required laptop computer, textbooks, course manuals, equipment, uniforms or scrubs, examination fees, and supplies are approximately $3,900. Travel and living expenses for local and out-of-town clinical experiences are not included in this estimate. Non-resident students are subject to additional tuition costs, which may be found under “Financial Information” in this Catalog.

Withdrawing from a Course
Courses in the Respiratory Care program follow a sequence that builds a foundation of knowledge and skills. The sequence is integrated and mandatory courses must be taken in the determined sequence. To withdraw from a course, a student must have permission from the faculty member and Chair of the Department. Withdrawing from a course may delay enrollment in subsequent courses until the course is taken again. If a student withdraws from a course, a grade of W is assigned.

Withdrawing from the Program
A student may withdraw from the program by submitting a written request to the Department Chair. This request must be approved by the Dean or Associate Dean of the School of Health Professions. As part of the withdrawal process, the student must complete a Clearance Form and submit it for proper signatures from personnel throughout the Health Science Center. An Exit interview must be scheduled with the Associate Dean.

Program Curriculum
Course Descriptions
In addition to Texas Core Curriculum requirements and program prerequisites, the professional phase of the program includes the following courses.

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall Semester</strong></td>
<td></td>
</tr>
<tr>
<td>RESC 3002 - Fundamentals of Respiratory Care</td>
<td>4.5</td>
</tr>
<tr>
<td>RESC 3005 - Respiratory Care Pharmacology</td>
<td>4.0</td>
</tr>
<tr>
<td>RESC 3007 - Cardiopulmonary Physiology</td>
<td>5.0</td>
</tr>
<tr>
<td>RESC 3011 - Patient Assessment</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td>16.5</td>
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</tbody>
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<table>
<thead>
<tr>
<th><strong>Spring Semester</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RESC 3012 - Patient Care Monitoring</td>
<td>3.5</td>
</tr>
</tbody>
</table>
Respiratory Care Course Descriptions

RESC 3002 - Fundamentals of Respiratory Care
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, percussion, positive pressure devices, environmental devices, manometers, gauges, and vacuum systems.
Semester Credit Hours: 4.5

RESC 3005 - Respiratory Care Pharmacology
This course introduces the physiologic and pharmacologic basis of pulmonary and cardiac medications. The course will focus on the preparation, as well as the calculation, of dosages and mixtures. General principles of pharmacology as a basis for an in-depth discussion of bronchoactive drugs and drug groups related to the cardiopulmonary system such as neuro-muscular blocking agents, central nervous system depressants, cardiovascular agents, and diuretics will be included.
Semester Credit Hours: 4.0

RESC 3007 - Cardiopulmonary Physiology
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.
Semester Credit Hours: 5.0

RESC 3011 - Patient Assessment
Fundamentals of respiratory assessment will be covered 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.
Semester Credit Hours: 3.0

RESC 3012 - Patient Care Monitoring
This course provides a study of invasive and non-invasive patient monitoring techniques and equipment. Invasive topics 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.
Semester Credit Hours: 3.5

RESC 3013 - Disease Management, Rehabilitation, and Extended Care
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.
Semester Credit Hours: 3.0

RESC 3018 - Diseases Affecting the Respiratory System
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.
Semester Credit Hours: 5.0

RESC 3019 - Clinical Practice I
This course introduces students to clinical practice in basic respiratory care procedures. Topics include: introduction to the clinical affiliate, medical gas therapy, oxygen therapy, aerosol therapy, incentive spirometry, and patient assessment. In addition, intermittent positive pressure breathing, and chest physio-
therapy and airway care using nasal, endotracheal, and tra-
cheal tubes is introduced in basic care situations. Case pres-
sentations are required to integrate clinical and classroom
theory. Practicum fee: $10.
Semester Credit Hours: 4.0
Prerequisites: RESC 3005, RESC 3003, and RESC 3001

RESC 3021 - Mechanical Ventilation
This course provides instruction in the theory, setup, operation,
and maintenance of mechanical ventilators and related equip-
ment. Topics include mechanical ventilator theory, ventilator
operation, ventilator maintenance, and troubleshooting. Main-
tenance of artificial airways, fiber-optic bronchoscopy, thorac-
ectomy, chest tube maintenance, and arterial blood gas
sampling related to the critical care patient will also be dis-
cussed. Laboratory fee: $15.
Semester Credit Hours: 3.5

RESC 3023 - Pulmonary Function Testing
This course is a study of normal and abnormal pulmonary func-
tions. The student will have the opportunity to learn how to per-
form, interpret, and evaluate various pulmonary function
studies. Also, students will be given the opportunity to learn the
operation and maintenance of pulmonary function and gas
analysis equipment. Laboratory fee: $10.
Semester Credit Hours: 2.5

RESC 3025 - Critical Respiratory Care
This course covers instruction on the phases of adult critical
care and continuous mechanical ventilation. The history of me-
chanical ventilation, modes of mechanical ventilatory support,
implementation, monitoring, ventilator weaning, and disconti-
u nuance will be covered.
Semester Credit Hours: 4.0

RESC 3029 - Clinical Practice II
Critical respiratory care is introduced to include all tasks pre-
sented in Clinical Practice I as applied to the intensive care
unit. In addition, tracheostomy care, ventilator monitoring, ar-
terial puncture and blood gas analysis, endotracheal intuba-
tion, EKG services, and bronchoscopy observation are
introduced. Case presentations are required to integrate clini-
cal and classroom theory. Practicum fee: $10.
Semester Credit Hours: 2.5
Prerequisites: RESC 3019

^TOP / SHP Programs

RESC 4001 - Cardiopulmonary Technology
An overview of the various areas comprising cardiopulmonary
diagnostics and related technology will be provided. Topics in-
clude sleep laboratory, stress and exercise testing, metabolic
testing, ventilation/ perfusion scanning, cardiac catheterization
laboratory, and noninvasive cardiology. In addition, extracorpo-
real membrane oxygenation, mechanical circulatory assis-
tance, hyperbaric medicine, and perfusion technology will be
introduced.
Semester Credit Hours: 3.0

RESC 4002 - Geriatric Respiratory Care
The course introduces students to aging issues along with ex-
pected psychological changes in older adults and how they re-
late to patient care. Topics include: demographics of aging,
age associated pulmonary and cardiac changes, geriatric pa-
tient assessment, atypical disease presentation, surgery in
older adults, pulmonary disease after age 65, geriatric phar-
macotherapy, communicating with the elderly, health aging
strategies, and health care economics.
Semester Credit Hours: 2.0

RESC 4003 - Pediatric and Neonatal Respiratory Care
The processes of growth and development relating to respira-
tory care, from the fetus to the adolescent, will be discussed.
The study relates physiologic function to respiratory care in-
cluding assessment, evaluation, and treatment. Topics include
fetal growth and development, neonatal growth and develop-
ment, fetal assessment, fetal evaluation, neonatal assessment,
neonatal evaluation, neonatal respiratory care, neonatal pa-
thology, pediatric pathology, and pediatric respiratory care.
Semester Credit Hours: 4.0

RESC 4009 - Clinical Practice III
Students will have an opportunity to further develop skills re-
quired in the intensive care of the respiratory patient. Topics
include initiation of mechanical ventilation; patient stabilization
and monitoring; measurement and evaluation of hemodynamic
variables; bronchial hygiene; and evaluation for weaning, extu-
bation, arterial line samples, and noninvasive monitoring. Case
presentations are required to integrate clinical and classroom
theory. Practicum fee: $10.
Semester Credit Hours: 5.0
Prerequisites: RESC 3029, RESC 3025, RESC 3021

RESC 4011 - Patient Care Management Seminar
This course is a review of respiratory care as it pertains to the
national credentialing examinations administered by the Na-
tional Board for Respiratory Care (NBRC). A series of simula-
tion examinations will be used to help students prepare for
these exams. Emphasis will be placed on decision making and
problem solving as they relate to clinical respiratory care. Top-
ics include Certified Respiratory Therapy Technician (CRTT)
exam preparation and Registered Respiratory Therapist (RRT)
exam preparation.
Semester Credit Hours: 3.0

RESC 4012 - Disease Management,
Rehabilitation, and Extended Care
This course provides an overview of the concepts, procedures,
and equipment utilized in the delivery of long-term care to per-
sons with a chronic cardiopulmonary disorder. The develop-
ment and implementation of disease management programs
for the care of patients with asthma, COPD, and other chronic
conditions is presented. Pulmonary rehabilitation, patient edu-
cation, and smoking cessation programs are reviewed. Prov-
sion of health care services in the home and other nonacute
settings is examined, along with technological and procedural
aspects of cardiopulmonary equipment.
Semester Credit Hours: 3.0

RESC 4013 - Management
Management principles and problems as they relate to respira-
tory care; cardiopulmonary sciences; and the management of
the department, hospital, service organization, and health pro-
grams will be discussed.
Semester Credit Hours: 2.0
Prerequisites: senior status
RESC 4015 - Education in Respiratory Care
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. 
Semester Credit Hours: 2.0
Prerequisites: senior status

RESC 4017 - Introduction to Research
This course is 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. 
Semester Credit Hours: 2.0

RESC 4019 - Clinical Practice IV
Clinical experience is provided in perinatal and pediatric respiratory care in the areas of oxygen and aerosol therapy, chest physical therapy, mechanical ventilation, patient assessment and monitoring (invasive and noninvasive), airway care, and labor and delivery assistance. Also covered in the Pulmonary Function Laboratory are arterial blood gas analysis, measurement of lung volumes and capacities, flow volume loops, diffusion testing, and body plethysmography. Practicum fee: $10.
Semester Credit Hours: 4.0
Prerequisites: RESC 3023, RESC 4003, and RESC 4009

RESC 4029 - Clinical Specialization
Students will have an opportunity for in-depth application and reinforcement of adult intensive care. In addition, students are provided with 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. Practicum fee: $10.
Semester Credit Hours: 4.5
Prerequisites: RESC 4019
School of Medicine

Students are responsible for all information contained in this Catalog up to and including their school’s section.

Click on an item in the list below to be taken to the location of its content.

- Mission
- Accreditation
- Admission and Application
- Acceptance Considerations
- Advanced Standing
- Scholarships
- Academic Advising
- Student Background Check Policy
- Absence, Dismissal, and Readmission
- Grades, Promotion, and Graduation
- United States Medical Licensing Examination (USMLE)
- Academic Dismissal
- Graduation
- Dual Degree Programs
- Guidelines for Professional Conduct
- Student Organizations
- Required Attire
- School of Medicine Curriculum
- Qualifying Examinations
- Advanced Education Programs
- Course Numbering System
- School of Medicine Academic Calendar

Mission

The mission of the Health Science Center’s School of Medicine is to serve the needs of the citizens of Texas by providing medical education and training to medical students and physicians at all career levels in an environment that is flexible and emphasizes: professionalism with special commitment to the preparation of physicians in both the art and science of medical practice; conducting biomedical and other health-related research paying particular attention to translational research; delivering exemplary quality health care; and providing a responsive resource in health-related affairs for the nation and the state, with particular emphasis on South Texas.

Accreditation

The School of Medicine is fully accredited by the Liaison Committee on Medical Education, 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.

Admission and Application

Information about specific admission requirements is detailed in the Applicant Viewbook of the School of Medicine. 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. Applicants must take the Medical College Admissions Test (MCAT) no later than the first week of September the year preceding matriculation. Web-based applications forms are available through the Texas Medical and Dental Schools Application Service in Austin (http://www.utsystem.edu/tmdsas). MCAT scores should be forwarded no later than October 15 of the year preceding matriculation. Scores from later administrations of the MCAT may be considered for purposes of selecting students from the alternate pool.

Acceptance Considerations

The Committee on Admissions evaluates each candidate’s application to make an assessment of the individual’s academic background, performance on the Medical College Admissions Test (MCAT), the recommendation of the premedical advisor, and the person’s nonacademic achievements. Preparation for medical school as reflected in clinical experiences along with integrity, maturity, motivation, judgment, and resourcefulness are also evaluated. Further evaluation of the most promising candidates is made by means of personal interviews, invitations for which are issued by the Admissions Committee.

The same criteria for evaluation are applied to all candidates. Applicants are encouraged to read the “Factors Considered for Applicant Interview and Final Scoring” at http://som.uthscsa.edu/admissions/index.asp. Although certain disabilities or combination of disabilities might prevent a candidate from meeting required technical standards, this institution is committed to avoiding discrimination against an otherwise qualified individual with disabilities (see http://som.uthscsa.edu/Admissions/essentialabilities.asp). The School of Medicine will announce its initial acceptances on November 15. Acceptances will continue on a rolling basis until December 31. Those interviewed applicants not accepted may be offered positions in the entering class through the TMDSAS medical school match, the results of which are available on February 1. Candidates whose applications are rejected by the Admissions Committee with or without personal interviews.
shall be notified as soon as possible after the committee’s action. An applicant receiving an acceptance of admission will be requested to file a letter of intent to enroll within two weeks of receipt of acceptance. The acceptance is contingent upon clearance through a criminal background check.

Because some of the medical schools in Texas begin their academic year earlier than September, all LCME-accredited medical schools in Texas have agreed not to offer acceptances to candidates already enrolled at another medical school in the state after July 1.

Advanced Standing

The acceptance of students with advanced standing is dependent upon the availability of clinical and academic facilities. Each year the School of Medicine considers class size and the imperative of maintaining high quality training in deciding whether additional students with advanced standing will be admitted. In such rare cases, only students currently enrolled in an LCME-accredited medical school in good academic standing can be considered. Given the scarcity of spaces, preference is given to those who must move to San Antonio for reasons of personal hardship and who have not only the consent but also the active support of their schools for the proposed move. The School of Medicine in San Antonio will determine in each case the viability of the proposed transfer from an academic viewpoint and establish the necessary courses and other requirements and level at which the transfer would take place.

No nonresident of the state of Texas may be enrolled with advanced standing if the result of that enrollment would increase to greater than ten percent the percentage of nonresidents enrolled in the class of which the student would be a member.

Application forms and inquiries concerning advanced standing admission should be obtained from and addressed to the Office of the Associate Dean for Academic Affairs of the School of Medicine.

Scholarships

Scholarship assistance is available within the School of Medicine. Scholarships selection is based on established criteria. For scholarships that are donor-gifts, selection is based on criteria established by the donor. Scholarships may be renewable depending upon academic performance and/or stated scholarship conditions.

Academic Advising

Six major resource areas provide academic and personal advising for medical students. These are the Associate Dean for Academic Affairs, the Associate Dean for Student Affairs, Course and/or Clerkship Directors, Veritas Career Advising Groups, Office of Academic Enhancement, and the Health Science Center Counseling Service.

Each entering student is assigned to a Veritas Group. Veritas Groups provide continuity of faculty advising throughout the School of Medicine experience. For students who encounter academic difficulty, the course director or clerkship director is the first line of consultation. Both the Associate Dean for Academic Affairs and the Associate Dean for Student Affairs monitor students’ progress through interaction with faculty in an effort to identify problems early and intervene if necessary. The Office of Academic Enhancement’s mission is to promote the retention and advancement of medical students throughout the four-year curriculum. It does this by providing group and individual tutoring, large-group review sessions for pre-clinical courses, a pre-matriculation program for incoming medical students, a tutoring elective for those interested in academic medicine, a USMLE preparation course and consultation services for study skills, time management issues, and test-taking assistance. The Health Science Center Counseling Service may be helpful to some students encountering academic difficulties, especially in helping the student to review study skills and learning style. This office and the other resources listed above may also be helpful if students encounter issues of personal concern. The Office of Student Life may also be helpful in this latter regard. The Health Science Center Counseling Service may be helpful to some students encountering academic difficulties, especially in helping the student to review study skills and learning style. This office and the other resources listed above may also be helpful if students encounter issues of personal concern. The Office of Student Life may also be helpful in this latter regard.

Student Background Check Policy

I. Applicability

This policy applies to applicants who have received an offer of admission to 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.

II. Policy

Applicants who have received an offer of admission must submit to and satisfactorily complete a background check review as a condition to matriculation to the School of Medicine. An offer of admission will not be final until the completion of the background check(s) with results deemed as satisfactory. Admission may be denied or rescinded based on a review of the background check.

Additionally, students who are currently enrolled and who do not have a valid background check must submit to, and satisfactorily complete, a background check review as a condition to enrolling or participating in education experiences at affiliated sites as required.

Students who refuse to submit to a background check or do not pass the background check review may be dismissed from the program.

Applicants who have received an offer of admission or students who are dismissed may seek admission into another educational program that does not have a clinical component requirement in its curriculum.
III. Rationale

A. 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.

B. Clinical facilities are increasingly required by accreditation agencies, such as Joint Commission of Healthcare Organization (JCAHO), to conduct 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 background checks for students and faculty.

C. Clinical rotations are an essential element in medical school curriculum. Students who cannot participate in clinical rotations due to criminal or other adverse activities that are revealed in a background check are unable to fulfill the requirements of medical school. Additionally, many health-care 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 Medicine, the student, or applicant.

D. The School of Medicine is obligated to meet the contractual requirements contained in affiliation agreements between the university and the various health-care facilities.

IV. Background Check Report

A. Obtaining a Background Check Report. The School of Medicine will designate approved company(ies) to conduct the background checks and issue reports directly to the School of Medicine. Results from a company other than those designated will not be accepted. Students and applicants who have received an offer of admission must contact a designated company and comply with its instructions in authorizing and obtaining a background check. Students and applicants who have received an offer of admission are responsible for payment of any fees charged by a designated company to provide the background check service.

B. Scope. Background checks include the following and cover at least the past seven years:

- Criminal history search, including convictions, deferred adjudications or judgments, and pending criminal charges involving felonies, Class A, Class B, and Class C violations
- Social Security Number verification
- Violent Sexual Offender and Predator Registry search
- Office of the Inspector General (OIG) List of Excluded Individuals/Entities
- General Services Administration (GSA) List of Parties Excluded from Federal Programs
- U.S. Treasury Office of Foreign Assets Control (OFAC), List of Specially Designated Nationals (SDN)
- Applicable State Exclusion List

C. Rights. Students and applicants who have received an offer of admission 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 Medicine will provide applicants or students a copy of or access to the 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 Medicine.

V. Procedure

A. Applicants

1. Applicants must complete the required background check screening following the offer of admission but prior to matriculation.

2. The background check report will be submitted to the Background Check Review Committee for its review. If the report contains negative findings, the committee may request that the applicant submit additional information relating to the negative finding, such as a written explanation, court documents, and/or police reports. The committee will review all information available to it and determine appropriate action.

3. Admissions decisions are final and may not be appealed.

B. Current Students

1. For students who did not have a background check review at the time of their admission into the educational program, students must complete the background check review prior to commencement of an assignment at a health care facility as required.

2. Background check reports will be submitted to the Background Check Review Committee for its review. If the report does not contain any negative findings as determined by the committee, the student will be allowed to participate in clinical rotations. If the report contains negative findings, the Background Check Review Committee may request that the student
submit additional information relating to the negative finding, such as a written explanation, court documents and police reports. The Background Check Review Committee will review all information available to it and determine whether the student should be permitted to participate in clinical rotations or be dismissed from the program.

3. If the Background Check Review Committee determines that dismissal from the program is warranted, a student may appeal that decision in accordance with the university’s grievance procedure for academic matters found in this Catalog.

C. Committee Review Standards In reviewing the background check reports and any information submitted, the Background Check Review 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 who has received an offer of admission 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.

VI. Confidentiality and Record Keeping

A. Background check reports and other submitted information are confidential and may only be reviewed by university officials and affiliated clinical facilities in accordance with the Family Educational Records and Privacy Act (FERPA).

B. Students: Background check reports and other submitted information of students will be maintained in the Office of Student Affairs in accordance with the university’s record retention policy for student records.

C. Applicants Denied Matriculation: Background check reports and other submitted information of applicants denied matriculation into the program will be maintained in accordance with the university’s record retention policy.

VII. Other Provisions

A. The School of Medicine shall inform students who have negative findings in their background check report and are nonetheless permitted to enroll that the School of Medicine’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.

B. A background check will be honored for the duration of enrollment if the student is continuously enrolled. An assigned clinical health care facility may require a repeat background check. A student who has a break in enrollment is required to complete a new 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.

C. Falsification of information, including omission of relevant information, may result in denial of admission or dismissal from the educational program.

D. Criminal activity that occurs while a student is in attendance at the university may result in disciplinary action, including dismissal, and will be addressed through the university’s academic or disciplinary policies.

Policy for Sharing Student Background Checks

1. Authorization to share information: Student background check reports results maintained by educational institutions are records subject to the Family Educational Records and Privacy Act (FERPA). FERPA prohibits the release of educational records without a student’s written authorization unless there is a specific FERPA exception authorizing a release without a student’s written authorization. Given that an affiliated health-care facility is offering educational services that would otherwise be provided by the educational institution, FERPA can be reasonably interpreted to permit institutions to release the information to the clinical facility without the student’s authorization. NOTE: HIPAA is not applicable to this scenario.

   a. A general notice will be provided to students (i.e., Catalog) that background check reports may be provided to affiliated health-care facilities that the student will be attending as part of their required course of study.

   b. A general release will be obtained from students at the time of the background check that authorizes the release of reports or results to any affiliated clinical facility to which the student may be assigned (Attachment A).
c. Information will be released to the affiliated healthcare facility upon its request.

2. Requests for Information: Request for background check reports must be submitted in writing by the affiliated healthcare facility and state the reason why the information is needed. All requests will be handled by the Student Affairs Office. Requests for information records will be maintained for as long as the background check reports are maintained.

3. Transmission of Information: Educational records will be sent to third-parties in a confidential manner. This can be achieved either by mailing the information and marking the outside of the envelope confidential, or scanning and e-mailing the records directly to the secure e-mail address for receipt of confidential information as identified by the clinical facility, preferably in the affiliation agreement. Transmission via facsimile is not recommended since often times the receiving fax machine is a public area of an office.

4. Confidentiality of Information: In releasing educational records to other entities, FERPA requires that the third-party maintain the confidentiality of the educational records while the records are in their possession. The affiliated healthcare facility will be informed in writing that:
   a. the information is confidential and subject to FERPA;
   b. the information may only be viewed by individuals who have a legitimate need to view the information to verify or audit the qualifications of the student to participate in the educational program at the facility;
   c. the information may not be redisclosed to other entities without the student’s written authorization;
   d. the information must be destroyed when it is no longer needed for the purposes for which the information was provided to the entity; and
   e. improper disclosure of personally identifiable information contained within the report may result in the university being prohibited from providing the facility access to this information for at least five years (Attachment B).

5. Affiliation or Program Agreements: Affiliation agreements may include a reference of continuing students’ criminal background checks. If criminal background check information is shared with a healthcare facility, the clinical facility is subject to the requirements of FERPA as to any documents received by the clinical facility from the School of Medicine related to one of its students.

Absence, Dismissal, and Readmission

Absences of short duration may be granted by the Associate Dean for Student Affairs in the case of illness or personal emergency with the understanding that the student arrange with the faculty to make up all work which is missed.

Absence for any cause shall, however, be reported by the student, within one week of the student’s return, to the Associate Dean for Student Affairs who will determine if the absence was “excused.” If requested in writing by the student, a leave of absence for an extended period of time may be granted by the Associate Dean if such absence is considered to be in the best interests of the student. To reach this decision, the Associate Dean will often rely not only on the student’s expressed wishes, but also on the opinion of her or his faculty advisor, faculty promotions committees, or other individuals familiar with the circumstances of the case. While the exact length of the leave of absence will vary in each case, it shall, under no circumstances, exceed one year.

It will be assumed that students who fail to register and pay tuition and fees within the specified dates will have terminated their connection with the School of Medicine, unless permission to register and pay tuition at a later date has been expressly granted by the Registrar.

Students who have ceased to be enrolled in the School of Medicine for any reason (withdrawal, dismissal, failure to register, failure to return from leave of absence at the specified time, or leaving school without authorization) and who wish to be considered for readmission either as freshmen or with advanced standing must apply to the Dean of the School of Medicine. Only students returning on schedule from authorized leaves of absence will be re-enrolled without having to be readmitted.

Attendance Policy

It is the practice of the School of Medicine that each course director establishes an attendance policy that must be explained during the first meeting of the class. Absences from any and all examinations are not acceptable without prior notification and approval from authorized officials of the School.

Students who are absent from a class, laboratory session, or conference requiring attendance, or students who miss an examination should attempt to notify the Associate Dean or Assistant Dean for Student Affairs in advance of her/his absence if possible. Absences must be explained to the Associate Dean or Assistant Dean for Student Affairs who, by memorandum to the course director, indicates whether an absence is excused.

Any question about a student’s absence (reason or number of absences) may require the student to come and defend the absences before the Pre-Clinical Promotions Committee in the first two years of medical school, or the Clinical Promotions Committee in the 3rd and 4th years of the student’s training.

Junior and senior students in clinical training are required to notify the clerkship director and the rotation site prior to their anticipated absences.
Leave of Absence

A leave of absence may be granted by the Dean or his designee if such absence is considered to be in the best interests of the student. The Dean’s designee to monitor this activity area is the Associate Dean for Student Affairs. Requests for leaves of absence must be made in writing by the student to the Associate Dean for Student Affairs. If approved, the student must complete a Student Clearance Form, available from the Registrar’s Office (319L MED).

The Dean relies not only on the student’s expressed wishes, but also on the opinion of the student’s faculty advisor, the student promotions committee, or other individuals familiar with the circumstances of the case. While the exact length of the leave of absence will vary from case to case, it shall, under normal circumstances, not exceed one year.

Grades, Promotion, and Graduation

The School of Medicine faculty is responsible for determining a student’s fitness to be a doctor of medicine. Committees on promotion for the preclinical and clinical years of the curriculum assess the achievements and progress of each student and make recommendations for promotion, graduation, academic warning, probation, dismissal, or implementation of special academic programs. These recommendations are submitted to the Dean.

The academic standards for successful completion of each course are determined by the department or task force under which the course is administered.

Grades

Grading of courses will be based on an A, B, C, F system. Grades of A, B, and C will be considered passing. A grade of A is given for an outstanding performance; B for a very good performance; and C for a satisfactory performance. A grade of F indicates a failing performance. The grade of Incomplete (I) is reserved for those circumstances in which academic work is not attempted or completed due to illness, family emergency, or other non-academic extenuating circumstance. A grade of Incomplete (I) is not acceptable as a temporizing measure in situations of substandard academic performance.

For purposes of Class Rank, each letter grade will also be assigned a point value as follows:

- A = 4 points
- B = 3 points
- C = 2 points
- F = 0 points

No grade of D will be issued.

In those circumstances in which a student will be allowed remediation (as described below), the maximum grade they can receive is a C. The C is the score that will be used for purposes of class rank.

Promotion

The standard for receiving either a passing or a failing grade for work done in any course is the prerogative of the Course Director, operating under the auspices of the Department Chairperson, or in the case of interdisciplinary courses, the Task Force Chairperson. Each Course Director will make her/his assessment of student performance independent of considerations of the student’s performance in other courses.

Students must satisfactorily complete all courses in each academic year in order to be promoted to the next year of the curriculum. The Pre-Clinical Promotions Committee will monitor the performance of students in the first and second years of the curriculum. The Clinical Promotions Committee will monitor the performance of those students in the third and fourth years of the School of Medicine curriculum.

Throughout the academic year promotions committees will review grade deficiencies as they are reported. This evaluation will be characterized by a review of a student’s performance in the course in which a deficiency was incurred, both from a grade-received perspective and from a review of written assessments of the student’s learning activities throughout the duration of the course. Also, brief written reports from directors of other courses in which the student was (or is) involved may be requested for review by committee members during their assessment of student performance.

Deficiencies

Promotion committees will consider a variety of approaches to deficiency removal. These approaches may include Remediation, Repetition, and/or Dismissal.

Remediation is an academic activity that occurs at the end of an academic year, but before the beginning of the next academic year, for courses in which a deficiency has been received. In those instances where remediation is approved, the nature of the remediation activity will be determined by the committee, taking into consideration recommendations of course directors, an assessment of the student’s overall academic performance, the student’s written request, and other factors as deemed appropriate by the respective committee.

Students who are successful in remediation activities are able to continue with their class into the next curricular year. The highest grade that can be achieved through remediation is a C. Also, students who are remediating deficiencies may not receive concurrent credit for any other curricular activity. Students who are not successful in their attempt to remediate a deficiency will be required to repeat the courses in which deficiencies occurred during the next academic year. The promotion committee may also require repetition of other courses that have already been passed.

Repetition refers to a student repeating all or part of a curricular year in which one has incurred deficiencies. The promotion committees, following their review of a student’s academic status, will determine the most appropriate approach to facilitate a student’s acquisition of necessary knowledge. And while a student will repeat courses in which failing grades have been incurred, a promotion committee may require that a student repeat courses that have already been passed.
Dismissal from the School of Medicine will be warranted in some instances, as outlined below.

Procedure

Students may ask the Promotions Committee to grant them an opportunity to remediate grade deficiencies or repeat the academic year. This request must be in writing and it should delineate those factors, both academic and personnel that, in the student’s view would justify such action by a promotion committee. The appropriate Promotions Committee may grant such a request if, from their review, such consideration is appropriate to facilitate student learning and progress.

The criteria, as stated below, apply to each year of the School of Medicine curriculum. In addition, no more than two (2) years may be taken to complete any one year of the curriculum. No more than six (6) years may be taken to complete the medical curriculum without permission from the appropriate promotions committee.

1. PRE-CLINICAL PROMOTIONS COMMITTEE PROCEDURES (MS1 AND MS2 ACADEMIC YEARS)
   a. Policy on failure of concurrent courses:
      i. 1 course failed: Remediate at the end of the academic year
      ii. 2 courses failed: Repeat entire academic year
      iii. 3 or more courses failed: Dismissal from the School of Medicine
   b. Policy on failure of a remediation exam:
      i. If a student fails a remediation exam, they must repeat the entire academic year.
   c. Policy on Failure across Academic Years:
      i. If a student fails three or more courses in years one and two of medical school they will be dismissed from the School of Medicine. This includes failures for any reason.
      d. The Pre-Clinical Promotions Committee can mandate a Leave of Absence for a student in difficulty, if the committee determines that this is in the student’s best interest.
      e. Currently the School of Medicine does not place students on a Probationary Status for academic reasons, only professionalism issues.
   f. Process for Appeals:
      i. Appeals for grades, or any other reason, will be submitted to the Pre-Clinical Promotions Committee first. If the appeal is not granted then the next course of action is sending the appeal to the Faculty Council for their review. A final review can be made by the President of the Health Science Center, but only for violations of following procedures.
      g. Mandatory Meetings with Pre-Clinical Promotions Committee:

   i. The Committee can mandate that a student in difficulty have mandatory meetings with them and also with the Office of Academic Enhancement.
   h. Restrictions on Activities for Students in Academic Difficulty:
      i. If a student has one or more failures, the Committee can restrict her/his Health Science Center extracurricular activities. Activities include holding a class office, participating in research, participating in intramural sports, becoming a Peer Advisor, receiving international/service/conference funding until a full academic year of satisfactory performance is completed.
      ii. Student may be placed on a Probationary Status as determined by a majority vote of the Pre-Clinical Promotions Committee. The range of responses for a professionalism violation is in the Handbook of Operating Procedures (HOP).

2. CLINICAL PROMOTIONS COMMITTEE PROCEDURES (MS3 AND MS4 ACADEMIC YEARS)
   a. Policy on failure of clerkship exams:
      i. 1 or 2 exams failed: Remediate at the end of the academic year
         (If no previous courses failed for any reason)
      ii. 3 exams failed: Dismissal from the School of Medicine
   b. Policy on failure of clinical portion of clerkship:
      i. Remove student from clerkships and remediate skills. Clinical portion of rotation must be repeated.
   c. Policy on Failure across Academic Years:
      i. If a student fails 3 or more clerkships in years three or four, or a total of four courses/clerkships over all fours years of medical school they will be dismissed from the School of Medicine. This includes failures for any reason.
   d. Students failing MS3 or MS4 Years due to Professionalism:
      i. Student may be removed from their current clerkship and may remediate the failed rotation at the discretion of the Clinical Promotions Committee. The student may be placed on a Probationary Status as determined by a majority vote of the Clinical Promotions Committee. The range of responses for a professionalism violation is in the HOP.
      e. The Clinical Promotions Committee can mandate a Leave of Absence for a student in difficulty, if the committee determines that this is in the student’s best interest.

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Currently the School of Medicine does not place students on a Probationary Status for academic reasons, only professionalism issues.

Process for Appeals:

i. Appeals for grades, or any other reason, will be submitted to the Clinical Promotions Committee first. If the appeal is not granted then the next course of action is sending the appeal to the Faculty Council for their review. A final review can be made by the President of the Health Science Center, but only for violations of following procedures.

Mandatory Meetings with Clinical Promotions Committee:

i. The Committee can mandate that a student in difficulty have mandatory meetings with them and also with the Office of Academic Enhancement.

Restrictions on Activities for Students in Academic Difficulty:

If a student has one or more failures the Committee can restrict her/his Health Science Center extracurricular activities. Activities include holding a class office, participating in research, participating in intramural sports, receiving international/service/conference funding until a full academic year of satisfactory performance is completed.

United States Medical Licensing Examination (USMLE)

Medical students must pass the Step I examination of the United States Medical Licensing Examination (USMLE) in order to be promoted into the Senior year. All students must have taken the Step I examination in order to begin the clinical clerkships of the Junior year. Those who are unsuccessful will be allowed to complete the Junior Clerkships. Those students will not be allowed, however, to begin either Senior Electives or Senior Selectives until they have again sat for that examination. Three (3) failures of the Step I examination of USMLE will result in dismissal from the School of Medicine. Medical students must take the Step II CK and Step II CS examinations of the United States Medical Licensing Examination (USMLE), both clinical knowledge and clinical skills, in order to qualify for graduation from the School of Medicine. The Step III examination will be taken following medical school graduation at a time determined by a state board of medical examiners.

Policy on Failure of USMLE Step Exams

a. Step 1 Failure

i. A student may have a maximum of 3 attempts to pass this exam. If they do not pass in 3 attempts then it is an automatic dismissal from the School of Medicine.

ii. Student must with the Associate Deans of Academic Affairs and Student Affairs.

b. Step 2 CK Failure

i. Student must with the Associate Deans of Academic Affairs and Student Affairs.

ii. Student must also meet with the Clinical Promotions Committee and the Office of Academic Enhancement.

c. Step 2 CS Failure

i. Student must with the Associate Deans of Academic Affairs and Student Affairs.

ii. Student must also meet with the Clinical Promotions Committee and the Clinical Skills Center.

Academic Dismissal

Dismissal from the School of Medicine for academic reasons will be considered for:

1. Students who are unable to meet the standards for promotion to a given academic year or the standards for eligibility for graduation after one additional year during which courses were repeated in an effort to meet those standards;

2. Students who would require repetition of courses or rotations after they have previously used a total of two additional years in order to meet the standards for promotion in previous academic years;

3. Students who receive a grade of F in a course or rotation being repeated;

4. Students who are unable to achieve a passing score on Step I of the USMLE examination within three attempts.

Dismissal for academic reasons will be subject to review by the appropriate promotions committee. The recommendations of the promotions committees are to the Dean. The students may appeal the recommendations of the promotions committee and the decision of the Dean to the Faculty Council. The decision of the Faculty Council is final with regard to academic matters. The student may further appeal to the President of the Health Science Center, but only on issues of procedural irregularity.

Graduation

The degree of Doctor of Medicine is awarded by the Board of Regents upon the student’s successful completion of the prescribed curriculum, recommendation of the Faculty of Medicine to the Dean, and certification by the Dean to the President. 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 medical curriculum, and
Degrees will be conferred once a year on Commencement Day in the spring. Students who complete requirements for a degree earlier in the year will be conferred the degree on the following Commencement Day, but may request the Registrar to provide a Certification of Completion on the date of graduation.

Dual Degree Programs

Dual degree programs of study provide a mechanism for a medical student to obtain an MPH or Ph.D. degree in addition to an M.D. degree at The UT Health Science Center at San Antonio. The purpose of these programs is to offer students the opportunity to become trained as clinical scientists who have not only depth of knowledge in clinical medicine but also experience in research planning and execution.

MD/PhD

This dual degree program is accomplished in seven-years. Students complete two years of the School of Medicine and then embark full-time on their PhD dissertation research for three years. It is anticipated that the requirements for the PhD degree, including dissertation research, will be completed during the following three years, after which students will complete the final two years of the School of Medicine. Flexibility has been built into the program in several areas. For example, students will conduct laboratory rotations during their first two years of the School of Medicine and it is anticipated that many of the School of Medicine basic science courses will satisfy graduate school course requirements. In addition, students will participate in a Bench-to-Bedside course throughout the program, which is designed to engage them functionally in the major premise of this dual degree program, which is to educate and provide a rich experiential learning environment for the next generation of physician-scientists. Towards the end of the graduate school years, students will take a six-month long course to provide for a smooth transition into their clinical training years. Time is provided during the fourth year of the School of Medicine should students require additional time to complete their dissertation research, including defense of their dissertation. Tuition reimbursement will be provided for all years in the program. In addition, a yearly stipend of $21,000 plus a fringe benefit will be provided from the dual degree program budget and from supervising professors’ funds.

M.D. Degree with Distinction in Research

The MD with Distinction in Research Program provides Health Science Center medical students with an opportunity to spend part of their medical school career doing sustained work in basic, clinical, translational, or social sciences. This program will be very helpful to students in shaping their career goals and building an academic track record that will be viewed favorably by residency selection committees. Students apply for acceptance into the MD with Distinction in Research Program in the spring of their first year of medical school. The application includes a description of the research project, a timeline for completing the project, and a mentoring plan written by the faculty mentor. Students must commit a minimum of four months during medical school to the program, beginning with eight weeks in the summer between first and second year. The additional time will be completed in the third and fourth years in research elective blocks or depending on the research project, during free time (holidays, evenings, weekends) in addition to other academic activities.

M.D. Degree with Distinction in Medical Education

The MD with Distinction in Medical Education Program provides Health Science Center medical students with an opportunity to spend part of their medical school career participating in activities focused on different components of teaching and educational research. The application for the MD with Distinction in Medical Education Program will have a final due date at the start of the student’s second year spring semester (third Friday in January). In order to be accepted to the MD with Distinction in Medical Education Program students must have minimum 3.25 GPA, and will have to maintain a minimum GPA of 3.25 to remain in the program. With the assistance of the mentor and advisory committee, the students will be asked to complete a project designed to increase the teaching effectiveness of a particular area within a course. It will be the responsibility of the student and their mentor and advisory committee to develop an educational research project (e.g., new syllabus, online instruction, curriculum development, etc.) and evaluate the effectiveness of the program.

Guidelines for Professional Conduct

Candidates for the Doctor of Medicine degree are expected to conduct themselves in a professional manner in interaction with patients, and also with peers, faculty, and staff of the Health Science Center and the community in general. Students are subject to the procedures and regulations governing “Student Conduct and Discipline” of the Health Science Center. Throughout the medical curriculum, medical students are governed by the Code of Professional Conduct of this School of Medicine (see Student Guide).

Administration of the Code of Professional Conduct for Students

Section I: Introduction

Medical students are expected to maintain the highest standards of professional and ethical conduct at the School of Med-
Section II: Grading

Each course or clerkship director may develop written expectations of professional conduct specific to her or his discipline. These expectations are to be distributed to students at the beginning of the course. The Associate Dean for Student Affairs will furnish copies of departmental expectations on a yearly basis. These departmental expectations may, on request, be made available to other departments.

Section III: Procedures

When a potential violation of the Code of Professional Conduct is reported, the course or clerkship director will: 1) require appropriate and timely documentation, 2) determine whether there is a basis for the complaint, and 3) inform the student of the allegation before any action is taken. If the unprofessional conduct is of a minor nature, the course or clerkship director may elect to counsel the student as the first intervention. If the conduct is of a serious nature, the course or clerkship director shall counsel the student, shall document the infraction, and may assign a “failing” grade for the course.

In those instances in which a failing grade is assigned based primarily on professionalism issues, such failure will indicate a pattern of unprofessional behavior at the student’s state of development.

When a failing grade is assigned, the course or clerkship director must provide written documentation to the Associate Dean for Student Affairs concerning the nature of the infraction. The Associate Dean will then present the documentation to the appropriate Promotions Committee for review.

In those instances in which the course or clerkship director would wish further review prior to the imposition of a penalty, the Promotions Committee will provide that review function.

When a student observes a breach of the professional code, the principles of professional conduct compel that prompt notification be rendered to the applicable course or clerkship director or the Associate Dean for Student Affairs. The Promotions Committee will recommend that the grade be sustained or modified based on the review.

The Promotions Committee may recommend a penalty as described in Section IV. This recommendation is subject to the usual dismissal, appeal, and review processes as stated in the Grades, Promotions, and Graduation section of this Catalog (School of Medicine section).

Section IV: Penalties

The Promotions Committee may recommend the imposition of one or more of the following penalties for violation of the Code of Professional Conduct. With some exceptions, these penalties parallel those outlined in this Catalog under Section IV, Subsection 4-100 of the procedures and regulations governing Student Conduct and Discipline of the Health Science Center.

- Warning
- Probation
- Suspension of rights and privileges deriving in whole or in part from the School of Medicine
- Suspension of eligibility for any student office or honor
- Cancellation of credit for scholastic work done
- Reduction of the grade assigned in a course
- Failing grade in the course
- Suspension from the School of Medicine
- Dismissal
- Formal letter of reprimand in academic file

Section V: Nature of Penalties

The nature of penalties for unprofessional conduct are in accordance with Section IV, Subsection 4-200, of the procedures and regulations governing “Student Conduct and Discipline” as outlined in this Catalog.

1. Probation for unprofessional conduct is for a definite period but no longer than one calendar year and indicates that further violations may result in suspension or dismissal.
2. Cancellation of credit for scholastic work done and reduction of a grade assigned in a course are imposed only for courses in which the student was found to exhibit unprofessional conduct.
3. Suspension from the School of Medicine means that a suspended student may not receive credit at the School of Medicine for work done by correspondence or in residence at either this or any other education institution during the period of suspension except as allowed by the hearing officer.
4. Dismissal from the School of Medicine means permanent severance from the School of Medicine.

“Standards of Conduct for the Teacher-Learner Relationship” and “Student Mistreatment” can be found in the Student Guide.

Student Organizations

Descriptions of the School of Medicine organizations as well as those of all registered Health Science Center student groups are in the Student Guide.

Required Attire

During the first two years of medical school, students spend most of their time in lectures, laboratories, or other activities that do not involve contact with patients. At such times, students are expected to dress comfortably, but in such a way that does not detract from attentiveness and learning. When patient contact is part of the curriculum, either through direct contact or with patients being brought to a lecture room, students are expected to make a professional appearance and to wear the white clinic jacket with school patch and the required student I.D. Course directors should be consulted about proper attire in specific circumstances.

In the clinical years (junior and senior), students are expected to dress as health care professionals and to wear both the white jacket with school patch and the required student I.D.

Again, clerkship directors or supervisors of electives/selectives
should be consulted if there is a question about appropriate attire.

Qualifying Examinations
Students may be exempted from participation in one or more preclinical curricular subjects if they are able to demonstrate proficiency on pre-course qualifying examinations. These examinations are offered at the discretion of the departmental chairmen and are given soon before the beginning of each course.

Advanced Education Programs
A degree with distinction is available to students who accomplish specific requirements and sustained work in basic, clinical, translational, or social sciences, in addition to the required medical school curriculum. Detailed information is available at http://som.uthscsa.edu/research/students.asp. Students apply for this program in the spring semester of their first year of medical school.

Course Numbering System
The four-letter prefix denotes the department presenting the course; the INTD prefix is used for interdisciplinary courses. The first digit of the number indicates the academic level at which the course is usually taken (1=freshman, 2=sophomore, 3=junior, 4=senior). Other digits indicate the semester credit hour values and identify the course.

School of Medicine Curricular Design

Course Descriptions

First Year
The curriculum of the first year of medical school concentrates on the normal function and structure of the human body. Courses are organized into organ system modules so that material is coordinated and integrated. Application of material to the practice of medicine is illustrated by a series of clinical cases. Students also must learn the basics of patient communication, physical examination skills, and ethical principles of becoming a physician. The following is a list of the required courses:

- Biochemistry
- Gross Anatomy & Embryology
- Microbiology
- Microscopic Anatomy
- Neuroscience
- On Becoming a Doctor—Foundations
- Physiology

First Year Courses
- BIOC 1005 - Medical Biochemistry
- CSBL 1005 - Histology
- CSBL 1010 - Gross Anatomy and Embryology
- INTD 1005 - On Becoming a Doctor—Foundations

- INTD 1041 - Neuroscience
- MICR 1005 - Microbiology
- PHYL 1005 - Physiology

Enrichment Electives
A series of elective courses are offered to first- and second-year students. These electives meet outside of the required course schedule, usually over the noon hour. Students receive credit on their transcript for successful completion of an enrichment elective, but no grade is given and they are not included in the official credit hour total or the calculation of the grade point average (GPA). A list of enrichment electives is available in the “Enrichment Elective Catalogue” from the School of Medicine.

First/Second Year
- ELEC 5040 - Trauma Enrichment

Second Year
The second year builds on knowledge gained in the first year. Disease processes are taught in organ system modules with an integration of clinical sciences, pathology, pharmacology, and clinical skills. Listed below are the required courses:

- Advanced Clinical Examination Skills
- Introduction to the Clinical Sciences
- Pathology
- Pharmacology
- Psychopathology

Second Year Courses
- INTD 2006 - Advanced Clinical Evaluation Skills (ACES)
- INTD 2001 - Introduction to the Clinical Sciences (ICS) I
- INTD 2002 - Introduction to the Clinical Sciences (ICS) II
- PATH 2005 - Pathology
- PHAR 2005 - Pharmacology
- PSYC 2005 - Psychopathology

Third Year
The third year begins with a preclinical course followed by clerkships in six specialties.

Up to 24 third-year medical students can choose to complete their clinical training (third and/or fourth years) within the Regional Academic Health Center facilities in Harlingen, Texas (see “Size and Location” in this Catalog’s introductory section, “The Health Science Center”). Beginning with the entering class of 2008, preference for completing the third and fourth year in Harlingen will be made at the time of the application process to medical school.

- Clinical Foundations
- Family Practice Clerkship
- Medicine Clerkship
- Obstetrics & Gynecology Clerkship
- Pediatrics Clerkship
Third Year Courses

Preclinical Didactics

The first two weeks of the Third Year are devoted to the Clinical Foundations Course.

- INTD 3030 - Clinical Foundations

Clerkships

- FAPR 3005 - Family Practice Clerkship
- MEDI 3105 - Medicine Clerkship
- OBGY 3005 - Obstetrics and Gynecology Clerkship
- PEDI 3005 - Pediatric Clerkship
- PSYC 3005 - Psychiatry Clerkship
- SURG 3005 - Surgery Clerkship

Fourth Year

The fourth year is composed of four-week periods (rotations) which are devoted to required selectives and electives, and a five-week period of required didactic courses. Remaining time may be used for optional travel/vacation periods.

- Electives - 18 weeks
- Required Didactic Period
  - Mandatory Didactic Courses:
    - Advanced Cardiac Life Support
    - Clinical Pathology
    - Medical Jurisprudence
    - On Becoming a Doctor
  - Elective Didactic Courses (students must choose three)
- Required Selectives - 8 weeks
- Vacation/Travel Periods - 10 weeks

Fourth Year Courses

The fourth year of medical school is devoted to required didactics, required selectives, and electives. Didactics require 5 weeks; required selectives are 8 weeks; electives require 18 weeks. Ten weeks (optional) may be used for vacation or travel, making the senior year 41 weeks in length.

Required Didactic Courses

All of the courses below are included in the required didactic periods.

Mandatory Didactic Courses

- EMST 4100 - Advanced Cardiac Life Support
- PATH 4105 - Evidence-Based Medicine in Everyday Practice
- PEDI 4425 - Community for Children – At the Border and Beyond
- PATH 4290 - Clinically Applied Laboratory Medicine (CALM)
- INTD 4105 - Medical Jurisprudence
- INTD 4106 - On Becoming a Doctor

Fourth-Year Selectives

Students are required to take a four-week selective in ambulatory care and a four-week selective in patient care. Rotations that satisfy the selective requirement can be found in the Senior Academic Year Catalog.

Senior Electives

Eighteen weeks of the senior year are devoted to course work chosen by the student. Electives may be chosen from those approved by the Curriculum Review Committee and published each year in the Electives Brochure. The courses offered vary according to student demand, faculty capabilities, and time availability.

Some courses are full-time rotations while others are part-time. Students must register for at least 35 hours per week of course work. Each four-week period of elective work earns 4 semester hours of academic credit.

As an illustration of the kinds of courses that may be offered, titles of electives available in 2009–2010 are listed below.

Senior Electives

Academic Enhancement

- ELEC 5006 - Beginning Medical Spanish
- ELEC 5106 - Intermediate Medical Spanish
- ELEC 5206 - Advanced Medical Spanish

Anesthesiology

- ANES 4001 - Clinical Anesthesia – UH
- ANES 4002 - Critical Care Anesthesia*
- ANES 4003 - Anesthesiology Research
- ANES 4004 - Obstetrical Anesthesiology
- ANES 4005 - Pain Management*

*Selective

Biochemistry

- BIOC 4001 - Biochemistry Research

(See current Electives brochure for areas of research.)

Cellular and Structural Biology

- CSBL 4023 - Advanced Anatomy of the Head & Neck (with Dental course)
- CSBL 4015 - Advanced Anatomy of the Trunk (with Dental course)
- CSBL 4017 - Advanced Neuroanatomy
- CSBL 4001 - Anatomy of the Newborn
- CSBL 4024 - History of Anatomy In Situ: The Reawakening and Development of Anatomy in 14th–18th Century Italy
- CSBL 4009 - Human Genetics Research
- CSBL 4016 - Molecular Immunological Research
- CSBL 4002 - Regional Anatomy
MEDI 4034 - Oncology Consultation Service
MEDI 4151 - Poverty, Health, and Disease Elective
MEDI 7002 - Selective Preceptorship in Indian Health Care
MEDI 4044 - Pulmonary Disease – WHMC
MEDI 4045 - Pulmonary Medicine – BAMC
MEDI 4028 - Renal Research
MEDI 4069 - Research in Aging
MEDI 4009 - Research in Calcium and Bone Metabolism
MEDI 4013 - Research In Clinical Epidemiology
MEDI 4055 - Research In General Internal Medicine
MEDI 4022 - Research In Infectious Disease
MEDI 4019 - Research In Hematology/Oncology
MEDI 4032 - Research In Neurology
MEDI 4051 - Rheumatology – WHMC
MEDI 4215 - Valley Aids Council – RAHC*

*Selective

Otolaryngology
OTOL 7000 - Off Campus
OTOL 4001 - Otolaryngology-Head and Neck Surgery*
OTOL 4002 - Otorthepathology Research
OTOL 4000 - Special Topics

*Selective

Pathology
PATH 4004 - Anatomic Pathology
PATH 4012 - Anatomic Pathology: Fine Needle Aspiration
PATH 4002 - Blood Banking
PATH 4001 - Hematology – UH
PATH 4003 - Hematology/Blood Banking
PATH 4104 - Naturopathic Medicine; Evidence-Based Critique
PATH 4007 - Research In Pathology

Pediatrics
PEDI 4074 - AHEC Clinic Experience
PEDI 4003 - Clinical Preceptorship in Ambulatory Pediatrics*
PEDI 4425 - Community for Children – At the Border and Beyond
PEDI 4201 - Community Pediatrics – RAHC*
PEDI 4205 - Evidence-Based Pediatrics – RAHC
PEDI 4207 - Neonatology – RAHC*
PEDI 4022 - Neonatal Research
PEDI 4023 - Neonatal Intensive Care Externship – UH/NICU*
PEDI 4006 - Pediatric Cardiology*
PEDI 4206 - Pediatric Cardiology – RAHC*
PEDI 4036 - Pediatric Critical Care Externship – UH*
PEDI 4037 - Pediatric Critical Care Externship – CSRCH*
PEDI 7002 - Pediatric Developmental Disabilities
PEDI 4020 - Pediatric Endocrinology*
PEDI 4202 - Pediatric Endocrinology – RAHC*
PEDI 4209 - Pediatric Gastroentrology – RAHC*
PEDI 4009 - Pediatric Gastroentrology/Nutrition*
PEDI 4027 - Pediatric Genetics*
PEDI 4013 - Pediatric Hematology/Oncology #1
PEDI 4015 - Pediatric Hematology/Oncology #2
PEDI 4208 - Pediatric ICU – RAHC (Valley Baptist Medical Center)*
PEDI 4016 - Pediatric Allergy, Immunology, and Infectious Diseases
PEDI 4210 - Pediatric Inpatient Service – RAHC (Valley Baptist Medical Center-Harlingen)*
PEDI 4031 - Pediatric Nephrology
PEDI 4204 - Pediatric Neurology – RAHC*
PEDI 4029 - Pediatric Pulmonology

*Selective

Microbiology
MICR 4001 - Basic Aspects of Immunology and Microbial Infections
MICR 4002 - Advanced Medical Microbiology

Obstetrics and Gynecology
OBGY 4010 - Advanced Sonography
OBGY 4011 - Clinical Obstetrics & Gynecology – RAHC*
OBGY 4009 - Endo-Infertility
OBGY 4001 - Obstetrical Externship
OBGY 4007 - Obstetrics and Gynecologic Research
OBGY 4008 - Women’s Reproductive Health and Gynecologic Surgery

*Selective

Ophthalmology
OPHT 4001 - Clinical Ophthalmology
OPHT 4201 - Clinical Ophthalmology-RAHC
OPHT 4003 - Research In Clinical Ophthalmology
OPHT 4006 - Ophthalmic Research

Orthopaedics
ORTO 4006 - Adult Reconstruction Surgery*
ORTO 4003 - Hand Surgery
ORTO 4012 - Musculoskeletal Oncology
ORTO 4008 - Pediatric Surgery – SRCH/UH
ORTO 7001 – Preceptorship
ORTO 4014 - Primary Care (Outpatient Orthopaedics)*
ORTO 4009 - Research
ORTO 4002 - Selective In Orthopaedics – WHMC
ORTO 4011 - Sports Medicine
ORTO 4005 - Trauma, Fracture and Clinical Care*
PEDI 7012 - Primary Ambulatory Care Preceptorship - Pediatrics
*Selective

Pharmacology
PHAR 4003 - Clinical Pharmacology

Physiology
PHYL 4016 - Ion Channel Research in Excitable and Non-Excitable Cells
PHYL 4012 - Research in the Endocrinology of Aging

Psychiatry
PSYC 4023 - Child and Adolescent Psychiatry
PSYC 4008 - Clinical Biological Psychiatric Research
PSYC 4001 - Clinical Psychiatry – HSC and RAHC*
PSYC 4020 - Consultation-Liaison Service
PSYC 4015 - Neuropsychiatry – VA Hospital
PSYC 4022 - Psychotic Disorders
PSYC 4019 - Psychiatric Emergency Service (PES)*
*Selective

Radiation Oncology
RADO 4003 - Radiation Oncology

Radiology
RADI 4004 - Diagnostic Radiology Clerkship – WHMC
RADI 4001 - General Diagnostic Radiology
RADI 4202 - General Diagnostic Radiology – RAHC
RADI 4006 - Pediatric Radiology

Rehabilitation Medicine
REHB 4001 - Clinical Rehabilitation Medicine (Outpatient and Consultative)
REHB 4005 - Combined Rehabilitation: Clinical Rehabilitation Medicine, Introduction to Inpatient Rehabilitation, Introduction to Pediatric Rehabilitation, and Introduction to Spinal Cord Injury Rehabilitation
REHB 4007 - Hyperbaric Medicine and Wound Care
REHB 4002 - Introduction to Inpatient Rehabilitation
REHB 4003 - Introduction to Pediatric Rehabilitation
REHB 4007 - Hyperbaric Medicine and Wound Care
REHB 4008 - Rehabilitation Engineering

Surgery
SURG 4008 - Cardiothoracic Surgery*
SURG 4201 - General Surgery – Harlingen*
SURG 4202 - Clinical Anesthesiology – Harlingen*
SURG 4050 - Congenital Cardiology and Cardiac Surgery*
SURG 4005 - Emergency Medicine*
SURG 4042 - General Surgery A*
SURG 4043 - General Surgery B*
SURG 4044 - General Surgery – VA*
SURG 4007 - General Surgery – BAMC/Burn Unit*
SURG 4039 - General Surgery – WHMC*
SURG 4010 - Neurosurgery*
SURG 4012 - Oral Maxillofacial Surgery*
SURG 4037 - Pediatric Surgery*
SURG 4026 - Plastic Surgery*
SURG 4038 - Rural Surgery*
SURG 4004 - Supervised Basic Science Research*
SURG 4006 - Supervised Clinical Science Research*
SURG 4040 - Surgical Critical Care*
SURG 4049 - Surgical Internship Readiness Elective*
SURG 4002 - Surgical Oncology*
SURG 4031 - Transplant Surgery*
SURG 4047 - Trauma/Emergency Surgery*
SURG 4027 - Urology*
SURG 4048 - Vascular Surgery – UH/VA*
*Selective

School of Medicine Course Descriptions

Anesthesiology

ANES 4001 - Clinical Anesthesia – UH
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 anesthetic, airway maintenance, and basic life support of the anesthetized patient.
Semester Credit Hours: 1.0–42.0

ANES 4002 - Critical Care Anesthesia*
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.
Semester Credit Hours: 1.0–42.0

ANES 4003 - Anesthesiology Research
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.
Semester Credit Hours: 1.0–42.0
ANES 4004 - Obstetrical Anesthesiology
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.
Semester Credit Hours: 1.0–42.0

ANES 4005 - Pain Management
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. Students 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.
Semester Credit Hours: 1.0–42.0

Biochemistry
BIOC 1005 - Medical Biochemistry
This course is designed for medical students and may be taken for Graduate School student credit only under unusual circumstances. Topics included are the chemistry and metabolism of carbohydrates, lipids, amino acids, proteins and nucleic acids.
Semester Credit Hours: 5.0
Prerequisites: general chemistry, organic chemistry, and physics

Cellular and Structural Biology
CSBL 1005 - Histology
Current concepts in cell biology and human histology are covered by means of a series of lectures and laboratory sessions. Basic information on the structure and function of cells and tissues is presented in the lectures; this is followed by staff-supervised laboratory sessions emphasizing the recognition of cells and the fundamental tissues. Each student is provided with a box of microscopic slides of human tissues. The laboratory sessions are accompanied by microscopic slide demonstrations and/or television tapes of tissues under study. Supplemental study material, such as films, television tapes, and transparent photomicrographs are available upon request through the Office of Educational Resources and the Teaching and Learning Center. The general purpose of this course is to acquaint the student with basic cytology and histology of normal human tissues, thereby offering a firm foundation of knowledge for the understanding of normal and disease processes. $48 microscope fee for the Freshman year includes this course. $32 laboratory fee for the Freshman year includes this course.
Semester Credit Hours: 4.5
Offered By: Department of Cellular & Structural Biology

CSBL 1010 - Gross Anatomy and Embryology
Lectures, conferences, and laboratory work cover normal human developmental and gross anatomy. Lectures on the development of the systems are correlated with the presentation and dissection of the gross structure of the adult. Groups of four students dissect a cadaver under the supervision of the departmental staff. Prosections, demonstration specimens, X-rays, films, and other learning aids supplement the laboratory work. Applied anatomy and malformations are discussed by clinical specialists. Human materials fee: $500. Laboratory fee: $30.
Semester Credit Hours: 7.5
Offered By: Department of Cellular & Structural Biology

Emergency Medical Technology
EMST 4100 - Advanced Cardiac Life Support
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.
Semester Credit Hours: 1.0
Offered By: Department of Emergency Medical Technology

Enrichment Elective
ELEC 5006 - Beginning Medical Spanish
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.
Semester Credit Hours: 0.0

ELEC 5038 - Literature and Medicine I
An elective for second- and fourth-year students, the purpose of the course is for students to use their readings as a tool to prepare for and process their clinical experiences, and to approach their development as people and as physicians. The course also will allow students to interact with other second- and fourth-year students and faculty in a venue that is open and informal. Most of the course will take place on the Web via WebCT. After each reading block, there will an evening meeting to discuss the story and/or poem. Students will be expected to read the assignments and attend as many of the evening meetings as possible.
Semester Credit Hours: 0.0
ELEC 5039 - Literature and Medicine II
An elective for second- and fourth-year students, the purpose of the course is for students to use their readings as a tool to prepare for and process their clinical experiences, and to approach their development as people and as physicians. The course also will allow students to interact with other second- and fourth-year students and faculty in a venue that is open and informal. Most of the course will take place on the Web via WebCT. After each reading block, there will an evening meeting to discuss the novel and/or poem. Students will be expected to read the assignments and attend as many of the evening meetings as possible.
Semester Credit Hours: 0.0
Prerequisites: Literature and Medicine I

ELEC 5040 - Trauma Enrichment
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.
Semester Credit Hours: 0.0
Offered By: Interdisciplinary

ELEC 5042 - Enrichment Elective in Ethics
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.
Semester Credit Hours: 0.0

ELEC 5044 - Preparing for Community Service Learning
This innovative inter-professional community service learning course, provided in partnership with the School of Nursing course (NURE 3090 Topics of Special Interest in Nursing: Healthy Choices for Kids), will provide the opportunity for medical students to gain an in-depth understanding and knowledge of contextual health and health-risk behaviors in disadvantaged adolescents residing in a low-income urban barrio. Healthy Choices for Kids (HCK) is offered in two parts: a didactic component and a service learning practicum. Part A is a three-week didactic session, otherwise known as “boot camp,” that takes place at the Health Science Center in late May and early June. The purpose of the boot camp is for students to develop the requisite knowledge base for teaching disadvantaged adolescents how to make healthy choices with respect to nutrition, fitness, pregnancy prevention, positive self esteem, and reaching one’s potential. Part B is an eight-week service learning practicum where the medical students, in partnership with nursing students and volunteer undergraduate students, will work with middle-school aged adolescents attending the summer camp at Good Samaritan Center.
Semester Credit Hours: 0.0
Prerequisites: completion of first year of medical school

ELEC 5045 - Clinical Knowledge and Surgical Skills
This elective is for second-year medical students who wish to learn basic clinical and surgical skills required for the third-year clerkships. Classes will be taught by various members of the Surgery department, including staff and residents. Components include technical skills sessions, case presentations, didactic sessions, and panel.
Semester Credit Hours: 0.0

ELEC 5046 - Clinical Knowledge for the Surgical Clerkships
This elective is for second-year medical students who wish to learn basic clinical and surgical skills required for the third-year clerkships. This course is similar to “Clinical Knowledge and Surgical Skills” course but does not include all the Technical Skills sessions. Classes will be taught by various members of the Surgery department, including staff and residents. Components include technical skills sessions, case presentations, didactic sessions, and panel. The class will total 10 class hours over the semester.
Semester Credit Hours: 0.0

ELEC 5106 - Intermediate Medical Spanish
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.
Semester Credit Hours: 0.0

ELEC 5206 - Advanced Medical Spanish
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.
Semester Credit Hours: 0.0

INTD 4058 - Hospice and Palliative Medicine
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.
Semester Credit Hours: 4.0
FAPR 3005 - Family Practice Clerkship
The family practice 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.
Semester Credit Hours: 6 weeks—7.0
Prerequisites: Successful completion of all required preclinical courses is prerequisite to enrollment in any of the clinical clerkships.
Offered By: Department of Family and Community Medicine

FAPR 4000 - Special Topics in Family Medicine
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.
Semester Credit Hours: 1.0–42.0
Prerequisites: Designed course description, objectives, and curriculum must be approved by the Predoctoral Faculty Director before the course can begin.

FAPR 4008 - Research in Family Medicine
The objective of this course is to provide the opportunity for students to learn to be able to critically evaluate a research article; design, complete, and analyze a simple research study; and conduct a proper statistical analysis.
Semester Credit Hours: 1.0–42.0
Prerequisites: Students must submit a prepared outline of course activities that is signed by their instructor prior to the beginning of the course, select a research topic at least 8 weeks prior to the start of the elective, and design the project with guidance.

FAPR 4011 - Community Geriatrics
The objectives of the course are for the student to be able to have the opportunity to learn to:
1. Evaluate an elderly patient to include history and physical examination, and problem list.
2. Administer geriatric assessments for dementia, depression, and function.
3. Interpret assessment findings in the context of a patient’s functional level.
4. Make a comprehensive geriatric treatment plan.
5. Target and prevent functional decline.
6. Determine capacity for decision making.
7. Identify and describe the geriatric syndromes.
8. Utilize home health services appropriately.
9. Make referrals for outpatient rehab and for consultants.
10. Utilize geriatric principles in all specialty areas.
Semester Credit Hours: 1.0–42.0

FAPR 4012 - Subinternship in Family Medicine In-Patient Services
The objectives of this course are for the student to have the opportunity to learn to be able to:
1. Perform initial patient history and physical, and develop comprehensive assessment and management plan of patients admitted to the hospital.
2. 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.
3. Participate in all aspects of inpatient care including daily visits, writing progress notes, attending patient and family discussions, and planning patient discharge.
4. Under the supervision of the faculty and upper level residents, maintain daily responsibility for care of a panel of hospitalized patients.
Semester Credit Hours: 1.0–42.0

FAPR 4015 - Medical Informatics
The objectives of this course are for the student to have the opportunity to learn to be able to:
1. Discuss informatics topics such as vocabulary issues and decision support theory.
2. Contribute to informatics projects such as creation of Web Pages or development of portions of electronic medical records
Semester Credit Hours: 1.0–42.0
Prerequisites: Contact course instructor before signing up for the course.

FAPR 4018 - Office Procedures
The objectives of this course are for the student to have the opportunity to learn to be able to:
1. Conduct an informed consent for common ambulatory procedures.
2. Perform with assistance and supervision laceration repairs, skin lesion removal, wedge ingrown toenail removal, and cast/splint placement.
3. Assist with circumcisions, colposcopies, vasectomies, and flex sigmoidoscopies.
Semester Credit Hours: 1.0–42.0

FAPR 4020 - Family Medicine Preceptorship with Clinical Faculty
The objectives of this course are for the student to have the opportunity to learn to be able to:
1. Evaluate known patients of all ages presenting in an ambulatory setting and develop management plans for chronic as well as acute illnesses.
2. 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.

3. Incorporate appropriate prevention and anticipatory guidance into chronic and acute patient visits.

4. 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.

5. 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.

Semester Credit Hours: 1.0–42.0
Prerequisites: Students must contact Rachel Halvaksz (RM 613L) for the list of available clinical faculty members before selecting a preceptor.

FAPR 4022 - Spanish-Speaking Patient Clinic
Duration: 4 weeks
Maximum students during period: 1

Objectives:
At the end of this selective, the student will have had the opportunity to learn to and be required to:

(1) Evaluate and develop management plans with primarily Hispanic, Spanish-speaking patients under the supervision of family physicians at the Barrio Comprehensive Health Clinic.

(2) Develop and present culturally appropriate patient education materials for Hispanic, Spanish-speaking patients.

(3) Discuss public health initiatives including Healthy People 2010, HHS Hispanic Health Initiative, and the President’s Initiative on Ethnic Health Disparities.

(4) Discuss Institute of Medicine reports such as “Unequal Treatment” and “Health Literacy” concerning health care disparities for Hispanic and other minority patients.

(5) Increase proficiency in Spanish in particular Medical Terminology.

Curriculum:

(1) Direct patient care under the supervision of the medical director of the Barrio Comprehensive Clinic. (7 half-days per week)

(2) Development and presentation of patient education session. (1 half day per week)

(3) Self-directed study. (2 half days per week)

Semester Credit Hours: 1.0–42.0

FAPR 4024 - MS4 Tutor Elective
The Tutoring Elective consists of activities that will provide the student the opportunity to participate in the Office of Academic Enhancement Tutoring Program as tutors. Each tutor will receive training, tutor over an entire academic year, participate in weekly online activities, and receive a formal observation with a follow-up conference.

Semester Credit Hours: 2.0

FAPR 4025 - Family Medicine Ambulatory Children’s Health Elective
Course content requires students to care for children in two ambulatory settings:

1) Family Health Center: See 15 patients/session in Well Child Clinic; 3 sessions/wk with one session school-aged children in the early evenings and 3–15 walk-in pediatric patients with acute or urgent care complaints 3 half-days/wk under the supervision of a Family Medicine attending. Students must participate in PGY-1 pediatric case conference on Friday mornings before walk-in clinic starts and attend Wednesday afternoon FM Residency Conference.

2) Bexar County Juvenile Detention Center (JDC): See detained adolescents for intake physical exams and for evaluation of acute complaints two half-days/week under the supervision of a Family Medicine attending.

Semester Credit Hours: 4.0

FAPR 4074 - Rural Clinical Experience in Family Medicine (AHEC Program)
Under the auspices of the Health Science Center AHEC Program, this experience exposes students to primary care of ambulatory patients at various AHEC clinical training sites in South Texas. Under the direct supervision of a Board Certified Family Physician, the student serves as the initial physician in the evaluation and management of a wide array of outpatient problems. In addition, the student gains experience in preventive services applicable to infectious diseases, tuberculosis, diabetes, etc., and works with health professionals to gain a broader understanding of health care needs and services. This clinic experience may include associated inpatient experience.

Semester Credit Hours: 1.0–42.0

FAPR 4103 - Interprofessional Women’s Health Course
Semester Credit Hours: 0.5

FAPR 4202 - Dermatology: A Short Review Course
This 8-hour dermatology course will follow the American Academy of Family Practice (AAFP) board dermatology curriculum and will include the following topics: basic components of dermatology and common dermatologic problems, as well as common skin cancers. This is a Family Medicine MS4 didactic elective for Harlingen.

Semester Credit Hours: 0.5

FAPR 4203 - Review of Evidence-Based Medicine (short course)
This course aims to provide medical students with a set of evidence-based exercises relating to diagnosis, prognosis, therapy, and harm. Students will be asked to formulate clinical questions so that they can be answered, to search for information, to critically appraise the evidence for validity and clinical importance, and apply the evidence in clinical practice. This is an MS4 didactic elective for Harlingen.

Semester Credit Hours: 0.5
FAPR 4205 - Medicine and the Environment
This is an online longitudinal elective for fourth-year medical students that meets September-February. Students are required to read and view assigned and selected materials on environmental health and discuss the role of environmental factors in the diagnosis and treatment of patients.
Semester Credit Hours: 1.0–42.0

FAPR 7000 - Off-Campus Rotation in Family Medicine
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.
Semester Credit Hours: 1.0–42.0
Prerequisites: Course Approval Form must be completed along with documentation of the designed course description and confirmation of appointment with preceptor.

FAPR 7004 - Family Medicine Preceptorship – External (in Texas)
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.
Semester Credit Hours: 1.0–42.0

FAPR 7005 - Preceptorship in International Health
The objectives of this course are for the student to have the opportunity to learn to be able to:
1. Describe inpatient, outpatient, and community health activities in a setting outside the United States.
2. Diagnose and provide management for illnesses seldom seen in the United States under the supervision of a physician.
3. Make appropriate medical decisions, supervised by a local physician in that country, in a setting in which cultural norms, socio-economic factors, and religious beliefs differ from those commonly found in the United States influence patient care.
Semester Credit Hours: 1.0–42.0

FAPR 7008 - Environmental/Border Health: South Texas Environmental Education and Research (Steer) Program
The objectives of this course are for the student to have the opportunity to learn to be able to:
1. Discuss contemporary environmental and public health concerns, as well as cultural influences, that affect the health of U.S.-Mexico border residents and other underserved populations.
2. Identify credible sources of public health information and assistance, and explain how to use these to help patients and communities.
3. Describe clinical manifestations of common environmental contaminants, such as lead, mold, allergens, and water pollutants, and tell how these exposures are measured.
4. Explain when and how to take an exposure history and the role of “environmental house calls” in addressing chronic health conditions such as asthma.

Prerequisites: To enroll in this elective, contact course director at least 6 weeks prior to rotation start date.
Semester Credit Hours: 1.0–42.0

FAPR 7010 - Public Health at the U.S.-Mexico Border: South Texas Environmental Education & Research (Steer) Program
This elective is a unique hands-on and community-based rotation focusing on public health concerns on both sides of the U.S.-Mexico border. Students spend 4 weeks in residence at the RAHC (Regional Academic Health Center) campus (housing provided for non-RAHC students) in Harlingen, Texas. Approximately three-quarters of the time, students are in the field, learning about environmental, international, and public health issues and diseases such as tuberculosis, dengue fever, diabetes, West Nile virus, and rabies that pose major risks to residents of the U.S.-Mexico border. Experienced public health practitioners teach participants while they visit clinics, health departments, and hospitals on both sides of the border, and spend time with families in colonias. Participating students learn first-hand about major public health concerns in the region that have the potential to affect citizens throughout Texas and the U.S. This elective is highly sought after by CDC Interns. At the end of the course, students are required to report on their experiences in writing and orally to a group of public health practitioners and faculty. Students will be transported to and from Mexico and accompanied to the teaching sites.
Prerequisites: Knowledge of Spanish is helpful but not necessary.
Offered By: 1.0–42.0

Interdisciplinary

ELEC 5043 - Public Health and the Physician
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.
Semester Credit Hours: 0.0

INTD 1005 - On Becoming a Doctor—Foundations
This course encompasses three primary aspects of learning to care for patients – health care ethics, patient communication,
INTD 1041 - Neuroscience

Neuroscience introduces the study of the nervous system using a multidisciplinary approach. The course is presented by a Task Force with representation from basic science and clinical departments. In this way, correlations between fundamental principles and their clinical application are demonstrated. The course considers the anatomy and physiology of the nervous system, introducing clinical discussions and patient demonstrations to highlight basic principles. Beginning with a consideration of fundamental cellular mechanisms, the student is introduced to successive levels of complexity of nervous function. Basic anatomic concepts are developed in the laboratory using microscopic and gross specimens. Demonstrations and audiovisual teaching techniques are widely used. Neurophysiology and functional anatomy are emphasized in lectures and clinical presentations. The course is jointly presented by the departments of Cellular & Structural Biology, Physiology, Pharmacology, and Medicine (Division of Neuroscience) with the assistance of the Department of Surgery and the Imaging Center. Microscope fee: $48. Laboratory fee: $30.
Semester Credit Hours: 5.0
Offered By: Interdisciplinary

INTD 2001 - Introduction to the Clinical Sciences (ICS) I

This course encompasses the major clinical fields of internal medicine, obstetrics/gynecology, pediatrics, surgery, and surgical subspecialties. It is designed to cover all aspects of human disease states including vocabulary, data collection skills, problem solving, surgical principles, surgical pathophysiology, concepts unique and common to pediatric-aged patients, and sexual and reproductive pathophysiology. The course will be organized into organ system modules and integrated with pathophysiology and pharmacology. Teaching format will include lectures and small-group sessions. The first semester, ICS I, will include general concepts, renal, cardiovascular, respiratory/infectious diseases, and hematology/dermatology organ system modules. ICS II, second semester, will include gastrointestinal, musculoskeletal, neuroscience, special senses, reproductive and endocrine systems, plus trauma and toxicology.
Semester Credit Hours: 7.5
Offered By: Interdisciplinary

INTD 2002 - Introduction to the Clinical Sciences (ICS) II

This course encompasses the major clinical fields of internal medicine, obstetrics/gynecology, pediatrics, surgery, and surgical subspecialties. It is designed to cover all aspects of human disease states including vocabulary, data collection skills, problem solving, surgical principles, surgical pathophysiology, concepts unique and common to pediatric-aged patients, and sexual and reproductive pathophysiology. The course will be organized into organ system modules and integrated with pathology and pharmacology. Teaching format will include lectures and small-group sessions. The first semester, ICS I, will include general concepts, renal, cardiovascular, respiratory/infectious diseases, and hematology/dermatology organ system modules. ICS II, second semester, will include gastrointestinal, musculoskeletal, neuroscience, special senses, reproductive and endocrine systems, plus trauma and toxicology.
Semester Credit Hours: 9.5
Offered By: Interdisciplinary

INTD 2006 - Advanced Clinical Evaluation Skills (ACES)

The ACES course is designed to build on the clinical skills learned in the first year and to integrate knowledge gained in the basic science courses for direct application to patient care. During the organ system modules, students will be paired with a preceptor to concentrate on examination skills of a particular organ site and will learn details and interpretation of abnormal findings. The course will cover important aspects of evidence-based medicine and students will have opportunities to use these concepts throughout the year. To prepare for the clinical clerkships, students will have the opportunity to practice skills of writing a complete history and physical, writing patient progress notes, writing prescriptions, and giving oral presentations.
Semester Credit Hours: 6.0
Offered By: Interdisciplinary

INTD 3030 - Clinical Foundations

The purposes of this course are to:

1. Prepare students to excel as learners in clinical settings by providing foundations for clinical skills including finding information, presenting cases, charting, writing orders, completing other paperwork, and clinical reasoning including basic EKG and radiograph interpretation.

2. Assist students in developing new skills expected of third-year clerks including lab skills (phlebotomy, ABG, blood cultures, hemoccult cards), IV insertion, PPD placement, sterile gowning/ gloving, basic suturing, nasogastric tube placement, O₂ management, and Basic Cardiac Life Support.

3. Prepare students for their new roles in clinical settings, where they encounter patient care responsibilities along with patient privacy and ethical issues.
INTD 4007 - Community Service Learning Elective
This is a longitudinal course that consists of activities that will provide the student with the opportunity to gain knowledge about community service learning, participate in service to the community through developing and conducting a community service learning project with the guidance of a mentor, present the results at a conference poster session, and reflect on all of these experiences as part of the learning process.
Semester Credit Hours: 2.0

INTD 4008 - Interprofessional Care in HIV
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.
Semester Credit Hours: 0.5

INTD 4009 - Interprofessional Care in HIV
Students will have the opportunity to learn how to function as a member of an interprofessional team in HIV case management, and become familiar with issues of: patient safety, health literacy, medication reconciliation, treatment guidelines, and interprofessional teamwork in HIV care.
Semester Credit Hours: 2.0

INTD 4015 - Humanism in Medicine Fellowship
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 and SAMM Transitional Living and Learning Center under faculty supervision. Clinical experiences will be at these clinics and on trips with Frontera de Salud to the Colonias of South Texas.
Semester Credit Hours: 2.0

INTD 4018 - Independent Elective in Ethics
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)
Semester Credit Hours: 2.0

INTD 4019 - Clinical Ethics
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.
Semester Credit Hours: 2.0

INTD 4030 - Preparing for Global Health Work
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.
Semester Credit Hours: 2.0

INTD 4047 - Community Service Learning Elective
This is a longitudinal two-week course that consists of activities that will provide the student with the opportunity to gain knowledge about community service learning, participate in service to the community through developing and conducting a community service learning project with the guidance of a mentor, present the results at a conference poster session, and reflect on all of these experiences as part of the learning process.
Semester Credit Hours: 3.0

INTD 4007 - Community Service Learning Elective
This is a longitudinal course that consists of activities that will provide the student with the opportunity to gain knowledge about community service learning, participate in service to the community through developing and conducting a community service learning project with the guidance of a mentor, present the results at a conference poster session, and reflect on all of these experiences as part of the learning process.
Semester Credit Hours: 2.0

INTD 4008 - Interprofessional Care in HIV
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.
Semester Credit Hours: 0.5

INTD 4009 - Interprofessional Care in HIV
Students will have the opportunity to learn how to function as a member of an interprofessional team in HIV case management, and become familiar with issues of: patient safety, health literacy, medication reconciliation, treatment guidelines, and interprofessional teamwork in HIV care.
Semester Credit Hours: 2.0

INTD 4015 - Humanism in Medicine Fellowship
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 and SAMM Transitional Living and Learning Center under faculty supervision. Clinical experiences will be at these clinics and on trips with Frontera de Salud to the Colonias of South Texas.
Semester Credit Hours: 2.0

INTD 4018 - Independent Elective in Ethics
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)
Semester Credit Hours: 2.0

INTD 4019 - Clinical Ethics
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.
Semester Credit Hours: 2.0

INTD 4030 - Preparing for Global Health Work
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.
Semester Credit Hours: 2.0

INTD 4047 - Community Service Learning Elective
This is a longitudinal two-week course that consists of activities that will provide the student with the opportunity to gain knowledge about community service learning, participate in service to the community through developing and conducting a community service learning project with the guidance of a mentor, present the results at a conference poster session, and reflect on all of these experiences as part of the learning process.
Semester Credit Hours: 3.0
mosis, 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.

**Semester Credit Hours:** 1.0–4.0

**MEDI 4206 - Cardiology Intensive Care – RAHC**
The student will work with a cardiologist in solo or group practice and will participate in the evaluation of patients with cardiovascular symptoms and disease. The student will have full-time participation in clinics, consultations, ECG interpretation, non-invasive cardiac test interpretation, and possible observation in the cardiac catheterization laboratory. The student is expected to learn the pathophysiologic approach to the diagnosis and management of disease of the cardiovascular system, detailed assessment through history and detailed cardiovascular physical exam, and interpretation of diagnostic tests. 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.

**Semester Credit Hours:** 1.0–4.0

**MEDI 4211 - Office Nephrology – RAHC**
The student will work with a nephrologist in a solo or group practice and are required to participate in the evaluation of patients with a variety of renal diseases including hypertension, acute and chronic renal failure, acid-base disturbances, fluid and electrolyte disturbances, and glomerular disease. The student will have full-time participation in clinics, consultations, special diagnostic procedures, and the dialysis unit. 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. 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.

**Semester Credit Hours:** 1.0–4.0

**MEDI 7004 - Literature and Medicine**
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 on-line. 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.

**Semester Credit Hours:** 2.0

**Medicine**

**MEDI 3105 - Medicine Clerkship**
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.

**Semester Credit Hours:** 14.0—12 weeks

**Prerequisites:** Successful completion of all required preclinical courses is prerequisite to enrollment in any of the clinical clerkships.

**Offered By:** Department of Medicine

**MEDI 4002 - Clinical Cardiology**

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.

**Semester Credit Hours:** 1.0–42.0

**MEDI 4004 - Cardiovascular Research**

Students can participate in original research, basic or clinical, in collaboration with a faculty member of the Division of Cardiology.

**Semester Credit Hours:** 1.0–42.0

**MEDI 4005 - Cardiology Intensive Care Unit/Ward Subinternship – WHMC**
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 resi-
dent, Cardiology fellow, and Cardiology attending. Students
are required to care for patients in the CCU and Telemetry
ward. Semester Credit Hours: 1.0–42.0

MEDI 4007 - Cardiology Care Unit - Subinternship – BAMC

This subinternship is designed to prepare students for the in-
tense 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 resi-
dent, 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 pa-
tients with cardiac disease, including critically ill patients need-
ning hemodynamic and respiratory monitoring and ventilation
support. Semester Credit Hours: 1.0–42.0

MEDI 4008 - Clinical Endocrinology

Students are required to participate in inpatient consultations
and outpatient clinics evaluating patients with pituitary and hy-
pothalamic disease, adrenal disease, diabetes mellitus, thyroid
disorders, and lipid disorders. Students are required to per-
form inpatient consultations at Audie Murphy VA Hospital and
University Hospital. Outpatients will be evaluated in weekly endo-
crine clinics at the VA Hospital and Texas Diabetes Institute.
Students will be responsible for the initial evaluation of as-
signed patients, presentation of findings from the history and
physical exam, interpretation of endocrine testing, and forma-
tion of differential diagnosis. If rotation is done as the Ambula-
tory selective, the student is required to prepare a written
essay based upon specific course objectives concerning sys-
tems of care. Essays must be submitted on the last day of the
rotation and are required to receive a passing grade in the
course. Semester Credit Hours: 1.0–42.0

MEDI 4009 - Research in Calcium and Bone Metabolism

This research elective is recommended for students with se-
rious research interests. It offers the opportunity to participate
in ongoing projects under the supervision of division faculty.
Semester Credit Hours: 1.0–42.0

MEDI 4010 - Clinical Dermatology

This elective is recommended for students with a serious inter-
est 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 ses-
dions will be held separately at WHMC and BAMC. Each stu-
dent 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. Semester Credit Hours: 1.0–42.0

MEDI 4012 - Clinical Endocrinology – WHMC

Students will have exposure to a very active clinical endocri-

nology 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 presenta-
tions, interpret laboratory data, and develop differential diag-

nosis and management plan on all assigned patients. Clinical
performance will be evaluated by supervising attending. No
late drops will be accepted.
Semester Credit Hours: 1.0–42.0

MEDI 4013 - Research In Clinical Epidemiology

Students will have the opportunity to participate in ongoing ep-
emiological surveys in diverse populations. Topics covered
include population and genetic epidemiologic studies sampling,
family studies (including studies of candidate genes and sys-

tematic genome searches), design of epidemiological instru-
ments, quality control of field operations, documentation of
health outcomes, management of large data bases, and data
analysis including complex segregation and linkage analysis.
Semester Credit Hours: 1.0–42.0

MEDI 4014 - Gastrointestinal Research

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.
Semester Credit Hours: 1.0–42.0

MEDI 4015 - Clinical Gastroenterology

Students are required to participate in inpatient consultations at
Audie L. Murphy V. A. Hospital (ALMVAH) and University Hos-
pital, outpatient clinics at ALMVAH and University Health Sys-
tem, 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 gastroenterological procedures, as well as the
MEDI 4019 - Research In Hematology/Oncology
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.
Semester Credit Hours: 1.0–42.0

MEDI 4021 - Infectious Disease – WHMC
The intent of this rotation is to acquaint the student with the field of infectious diseases as it pertains to the problems of general internal medicine and surgery and provide clinical expertise in the use of antibiotics for medical and surgical infections. Special emphasis will be placed on understanding patterns of infection in immunocompromised patients (cancer patients, solid organ and bone marrow transplant recipients, and AIDS). Students are expected to acquire techniques in the evaluation and management of medical and surgical infections, in both the in-patient and outpatient sphere. These techniques include detailed history and physical examination with presentation of available data, pertinent epidemiological factors associated with infections, and appropriate laboratory and other diagnostic studies. Students are required to participate in daily infectious diseases consult rounds, which include rounds in the Microbiology laboratory. No late drops will be accepted.
Semester Credit Hours: 1.0–42.0

MEDI 4022 - Research in Infectious Disease
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.
Semester Credit Hours: 1.0–42.0

MEDI 4023 - Clinical Infectious Disease
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.
Semester Credit Hours: 1.0–42.0

MEDI 4024 - Infectious Disease – BAMC
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 ill-
nesses 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.**

Semester Credit Hours: 1.0–42.0

**MEDI 4025 - Clinical Nephrology**

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.

Semester Credit Hours: 1.0–42.0

**MEDI 4026 - Nephrology Service – BAMC**

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.**

Semester Credit Hours: 1.0–42.0

**MEDI 4027 - Nephrology Service – WHMC**

Students are required to work with the residents and fellows on the Nephrology Service consult team under the direction of a staff nephrologist. Patients with hypertension, fluid and electrolyte disorders, acid-base disorders, kidney stones, acute renal failure, chronic renal failure, and the full range of primary and secondary glomerular diseases including pregnancy-related syndromes will be seen and followed. Experience in the treatment of renal failure including hemodialysis, peritoneal dialysis, and transplantation will be available for those interested. 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. **No late drops will be accepted.**

Semester Credit Hours: 1.0–42.0

**MEDI 4028 - Renal Research**

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.

Semester Credit Hours: 1.0–42.0

**MEDI 4029 - Neurology Consultation Service**

Students are required to perform neurological consultations both at the University Hospital and Audie L. Murphy V. A. Hospital. 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. 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.

Semester Credit Hours: 1.0–42.0

**MEDI 4030 - Neurology Subinternship – UH/VA**

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 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. Considerable responsibility in the management of neurologic patients is provided on the inpatient ward services at the University Hospital and Audie L. Murphy V. A. Hospital. Attendance at daily rounds, consultation rounds, and formal conferences is expected.

Semester Credit Hours: 1.0–42.0

**MEDI 4032 - Research In Neurology**

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.

Semester Credit Hours: 1.0–42.0

**MEDI 4034 - Oncology Consultation Service**

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.

Semester Credit Hours: 1.0–42.0
MEDI 4036 - Molecular Genetics Research in Breast Cancer
A student may participate in research in hormone receptor molecular biology, drug resistance, and gene expression in breast cancer directed at improving the treatment and diagnosis of breast cancer.
Semester Credit Hours: 1.0–42.0

MEDI 4042 - Coronary Intensive Care Unit-Subinternship – UH
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.
Semester Credit Hours: 1.0–42.0

MEDI 4043 - Clinical Chest Disease Consultation Service
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.
Semester Credit Hours: 1.0–42.0

MEDI 4044 - Pulmonary Disease – WHMC
Students are required to become acquainted with the field of pulmonary disease, including preoperative evaluation, evaluation of abnormal chest x-rays, pulmonary function testing, pulmonary infectious diseases, and intensive care medicine. Students are required to observe (and occasionally participate in) pulmonary procedures: bronchoscopy, pleural biopsy, thoracentesis, and fine needle aspiration of lung lesions. The student is expected to acquire basic knowledge in the broad fields of pulmonary disease and intensive care medicine, with emphasis on the workup of routine problems such as abnormal chest x-ray, tuberculosis, interpretation of pulmonary function tests and arterial blood gases, and preoperative evaluation for cardiopulmonary risk. No late drops will be accepted.
Semester Credit Hours: 1.0–42.0

MEDI 4045 - Pulmonary Medicine – BAMC
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.
Semester Credit Hours: 1.0–42.0

MEDI 4046 - General Medicine Ward Subinternship – UH/VA
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 and attending.
Semester Credit Hours: 1.0–42.0

MEDI 4047 - General Medicine Ward Subinternship – BAMC
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.
Semester Credit Hours: 1.0–42.0

MEDI 4048 - Medical ICU Subinternship – BAMC
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.
Semester Credit Hours: 1.0–42.0

MEDI 4049 - Clinical Rheumatology
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 stu-
dent 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.

**Semester Credit Hours:** 1.0–42.0

**MEDI 4051 - Rheumatology – WHMC**

Student will receive a comprehensive initial exposure to the field of rheumatology. Students will be involved in the care of conditions ranging from common regional musculoskeletal disorders to severe systemic rheumatic diseases such as systemic lupus erythematosus. The student will function at the subintern level both in the outpatient clinic and on the inpatient consult service. Participation in research and exposure to data interpretation in the Clinical Immunology Laboratory are potential opportunities arranged on an individual basis. **No late drops will be accepted.**

**Semester Credit Hours:** 1.0–42.0

**MEDI 4054 - Clinical Nutrition**

This elective is structured into two parts: 1) Independent study focused upon a topic in nutrition that pertains to the student’s planned career goals, and 2) Hospital nutrition support where students will work with a hospital nutritionist to learn the practicalities of patient assessment, enteral and parenteral nutrition support, and calculation of caloric and protein needs. Students will have the opportunity to follow patients throughout their postoperative or ICU course. Focus will be placed on the most current medical reports that relate to the application of nutrition assessment and the provision of nutritional support, and teaching rounds will include discussion of hypothetical patient cases. The independent study will be planned in consultation with each student. Critical review of current medical literature will focus on nutrition as related to each student’s future professional direction: surgery, internal medicine, etc.

**Semester Credit Hours:** 1.0–42.0

**MEDI 4055 - Research In General Internal Medicine**

Students are required to join the research activities of the Division of General Medicine, focusing on problems in clinical diagnosis and management, risk factors for disease, and health care delivery. Students may join an ongoing project or design their own under faculty supervision. Research methods, including hypothesis formation, protocol design, data collection, and data analysis will be emphasized. Students are required to also participate in the Division’s research conferences and journal clubs.

**Semester Credit Hours:** 1.0–42.0

**MEDI 4056 - Neurology Service – BAMC**

The Neurology Service consists of four staff neurologists. Students will be required to rotate on the consultation service and act as interns on the service (i.e., initially see and evaluate inpatients who have been referred to the service and present the patients during daily rounds with the attending neurologist). The Neurology Service also operates a large outpatient clinic and an outpatient clinical experience can be tailored to the student’s needs and desires. **No late drops will be accepted.**

**Semester Credit Hours:** 1.0–42.0

**MEDI 4060 - Medical ICU Subinternship – WHMC**

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 her/his patients, under the supervision of the Internal Medicine resident, Critical care fellow and attending. This subinternship is required to teach the fundamentals of Critical Care Medicine. Daily bedside teaching by the ICU staff is provided in addition to “hands-on” experience in managing the critically ill patient with close resident and staff supervision.

**Semester Credit Hours:** 1.0–42.0

**MEDI 4061 - General Internal Medicine Ward Subinternship – WHMC**

This subinternship is designed to prepare students for the intense and responsible role of the intern. The subintern is an integral member of the general medicine ward team and is required to participate in all team activities and medical care for his/her patients, under the supervision of the Internal Medicine resident and attending. The broad range of medical conditions admitted to WHMC affords the student exposure to the full spectrum of inpatient general internal medicine. **No late drops will be accepted.**

**Semester Credit Hours:** 1.0–42.0

**MEDI 4062 - Allergy-Immunology Clinic and Consultation Service – WHMC**

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.**

**Semester Credit Hours:** 1.0–42.0

**MEDI 4063 - Hematology/Oncology Consultation – WHMC**

The student is required to participate on the Medical Oncology/Hematology Consultation Service. Students are required to evaluate inpatients on the other medicine and surgical services, as well as new patients with classic hematologic problems seen in the outpatient clinic. The student is expected to acquire an evaluation and treatment approach to patients whether presenting with malignant or hematologic problems. The appropriate selection of diagnostic studies will be emphasized as well as the basics of selecting appropriate therapy. Experience in the evaluation of peripheral blood smears and the obtaining and interpretation of marrow samples will be stressed. **No late drops will be accepted.**

**Semester Credit Hours:** 1.0–42.0

**MEDI 4065 - Medical Ethics for the Clinician**

At the end of this seminar, students are required to be able to:

1. Describe the purposes and methods of ethics consultations.
2. Describe and critique four approaches to solving ethical issues in medicine: principle-based (including consequence-oriented and duty-oriented), relational, virtue-oriented, and casuistic;

3. Use each of these four approaches to analyze a clinical case presenting ethical issues;

4. Use each of these approaches to analyze major ethical issues in health care; and

5. Analyze the sources, methods, and outcomes of other people’s deliberations over ethical issues in health care.

This course requires approximately 3–4 hours reading outside of class each day. Students are required to meet daily with the instructor to discuss the assigned readings during a 90-minute seminar.

**Semester Credit Hours:** 1.0–42.0

**MEDI 4066 - Medical ICU Subinternship – UH/VA**

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.

**Semester Credit Hours:** 1.0–42.0

**MEDI 4068 - Geriatric Medicine**

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.

**Semester Credit Hours:** 1.0–42.0

**MEDI 4069 - Research in Aging**

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.

**Semester Credit Hours:** 1.0–42.0

**MEDI 4074 - AHEC Clinic Experience**

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](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.**

**Semester Credit Hours:** 1.0–42.0

**MEDI 4075 - AHEC Preceptorship**

Students will work closely with board certified internists in private practice in other communities throughout South Texas, San Antonio, and surrounding counties. Students are required to actively participate in office outpatient care and inpatient care under the direct supervision of the preceptor. 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. 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 travel and/or housing expenses may be covered by the AHEC/STBI. **No late drops will be accepted.**

**Semester Credit Hours:** 1.0–42.0

**MEDI 4077 - EKG Interpretation**

This rotation is designed for students whom 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.

**Semester Credit Hours:** 2.0

**MEDI 4079 - Clinical Preceptorship in General Internal Medicine**

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. 

Semester Credit Hours: 1.0–42.0

MEDI 4082 - Cardiology Consultation – WHMC
Students are required to participate in evaluation of patients through the Cardiology consult service. Students are required to participate in daily rounds on inpatient consultations and patients in the Cardiology Clinic. Students are to learn the pathophysiological approach to the diagnosis and treatment of disease of the cardiovascular system. He/she is expected to learn a detailed approach to the history, physical examination, and the ordering and interpretation of non-invasive and invasive cardiac diagnostic tests. No late drops will be accepted. 

Semester Credit Hours: 1.0–42.0

MEDI 4115 - Palliative Care
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

Semester Credit Hours: 0.5

MEDI 4151 - Poverty, Health, and Disease Elective
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. 

Semester Credit Hours: 0.50

MEDI 4155 - Clinical Epidemiology for the Intern
Semester Credit Hours: 0.5

MEDI 4170 - Internal Medicine Internship Readiness Elective
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. 

Semester Credit Hours: 1.0–42.0

MEDI 4201 - Electrocardiogram Interpretation – RAHC
This rotation is designed for students whom 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. The ECG’s are referenced from the textbook: Clinical Electrocardiography – Review and Study Guide, Franklin H. Zimmerman, McGraw-Hill, 2nd ed, 2004, ISBN 0-07-142302-8. 

Semester Credit Hours: 2.0

MEDI 4202 - Emergency Department – RAHC
The student will work at Valley Baptist Medical Center with the supervision of the emergency medicine physicians. Students are required to work in all areas of the ER to experience both severely ill patients and patients with nonemergent problems, and are required to observe and participate in procedures. 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. 

Semester Credit Hours: 1.0–4.0

MEDI 4204 - Geriatrics/End-of-Life Rotation – RAHC
This rotation offers clinical experience in both geriatric medicine and palliative medicine. For the geriatric portion, the student is required to participate in the care of patients in a clinic, a nursing home, with home health agencies, and will have didactic educational activities. For the end-of-life portion, the student is required to work with professionals from different disciplines involved in a hospice-affiliated with the Harlingen teaching hospital (VBMHC). 

Semester Credit Hours: 1.0–4.0

MEDI 4207 - Office Endocrinology – RAHC
The student will work with an endocrinologist in solo or group practice and is required to participate in the evaluation of patients with endocrine disease. The student will have full-time participation in clinics, consultations, and endocrine test interpretation. The student is expected to learn the diagnosis and management of disease of the endocrine system, patient assessment through a detailed history and physical exam, and interpretation of tests. Exposure to patients with pituitary and hypothalamic disease, thyroid disease, abnormalities in calcium metabolism, adrenal disease, diabetes, and lipid disorders may be seen. 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.

Semester Credit Hours: 1.0–4.0

MEDI 4208 - Office Gastroenterology – RAHC

The student will work with a gastroenterologist in solo or group practice in Harlingen or in McAllen. The student is required to participate in the evaluation of patients with gastrointestinal diseases, liver disease, and diseases of the pancreas. The student will have full-time participation in clinics, consultations, and special gastrointestinal diagnostic techniques. 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. 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.

Semester Credit Hours: 1.0–4.0

MEDI 4210 - Office General Medicine – RAHC

The student will work with general internists at Su Clinica Familiar clinic and is required to participate in the evaluation of patients with common internal medicine problems. The student is required to participate full-time with a mixture of day and evening clinics. The student is required to independently evaluate patients, present findings to the attending physician, document notes in the medical record, and participate in the management discussion and any procedures related to the patient. Students will have exposure to community resources for special problems encountered by the patients in obtaining health care and be able to identify different types of medical delivery systems. 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.

Semester Credit Hours: 1.0–4.0

MEDI 4213 - Office Pulmonary Medicine – RAHC

The student will work with a pulmonologist in solo or group practice, and is required to participate in the evaluation of patients with acute and chronic lung diseases. The student will have full-time participation in clinics, inpatient hospital consultations, and various diagnostic methods. 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. The student will be expected to become proficient in the interpretation of chest x-rays, pulmonary function tests, the evaluation of common pulmonary disorders, and the principles and methods of respiratory therapy, antimicrobial therapy, and arterial blood gases. The student may also have exposure to bronchoscopy, thoracentesis, pleural biopsy, and radionuclide testing.

Semester Credit Hours: 1.0–4.0

MEDI 4214 - Office Rheumatology – RAHC

The student will have the opportunity to work with a rheumatologist in solo or group practice and is required to participate in the evaluation of patients with rheumatic disease. The student will have full-time participation in clinics, consultations, and special diagnostic techniques. 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. The student is expected to become proficient in the differential diagnosis and treatment of rheumatic and autoimmune diseases. 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.

Semester Credit Hours: 1.0–4.0

MEDI 4215 - Valley Aids Council – RAHC

The student will have the opportunity to work in the AIDS clinic with an internal medicine physician who specialized in the care of patients with HIV disease. This rotation will provide experience in the diagnosis and treatment of HIV disease and complications such as PCP, CMV, toxoplasmosis, invasive fungal infections, mycobacterial disease, and oncological and neurological complications of HIV disease. The student will have full-time participation in clinics and consultations. 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 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.

Semester Credit Hours: 1.0–4.0

MEDI 4216 - Office Hematology-Oncology – RAHC

The student will have the opportunity to work with a hematologist/oncologist in solo or group practice in Harlingen or in McAllen. The student is required to participate in the evaluation of patients with hematologic disease and malignancies through daily clinics, consultations, interpretation of special clinical, and laboratory procedures. 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. 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.

Semester Credit Hours: 1.0–4.0
MEDI 7002 - Selective Preceptorship in Indian Health Care

This elective offers the opportunity for an experience in the health care of Native American's, 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.

Semester Credit Hours: 1.0–42.0

MEDI 7003 - Elective in International Medicine

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 Dr. Ruth Berggren, 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 (contact Dr. Lapey for details), 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.

Semester Credit Hours: 1.0–42.0

OBGY 4001 - Obstetrical Externship

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.

Semester Credit Hours: 1.0–42.0

Obstetrics and Gynecology

OBGY 3005 - Obstetrics and Gynecology Clerkship

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.

Semester Credit Hours: 6 weeks—7.0
Prerequisites: Successful completion of all required preclinical courses is prerequisite to enrollment in any of the clinical clerkships.
Offered By: Department of Obstetrics and Gynecology

OBGY 4001 - Obstetrical Externship

This elective 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 subinternship for students anticipating residency in Obstetrics and Gynecology. 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 Chief Resident. Opportunity for direct participation in labor and delivery, outpatient clinics (high risk and routine), operative obstetrics, and obstetric sonography is provided. The student is required to attend patient-care conferences and didactic teaching rounds directed by the Obstetric Faculty, and will be required to give one seminar presentation.

Semester Credit Hours: 1.0–42.0

Microbiology and Immunology

MICR 1005 - Microbiology

The medical microbiology course is designed to provide a foundation in pathogenic microbiology and to prepare the medical student for subsequent offerings in infectious diseases, pathology, pharmacology, and epidemiology. The scope of the course includes the biology of microorganism; the concepts of host-parasite interrelationships for pathogenic bacteria, viruses, fungi, and parasites; and the fundamentals of immunology. Laboratory sessions are an integral part of the course and provide the opportunity to understand the principles of diagnostic microbiology. The medical student is provided an opportunity to develop proficiency in the basic technical skills required of clinical clerks, house officers, and physicians treating patients with infectious diseases. The course is taught by full-time members of the Department of Microbiology. $48 microscope fee for the Freshman year includes this course. $32 laboratory fee for the Freshman year includes this course.

Semester Credit Hours: 7.5
Offered By: Department of Microbiology
Prerequisites: additional prerequisite for non-HSC students is rank in the upper half of one’s medical school class.

**OBYG 4007 - Obstetrics and Gynecologic Research**

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 his or her 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.
Semester Credit Hours: 1.0–42.0

**OBYG 4008 - Women’s Reproductive Health and Gynecologic Surgery**

This selective gives broad experience in gynecologic surgery and primary women’s healthcare. It offers a direct, hands-on opportunity to develop surgical and microsurgical skills. 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 Chief Resident. Responsibilities will include participation in: 1) inpatient gynecologic, oncologic, and urologic surgeries and medical 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, and treatment of sexually transmitted diseases; 4) treatment of acute gynecologic emergencies; and 5) rounds, patient care conferences, and didactic lectures. Additionally, the student will be given 16 hours of instruction in microsurgery using an animal model.
Semester Credit Hours: 1.0–42.0

**OBYG 4009 - Endo-Infertility**

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.
Semester Credit Hours: 1.0–42.0

**OBYG 4011 - Clinical Obstetrics & Gynecology – RAHC**

This is a four-week preceptorship in General Obstetrics and Gynecology in Harlingen, Texas. Staff are all clinical faculty of the RAHC. The clinical experience will be in both obstetrics and gynecology and involve more responsibility for patient care than is provided for third-year students; it is designed to be a subinternship. Patients are low- and high-risk obstetrical patients, general gynecology patients, GYN oncology patients, and infertility patients. Students considering a career in Obstetrics and Gynecology, Family Practice or other primary care or surgical should consider this rotation. It is a high volume, “hands-on” rotation and students have the opportunity to fulfill the required elective for ambulatory care. Housing is furnished through the Area Health Education Center/South Texas Border Initiative.
Semester Credit Hours: 1.0–42.0

**Ophthalmology**

**OPHT 4001 - Clinical Ophthalmology**

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.
Semester Credit Hours: 1.0–42.0

**OPHT 4003 - Research In Clinical Ophthalmology**

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.
Semester Credit Hours: 1.0–42.0

Prerequisites: third-year Ophthalmology Clerkship required; arrangement with instructor on individual basis

**OPHT 4006 - Ophthalmic Research**

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.
Semester Credit Hours: 1.0–42.0

**OPHT 4024 - MS4 Tutor Elective**

The Tutoring Elective consists of activities that will provide the student the opportunity to participate in the Office of Academic Enhancement Tutoring Program as tutors. Each tutor will receive training, tutor over an entire academic year, participate in weekly online activities, and receive a formal observation with a follow-up conference.
Semester Credit Hours: 2.0

Prerequisites: status of a senior medical student

**OPHT 4201 - Clinical Ophthalmology-RAHC**

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 which have ocular manifestations. The student will learn to recognize and understand the treatment of the most frequently encountered ocular diseases. The student will observe ophthalmologists and fellows perform specialized examinations and treatment, including surgery. The course is ambulatory based and is available all year. Students will receive a clinical performance evaluation by the supervising attending physician.

Semester Credit Hours: 1.0–42.0

**Orthopedics**

**ORTO 4002 - Selective In Orthopaedics – WHMC**

Semester Credit Hours: 1.0–42.0

**ORTO 4003 - Hand Surgery**

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.

Semester Credit Hours: 1.0–42.0

Prerequisites: ORTO 4005

**ORTO 4005 - Trauma, Fracture and Clinical Care**

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.

Semester Credit Hours: 1.0–42.0

**ORTO 4006 - Adult Reconstruction Surgery**

Assigned to the Total Joint Service under the director of Dr. Amanda Marshall. 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. Must attend core lectures on basic orthopaedics by orthopaedic faculty. Reading material includes excerpts from Essentials of Musculoskeletal Care. No late drops.

Semester Credit Hours: 1.0–42.0

**ORTO 4008 - Pediatric Surgery – SRCH/UH**

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 neurologic 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.

Semester Credit Hours: 1.0–42.0

**ORTO 4009 - Research**

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.

Semester Credit Hours: 1.0–42.0

**ORTO 4011 - Sports Medicine**

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.

Semester Credit Hours: 1.0–42.0

**ORTO 4012 - Musculoskeletal Oncology**

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.

Semester Credit Hours: 1.0–42.0

**ORTO 4014 - Primary Care (Outpatient Orthopaedics)**

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 ca-
reer 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.

Semester Credit Hours: 1.0–42.0

ORTO 7001 - Preceptorship
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, total joint replacement, pediatric orthopaedics, and general orthopaedics. A rotation description from the selected site must be turned in to the Orthopaedic Student Administrator.

Semester Credit Hours: 1.0–42.0

Otolaryngology - Head and Neck Surgery

OTOL 4000 - Special Topics
Special topics in Otolaryngology-Head and Neck Surgery.

Semester Credit Hours: 1.0–42.0

OTOL 4001 - Otolaryngology-Head and Neck Surgery
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.

Semester Credit Hours: 1.0–42.0

OTOL 4002 - Otolorhinolaryngology Research
The department offers students research opportunities in a diverse and wide range of clinical and basic science topics. Areas of on-going 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.

Semester Credit Hours: 1.0–42.0

OTOL 7000 - Off Campus
This is an off-campus externship.

Semester Credit Hours: 1.0–42.0

Pathology

PATH 2005 - Pathology
This course provides an introduction to the fundamentals of human disease (general pathology) followed by a review of the principal diseases of major organ systems (systemic pathology). Teaching methods include lectures, laboratory exercises, case conferences, and reviews. The interpretation of gross and microscopic pathologic specimens is emphasized as a means of illustrating the application of principles to actual clinical diseases. The course also includes the application of clinical laboratory tests in disease diagnosis. This will be taught in an integrated fashion with ICS, ACES, and Pharmacology in the organ system modules.

Semester Credit Hours: 10.5

PATH 4001 - Hematology – UH
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.

Semester Credit Hours: 1.0–42.0

PATH 4002 - Blood Banking
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.

Semester Credit Hours: 1.0–42.0
PATH 4003 - Hematology/Blood Banking
Combination selective between the Hematology Laboratory and the Blood Bank may be arranged if student so desires. Semester Credit Hours: 1.0–42.0

PATH 4004 - Anatomic Pathology
Emphasis may center on one aspect of anatomic pathology (surgical pathology or autopsy pathology), or on the pathology of a specific organ system, such as gynecologic pathology, hematopathology, neuropathology, dermatopathology, pulmonary etc. Students are required to assist in handling of tissues received from surgical procedures and may participate in autopsy dissections. Students will study microscopic slides and assigned reading, and will be expected to do a brief case presentation at Anatomic Pathology Grand Rounds. Semester Credit Hours: 1.0–42.0

PATH 4007 - Research In Pathology
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. Semester Credit Hours: 1.0–42.0

PATH 4012 - Anatomic Pathology: Fine Needle Aspiration
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). Semester Credit Hours: 1.0–4.0

PATH 4015 - Forensic Pathology
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. Semester Credit Hours: 2.0–4.0
Prerequisites: 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
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. Semester Credit Hours: 0.5

PATH 4105 - Evidence-Based Medicine in Everyday Practice
This course includes theory and methodological foundation, definitions and overview of evidence-based medicine, practical considerations, and reporting in evidence-based medicine. Semester Credit Hours: 0.5

PATH 4290 - Clinically Applied Laboratory Medicine (CALM)
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. Semester Credit Hours: 0.5 Offered By: Department of Pathology

Pediatrics

PEDI 3005 - Pediatric Clerkship
The pediatric clerkship is intended to introduce the student to the infant, child, and adolescent as a developing and growing organism. The effects of developmental, psychosocial, and environmental factors on the child’s growth and health status are emphasized. Students spend variable lengths of time on inpatient teaching services, in the newborn nursery, and in various general and subspecialty outpatient clinics. Students participate, along with house staff, in care of patients and are responsible for taking a history and doing a complete physical examination. After analyzing these data, the student is expected to establish a working diagnosis and to recommend appropriate laboratory studies and a course of management. Students also participate in house staff and attending rounds, grand rounds, and departmental conferences as well as student discussion groups.

The objectives of the clerkship are: (1) to provide students with an opportunity to gain skills and insight into the more unique features of history taking and physical examination performance in infants and children, (2) to provide students with an
exposure to infants and children with both common minor illnesses and with serious and more unusual acute and chronic illnesses, (3) to impress students with the necessity to consider not only the infant or child patient, but the entire family constellation, its cultural background and socioeconomic status, (4) to give students the opportunity to participate in the diagnostic workup and treatment of infants and children, and (5) to encourage students to refer to appropriate textbooks and journal articles as they undertake the diagnostic workup and treatment of their assigned patients. (6 weeks)

**Semester Credit Hours:** 7.0

**Prerequisites:** Successful completion of all required preclinical courses is prerequisite to enrollment in any of the clinical clerkships.

**Offered By:** Department of Pediatrics

**PEDI 4003 - Clinical Preceptorship in Ambulatory Pediatrics**

This selective is based in the Children’s Health Center, a teaching clinic in an urban setting. Students are required to obtain history and perform physical exams, prepare written and verbal presentations, interpret laboratory and radiographic data, and develop differential diagnosis and management plans under faculty supervision. Opportunities will be given to provide well-child care. The student is required to develop a presentation based on curriculum objectives with a focus on healthcare delivery.

**Semester Credit Hours:** 1.0–4.0

**PEDI 4006 - Pediatric Cardiology**

This rotation provides an opportunity for students to improve their understanding of the pathophysiology and management of pediatric and congenital heart diseases. The student will be offered didactic instruction, as well as slide and computerized material, to improve her/his skills. Clinical skills in cardiac auscultation, EKG interpretation, and chest x-ray interpretation will be emphasized primarily in the outpatient setting. The students will receive exposure to noninvasive techniques in diagnosis such as echocardiography, and invasive procedures in the cardiac catheterization laboratory.

**Semester Credit Hours:** 1.0–42.0

**PEDI 4009 - Pediatric Gastroenterology/Nutrition**

This rotation offers an opportunity to participate in the diagnosis and management of gastrointestinal, liver, and nutritional disorders of children. Sites include inpatient facilities at University Hospital and Christus Santa Rosa Children’s Hospital and the outpatient clinic at the Christus Santa Rosa Clinic. The student is required to participate actively in seeing patients, in the diagnostic process, including procedures, if necessary. Required reading and discussion of material covered will be expected. (Elective can be modified based on the interests of the student.)

**Semester Credit Hours:** 1.0–42.0

**PEDI 4013 - Pediatric Hematology/Oncology #1**

The student is required to participate in the diagnostic evaluation, therapy, and follow-up of hematology/oncology patients at Christus Santa Rosa Children’s Hospital. This is an opportunity for experience in blood and bone marrow morphological diagnosis, techniques for bone marrow aspiration, and intravenous and intrathecal chemotherapy.

**Semester Credit Hours:** 1.0–42.0

**PEDI 4015 - Pediatric Hematology/Oncology #2**

The student is required to 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 Greehey Children's Cancer Research Institute, 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.

**Semester Credit Hours:** 1.0–42.0

**Prerequisites:** previous experience with introductory adult or pediatric hematology/oncology courses preferred

**PEDI 4016 - Pediatric Allergy, Immunology, and Infectious Diseases**

Students are required to actively participate in all clinical activities of the Division, including outpatient clinics for children with HIV/AIDS and primary immune deficiency disorders, and infectious disease consultations at Christus Santa Rosa Children’s Hospital and University Hospital. Emphasis is placed on clinical and laboratory evaluation of infection, immunity, and inflammation, and the management of infectious diseases, primary and secondary immune deficiencies, and associated complications. The scope of infectious diseases typically encountered includes community and hospital acquired infections, including post-surgical infections, infections in cancer patients, and HIV-infected children.

**Semester Credit Hours:** 1.0–42.0

**PEDI 4020 - Pediatric Endocrinology**

Disorders of thyroid/parathyroid, adrenal/gonad, growth (including hypopituitarism) and carbohydrate metabolism (including diabetes mellitus), respectively, are covered. Clinics are focused on either diabetes or endocrine issues. Directed reading is provided, and the patients are reviewed and the pertinent literature discussed at conferences held two to three times weekly. Informal lectures occur during clinic time as well. There is a weekly case management conference at which students present interesting cases, and laboratory results obtained during the week are discussed. Students are also encouraged to attend Pediatric and Endocrine Grand Rounds.

**Semester Credit Hours:** 1.0–42.0

**PEDI 4022 - Neonatal Research**

This rotation is designed for students interested in laboratory or clinical research experience in Perinatal Medicine. Students work directly under the guidance of a faculty member and are required to 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.

**Semester Credit Hours:** 1.0–42.0

**PEDI 4023 - Neonatal Intensive Care Externship – UH/NICU**

This rotation includes all of the duties of a pediatric first-year resident under the supervision of a senior pediatric resident.
and the pediatric full-time faculty. The objectives for this course are two-fold:

- To prepare for postgraduate training by functioning in an inpatient clinical setting with the maximal responsibility a student can be allowed.
- To extend the skills and knowledge acquired as a third-year clerk in a specific clinical pediatric setting. The student will have the opportunity to increase her/his skills in pediatric physical diagnosis, skills in clinical decision making, knowledge of pediatric differential diagnosis, and knowledge of pediatric therapeutics.

Semester Credit Hours: 1.0–42.0

PEDI 4027 - Pediatric Genetics

Students are required to participate in Christus Santa Rosa clinics for experience with single gene disorders, chromosome abnormalities, multiple congenital anomalies, and teratogenic exposures. Students are required to participate in inpatient consultations. Students are required to participate in scheduled multidisciplinary clinics including craniofacial anomalies, vascular, and neurofibromatosis clinics. Opportunities with inpatient consultations at other local hospitals and prenatal genetics clinic are also available. Students will have the opportunity to gain skills in genetic physical exam, pedigree analysis, genetic counseling, dysmorphology, as well as ordering and interpreting DNA, chromosomal, FISH, and metabolic testing. Training in differential diagnosis includes use of genetics databases and Internet resources. Students will present a case/review of a disorder or management issues on the last Thursday of their rotation in conference.

Semester Credit Hours: 1.0–12.0

PEDI 4029 - Pediatric Pulmonology

The main objective of this rotation is to acquaint students with the diagnosis and treatment of the most 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. The practice of evidence-based medicine will be emphasized. Whenever possible, didactic material will be linked to patient care. Students are required to participate in all available outpatient pulmonary clinics and will follow pediatric inpatients with pulmonary disorders.

Semester Credit Hours: 1.0–42.0

PEDI 4031 - Pediatric Nephrology

This course offers the student the opportunity to learn the essential concepts in the pathophysiology and the management of fluid and electrolytes and acid base disturbances. It also offers ample involvement in the 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 is required to attend the renal clinics at Children’s Kidney Center and participates in the management of in-patients. There will be an opportunity to learn histopathology of renal diseases through reviewing biopsies with pathologists.

Semester Credit Hours: 1.0–42.0

PEDI 4036 - Pediatric Critical Care Externship – UH

This rotation offers in-depth exposure to the science and care of the critically ill infant and child with particular emphasis on surgical intervention. The University Hospital Pediatric ICU provides comprehensive critical care services but focuses on trauma care, neurointensive care, and transplantation services. This opportunity provides exposure to multidisciplinary care of the child with neuro or general trauma, and will provide the opportunity to enhance 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 is required to participate in daily rounds with the attending pediatric faculty and radiology rounds with pediatric radiologists. Directed reading will be provided.

Semester Credit Hours: 1.0–42.0

PEDI 4037 - Pediatric Critical Care Externship – CSRCH

This rotation offers in-depth exposure to the pathophysiology and care of the critically ill infant and child. This opportunity will provide experience with care of children in a multidisciplinary PICU. Knowledge and skills in invasive procedures, principles of mechanical ventilation, pharmacology of critical care, interpretation of blood gases, and pathophysiology of critical illness will be available. The student is required to participate in daily work, attending, and x-ray rounds. Directed reading and didactic lectures will be provided.

Semester Credit Hours: 1.0–42.0

PEDI 4074 - AHEC Clinic Experience

Under the auspices of the Health Science Center’s 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.

Semester Credit Hours: 1.0–42.0

PEDI 4080 - Pediatric Emergency Medicine Clerkship

This four-week clinical clerkship will be conducted at the Children’s Emergency Services Department, Christus Santa Rosa Children's Hospital. Up to four students per block may take this course. These senior medical students will be exposed to Pediatric Emergency Medicine both in the Children's Hospital Emergency Department and during Core Case Discussion Conferences. Topics to be discussed both in the clinical and conference settings include: Child with Shock, Child with Seizure (Febrile and non-Febrile), Child with Elbow Injury, Child with Rash, Child with Vomiting and Diarrhea, Child with Wheezing - Asthma and Bronchiolitis, Child with Fever and AMS (meningitis), Child with Limp (knee and hip), Child with Abdominal Pain - Intussusception, Child with Breathing Difficulty - Pneumonia, Child with Ingestion, Child with Hemophilia, Child with Head Injury, Child with a Laceration, Child with a Spider Bite - Abscess, Child with DKA, Child with Near-Drowning, Child with Bee Sting - Anaphylaxis, and Child with...
and their families cope with these conditions at home, in school, and in the community at large. Preceptors will guide the student in selecting appropriate reading to enhance the experiential component of the elective.

Semester Credit Hours: 1.0–4.0

PEDI 4206 - Pediatric Cardiology – RAHC

Students will work with pediatric cardiologists in their private practice in Brownsville and Harlingen. Both cardiologists are members of the RAHC pediatric faculty. The student will see patients with the cardiologists in their office, and visit local hospitals with them as they respond to requests for consultation. The student will have the opportunity to gain clinical skills in interviewing, physical assessment, EKG, and echocardiogram interpretation. Since many of the cardiac disorders managed in this practice are chronic in nature, students will have the opportunity to learn how children and their families cope with these conditions at home, in school, and in the community at large. Preceptors will guide the student in selecting appropriate reading to enhance the experiential component of the elective.

Semester Credit Hours: 1.0–4.0

PEDI 4207 - Neonatology – RAHC

The student will work with neonatologists and their staff in the Neonatal Intensive Care Unit at Valley Baptist Medical Center, Harlingen. The student will 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 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 elective.

Semester Credit Hours: 1.0–4.0

PEDI 4208 - Pediatric ICU – RAHC (Valley Baptist Medical Center)

This selective offers in-depth exposure to the pathophysiology and care of the critically ill infant and child. Knowledge and skills in invasive procedures, principles of mechanical ventilation, pharmacology of critical care, interpretation of laboratory studies, and working collaboratively and effectively with other critical care team members as well as families will be developed. The student is required to participate in daily work and attending rounds.

Semester Credit Hours: 1.0–4.0

PEDI 4209 - Pediatric Gastroenterology – RAHC

Students will work with a pediatric gastroenterologist in her practice in Harlingen. The student will see patients with the gastroenterologist in her office, and visit local hospitals with her as she responds to requests for consultation. The gastroenterologist’s practice includes a broad array of patients with gastrointestinal problems, including seizure disorders, behavior disorders, congenital anomalies, malignancies, and cerebral palsy. The student will have the opportunity to learn how the gastroenterologist, as a specialist-consultant, interacts with referring physicians and agencies. The preceptor will guide the student in selecting appropriate reading to enhance the experiential component of the elective. Facility in Spanish is desirable but not essential.

Semester Credit Hours: 1.0–4.0
strointestinal problems, including digestive and malabsorptive disorders, short-gut syndrome, congenital anomalies, cystic fibrosis, recurrent infections, inflammatory bowel disease, and failure to thrive. The student will gain clinical skills in interviewing, physical assessment, the use and interpretation of imaging studies, and the indications for and interpretation of endoscopic assessments. In addition, the student will learn how the gastroenterologist, as a specialist-consultant, interacts with referring physicians and agencies. Since many of the gastrointestinal disorders managed in this practice are chronic in nature, students will learn how children and their families cope with these conditions at home, in school, and in the community at large. The preceptor will guide the student in selecting appropriate reading to enhance the experiential component of the elective. The student may have an opportunity to complete a small research project during the elective. Facility in Spanish is desirable but not essential.

**Semester Credit Hours:** 1.0–4.0

**PEDI 4210 - Pediatric Inpatient Service – RAHC (Valley Baptist Medical Center-Harlingen)**

The Pediatric Inpatient Service at VBMC-H accepts acutely ill children referred for inpatient care from local pediatricians, the hospital’s emergency department, and pediatricians and hospitals in the larger region served by VBMC-H. All activity will occur on the inpatient unit. The student will function as a “sub-intern” with responsibilities for patient assessment and management appropriate to the student’s interests and abilities. In the subintern role, the student will be expected to accept and discharge patient care responsibilities as a member of the ward team under the direct supervision of the faculty preceptor.

**Semester Credit Hours:** 1.0–4.0

**PEDI 4425 - Community for Children – At the Border and Beyond**

This is a four-week elective rotation in International Children’s Health and Community Pediatrics located in the Lower Rio Grande Valley and Northern Mexico. The purpose of this initiative is to educate future physicians to provide compassionate, effective international leadership within community collaborations addressing children’s rights and the social determinants of disease and health in resource-poor communities worldwide and to provide opportunities to develop skills necessary for effective advocacy. The course is based at the UT Health Science Center-Houston School of Public Health, Brownsville campus and includes discussions of the UN Convention on the Rights of the Child and didactic lectures on the social determinants of disease and health in any community. In addition, the course includes Spanish classes, electronically based curriculum addressing cultural competency, and meetings with a medical anthropologist to discuss curanderismo culture and practices. Although the course is not designed as a clinical course, there is opportunity to participate in direct patient care in clinics and hospitals in the Lower Rio Grande Valley and in Mexico, including home visits. Advocacy is a large component of this elective. The participants work with community-based organizations on selected advocacy issues, such as child refugees and immigration, tuberculosis research in a bi-national region, obesity and diabetes among the young, and medical-legal partnerships for children. This elective is being offered through a partnership with the Dept. of Pediatrics, UT Health Science Center-Houston School of Public Health – Brownsville, Brownsville Community Health Center, RAHC, Hospital Infantil de Tamaulipas/Ciudad Victoria, Mexico, and Centro de Salud Tamaulipas, Mexico.

**Semester Credit Hours:** 1.0–4.0

**PEDI 7002 - Pediatric Developmental Disabilities**

The student will have the opportunity to participate with the faculty in the following clinics: Neurodevelopmental, Autism Spectrum Disorders, Child Developmental, School Functioning, Fetal Alcohol Syndrome, PREMIere (high risk premature infant follow-up clinic), Genetics, Myelomeningocele, and Follow-Up for medication and behavioral management of children predominantly Attention Deficit Hyperactivity Disorder. The goals of the elective include the enhancement of skills in developmental assessment and interpretation of findings in infants, toddlers and younger and older school-aged children through active participation and direct observation of assessments. The student will also have the opportunity to become acquainted with a multidisciplinary approach to the evaluation and management of children with more complex disorders like Autism, Myelomeningocele, and those suspected to have Fetal Alcohol Syndrome. The student will be exposed to community resources available for children and families with handicapping conditions through key site visits, like an Early Childhood Intervention agency, a sheltered workshop for adults with mental retardation, an assistive technology classroom, a school for deaf children, and others. The student will spend one half-day per week in formal didactics on core topics in developmental disabilities. In some instances, the student may be asked to prepare a 30-minute presentation to faculty on a topic of the student’s choice that is related to developmental disabilities. This elective is set in an outpatient clinic at the CHRISTUS Santa Rosa Center of Hope for Child Development. During the months of June, July and August, the student may participate in a summer camp in the Texas Hill Country (all expenses paid). Camp CAMP (Children’s Association for Maximum Potential) is attended by children with a variety of disabilities, such as cerebral palsy, myelomeningocele, Down syndrome, spinal cord and head injuries, cyanotic heart disease, and autism, who may also have a variety of co-morbid medical conditions. Children with tracheostomies, gastrostomies, and children requiring ventilator support also attend. The volunteer staff typically consists of pediatricians, nurses, medical residents, special education teachers, therapists, and high school and college students. Each session has at least one physician on site who will serve as supervisor of the student. The campers are divided into “tribes” based on age. Medical students will be part of a team responsible for daily medical management of a “tribe” of children, and participate in medical “rounds” and nightly report to the on-call medical staff. Each student will take one night call in the infirmary with pediatrics and nurses. Camp CAMP is typically held 7 full weeks of the summer months. During 3 of the 7 weeks, a formal Developmental Disabilities Review Course, which is a series of lectures on major types of disability given by experts around the nation and at UTHSCSA, also takes place. Students would typically attend Camp for 1 full week during their rotation, while the remaining weeks of the rotation will be at the Center of Hope clinic site. Early scheduling is important if Camp participation is desired, and the student must complete all paperwork as required by CAMP before attending.

**Semester Credit Hours:** 1.0–42.0
PEDI 7012 - Primary Ambulatory Care Preceptorship-Pediatrics

This rotation offers a clinical experience utilizing the office practice of qualified pediatricians preceptors. Preceptorships are available with general pediatricians or with subspecialties.

Semester Credit Hours: 1.0–42.0

Pharmacology

PHAR 2005 - Pharmacology

This course is designed to provide the student 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, chemotherapy, neuropharmacology, toxicology, endocrine pharmacology and special topics such as GI and respiratory tract pharmacology, and prescription writing. This will be taught in an integrated fashion with ICS, ACES, and Pathology in the organ system modules.

Semester Credit Hours: 6.0

Offered By: Department of Pharmacology

PHAR 4003 - Clinical Pharmacology

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.

Semester Credit Hours: 1.0–42.0

Physiology

PHYL 1005 - Physiology

The course in Medical Physiology is designed to introduce students to concepts dealing with the major cellular processes and organ systems of the normal person; to explore the homeostatic mechanisms that regulate and control their behavior; and to develop skills in group problem solving. The course begins with cellular physiology with emphasis on membrane transport, excitable tissues and muscle function. It then proceeds with the sequential coverage of the cardiovascular system, respiratory system, renal system, digestive system, and endocrine and reproductive systems. The teaching/learning program deemphasizes lectures, thereby providing time for individual, independent self-study from a modern textbook. It is the textbook that defines the essential core material to be mastered. Time formally scheduled for classroom activities includes a two-hour class meeting each week structured specifically to assess learning and to foster interaction and discussion between students within assigned groups. Laboratory fee: $32 for the Freshman year.

Semester Credit Hours: 7.5

Offered By: Department of Physiology

PHYL 4012 - Research in the Endocrinology of Aging

The course consists of student participation in research on glucocorticoid-induced gene expression during aging and food restriction.

Semester Credit Hours: 1.0–42.0

PHYL 4016 - Ion Channel Research in Excitable and Non-Excitable Cells

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.

Semester Credit Hours: 1.0–42.0

Psychiatry

PSYC 2005 - Psychopathology

This course is designed to provide fundamental knowledge about descriptive and psychodynamic aspects of mental disorders. The 46 hours of classroom presentations focus on understanding basic concepts of psychopathology, diagnosing each of the mental disorders, identifying psychopathology through use of the psychiatric interview, and recognizing emotional problems commonly seen in patients with other medical disorders. Video and film recordings are used extensively in the classroom to demonstrate the mental disorders. In each of the seven two-hour periods of small-group instruction, patients are interviewed and students have the opportunity to learn to write accurate mental status reports.

Semester Credit Hours: 3.5

Offered By: Department of Psychiatry

PSYC 3005 - Psychiatry Clerkship

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. (6 weeks)

Semester Credit Hours: 7.0

Prerequisites: Successful completion of all required preclinical courses is prerequisite to enrollment in any of the clinical clerkships.

Offered By: Department of Psychiatry

PSYC 4001 - Clinical Psychiatry – HSC and RAHC

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 supervi-
sion 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, both in San Antonio or the Rio Grande State Center in Harlingen. 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.

Semester Credit Hours: 1.0–42.0

PSYC 4008 - Clinical Biological Psychiatric Research
The course includes participation in clinical research into biochemical disturbances in mood disorders, mechanisms of drug actions, and clinical testing of experimental drugs in depression, ADHD, schizophrenia, and anxiety.

Semester Credit Hours: 1.0–42.0

PSYC 4015 - Neuropsychiatry – VA Hospital
This rotation will introduce students to an appreciation of the correlation between brain dysfunction and behavior disorders. Students will have the opportunity to learn how to clinically evaluate patients for cognitive dysfunction and perform a behavioral neurological exam. The appropriate use of structural and functional brain imaging studies will be emphasized. Students will also be required to participate in the management of patients with neuropsychiatric disorders.

Semester Credit Hours: 1.0–42.0

PSYC 4019 - Psychiatric Emergency Service (PES)
The fourth-year medical student psychiatric emergency service rotation at University Hospital is designed to further the training of the medical student by emphasizing systems of care and how these impact the patient in crisis. The student will be actively incorporated into the faculty-lead multidisciplinary team. The University Hospital Psychiatric Emergency Service (PES) is a busy unit that provides emergent evaluations to approximately 300 patients per month. The patient population is diverse in age, ethnicity, and presenting diagnoses. Approximately 30% of the patients are brought in by peace officers for involuntary evaluation. In addition, the PES provides consultative service to the medical emergency center.

Semester Credit Hours: 1.0–4.0

PSYC 4020 - Consultation-Liaison Service
The course includes participation in the evaluation and management of medical and surgical inpatients with psychiatric problems at the University Hospitals.

Semester Credit Hours: 1.0–42.0

PSYC 4022 - Psychotic Disorders
Rotation focuses on research. It may include assessment, planning of care, diagnosis, treatment and evaluation of care of patients in research protocols; experience with behavioral ratings for psychosis, counseling of families and theories regarding schizophrenic etiology and treatment. Rotation sites will vary (but all located within the San Antonio area) and students will be required to travel from one site to another on their own. Given the inherent characteristics of research, daily rotation schedules may change frequently.

Semester Credit Hours: 1.0–42.0

PSYC 4023 - Child and Adolescent Psychiatry
To gain clinical experience in both inpatient and outpatient child/adolescent psychiatry, the student will attend the Child Guidance Center and Christus Santa Rosa Children’s Hospital outpatient psychiatry clinics. Some half-days are spent at the Southwest Mental Health Center working with children and adolescent inpatients. The student will also rotate one half-day a week at the Bexar County Juvenile Detention Center and attend seminars with the child and adolescent psychiatry residents. Experiences may be adjusted to fit students’ individual interests.

Semester Credit Hours: 1.0–42.0

Radiation Oncology

RADO 4003 - Radiation Oncology
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.

Semester Credit Hours: 1.0–40.0

Radiology

RADI 4001 - General Diagnostic Radiology
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.

Semester Credit Hours: 1.0–42.0

RADI 4004 - Diagnostic Radiology Clerkship – WHMC
This clerkship is designed as an introduction to the broad field of Diagnostic Radiology for students who are considering a career in this specialty or who seek a detailed overview of Diagnostic Radiology. The student rotates on each subspecialty service, (Chest, GI, GU, Neuroradiology, Pediatric Radiology, Skeletal Radiology, CT, Ultrasound, Special Procedures, MRI, Nuclear Radiology and Mammography), and participates with the staff and residents in performing and interpreting radiologic procedures.

Semester Credit Hours: 1.0–42.0

RADI 4005 - Diagnostic Radiology – BAMC
This course is an introduction to basic radiology, including patient positioning, film exposure, and processing procedures. Observe the operation of a radiology department and learn the indications for different diagnostic imaging modalities. Work with radiology teaching files, take part in film and study performance and interpretation, and attend 10 hours per week of
formal conferences given by residents, staff, and visiting consultants. Exposure to chest, bone and joint, genitourinary, gastrointestinal, neuro, cardiovascular, pediatric, and emergency radiology is provided to include the modalities of CT, MRI, Nuclear Medicine, and Ultrasound.

Semester Credit Hours: 1.0–4.0

REHB 4007 - Hyperbaric Medicine and Wound Care

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

Semester Credit Hours: 1.0–4.0

REHB 4006 - Introduction to Spinal Cord Injury

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.

Semester Credit Hours: 1.0–4.0

REHB 4002 - Introduction to Inpatient Rehabilitation

This course is especially recommended for students planning to specialize in Family Practice, Neurology, Neurosurgery, Orthopaedics, Plastic Surgery, ENT, Internal Medicine or Rheumatology. 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. This selective will be tailored to specific student interest. Comprehensive work-ups and close follow-up of patients will be required (University Hospital). No late drops will be accepted.

Semester Credit Hours: 1.0–4.0

REHB 4001 - Clinical Rehabilitation Medicine (Outpatient and Consultative)

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.

Semester Credit Hours: 1.0–4.0

RADI 4202 - General Diagnostic Radiology – RAHC

This course is designated as an introduction to diagnostic radiology. The primary goals of the course are directed toward introducing students to the different diagnostic imaging modalities available and teaching students 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.

Semester Credit Hours: 1.0–4.0

REHB 4005 - Combined Rehabilitation: Clinical Rehabilitation Medicine, Introduction to Inpatient Rehabilitation, Introduction to Pediatric Rehabilitation, and Introduction to Spinal Cord Injury Rehabilitation

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.

Semester Credit Hours: 1.0–4.0

REHB 4003 - Introduction to Pediatric Rehabilitation

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.

Semester Credit Hours: 1.0–4.0

RADI 4006 - Pediatric Radiology

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.

Semester Credit Hours: 1.0–4.0

RADI 4002 - General Diagnostic Radiology – RAHC

This course is designated as an introduction to diagnostic radiology. The primary goals of the course are directed toward introducing students to the different diagnostic imaging modalities available and teaching students 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.

Semester Credit Hours: 1.0–4.0

Rehabilitation Medicine

REHB 4001 - Clinical Rehabilitation Medicine (Outpatient and Consultative)

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.

Semester Credit Hours: 1.0–4.0

REHB 4002 - Introduction to Inpatient Rehabilitation

This course is especially recommended for students planning to specialize in Family Practice, Neurology, Neurosurgery, Orthopaedics, Plastic Surgery, ENT, Internal Medicine or Rheumatology. 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. This selective will be tailored to specific student interest. Comprehensive work-ups and close follow-up of patients will be required (University Hospital). No late drops will be accepted.

Semester Credit Hours: 1.0–4.0

REHB 4003 - Introduction to Pediatric Rehabilitation

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.

Semester Credit Hours: 1.0–4.0

REHB 4005 - Combined Rehabilitation: Clinical Rehabilitation Medicine, Introduction to Inpatient Rehabilitation, Introduction to Pediatric Rehabilitation, and Introduction to Spinal Cord Injury Rehabilitation

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.

Semester Credit Hours: 1.0–4.0

REHB 4006 - Introduction to Spinal Cord Injury

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.

Semester Credit Hours: 1.0–4.0

REHB 4007 - Hyperbaric Medicine and Wound Care

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

Semester Credit Hours: 1.0–4.0
Surgery

SURG 3005 - Surgery Clerkship
The 12-week clerkship is divided into two 6-week rotations, one on general surgery and one on surgical specialties. Each of these rotations is then subdivided into two 3-week sessions with the general surgery rotation consisting of sessions on each of two different surgical services and the surgical specialties rotation including sessions on two different specialty services chosen electively from among seven surgical specialties. During this surgical clerkship, the student is afforded the opportunity to participate actively in the diagnosis and therapy of patients suffering from both acute and chronic surgical illness including both ambulatory and bedridden patients. The clerkship is interwoven with teaching ward rounds, clinical conferences, symposia, and a reading program with weekly examination and reviews on all aspects of surgery and the surgical specialties. The goals of the surgical clerkship are to provide students the opportunity to develop adequate knowledge, basic manual skills, and attitudes about surgical disease that should be encompassed by every practicing physician. (12 weeks)
Semester Credit Hours: 14.0
Prerequisites: Successful completion of all required preclinical courses is prerequisite to enrollment in any of the clinical clerkships.
Offered By: Department of Surgery

SURG 4002 - Surgical Oncology
Senior students must function as “interns” on the surgical oncology service. They admit and discharge surgical oncology patients. They perform history and physical examinations, and keep daily records on surgical oncology 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 oncology patients. They present cases, attend all conferences, and take call as designated by the surgical oncology service. They mentor third-year medical students on the surgical oncology service. They may participate in basic science research projects in the surgical oncology laboratory and in ongoing clinical trials of cancer diagnosis and management.
Semester Credit Hours: 1.0–42.0

SURG 4004 - Supervised Basic Science Research
Senior students are required to participate in a basic science project in a research laboratory. Before students enroll in the course, they must contact a surgery faculty member with whom they want to conduct a basic science research project. In order to receive credit for this elective, a student must write a brief synopsis of the basic science research project including: research purpose, methodology, and project (report, abstract, presentation, experiments). The students must submit the synopsis with paperwork for approval of the elective. Midway during the elective (2 or 4 weeks), a student must submit a progress report to the Director of Surgical Education and the supervising surgery faculty member. At the end of the elective, a student will submit a final report to the Director of Surgical Education and to the supervising faculty member, Texas Diabetes Institute.
Semester Credit Hours: 1.0–8.0

SURG 4005 - Emergency Medicine
Senior students must participate in the diagnosis and management of patients with urgent and emergent medical and surgical problems in the Emergency Department at University Hospital. The faculty will attempt to provide students with seriously ill and injured patients. The call schedule includes 12-hour shifts, which are equally divided among students on the service. Students will participate in all conferences designated by the service. Late drops, as defined by the Registrar, will not be permitted.
Semester Credit Hours: 1.0–12.0

SURG 4006 - Supervised Clinical Science Research
Senior students are required to participate in a clinical science project. Before students enroll in the course, they need to contact a surgery faculty member with whom they want to conduct a clinical science research project. In order to receive credit for this elective, a student must write a brief synopsis of the clinical science research project including: research purpose, methodology, and project (report, abstract, presentation, clinical protocol). A student must submit the synopsis with paperwork for approval of the elective. Midway during the elective (2 or 4 weeks), a student must submit a progress report to the Director of Surgical Education and the supervising surgery faculty member. At the end of the elective, the student must submit a final report to the Director of Surgical Education and to the supervising faculty member.
Semester Credit Hours: 1.0–42.0

SURG 4007 - General Surgery – BAMC/Burn Unit
Senior students may take a general surgery clerkship at BAMC. They may also take a clerkship at the Burn Unit at the...
Semester Credit Hours: 1.0–4.0

SURG 4007 - Pediatric Surgery
Senior students function as "interns" on private practice pediatric surgery services under the supervision of pediatric surgeons who are clinical faculty at the Health Science Center. They admit and discharge pediatric patients. They perform history and physical examinations, and follow daily records on pediatric patients. They have much 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.
Semester Credit Hours: 1.0–4.0
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 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.

**Semester Credit Hours:** 1.0–12.0

**SURG 4038 - Rural Surgery**

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 participate in pre- and post-operative care of general surgery patients. They 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.

**Semester Credit Hours:** 1.0–12.0

**SURG 4039 - General Surgery – WHMC**

Senior students function as "interns" on each service. 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 service. They mentor third-year medical students on the designated service. Students can rotate on the Falcon or the Eagle service at WHMC. Students can focus on oncology, colorectal, or trauma care.

**Semester Credit Hours:** 1.0–12.0

**SURG 4040 - Surgical Critical Care**

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 conferences and trauma morbidity and mortality conference. They will have opportunity to take call as designated by the service.

**Semester Credit Hours:** 1.0–12.0

**SURG 4042 - General Surgery A**

Senior 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. They mentor third-year medical students on the service.

**Semester Credit Hours:** 1.0–4.0

**SURG 4043 - General Surgery B**

Senior 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. They mentor third-year medical students on the service.

**Semester Credit Hours:** 1.0–4.0

**SURG 4044 - General Surgery – VA**

Senior students function as "interns" on this broad-based general surgery VA service. They admit and discharge general surgical VA patients. They perform history and physical examinations, and keep daily records on general surgical VA patients. They follow general surgical 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 general surgical VA patients. They present cases, attend all conferences, and take call as designated by the general surgical service. They mentor third-year medical students on the general surgical VA service.

**Semester Credit Hours:** 1.0–4.0

**SURG 4047 - Trauma/Emergency Surgery**

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.

**Semester Credit Hours:** 1.0–4.0
SURG 4048 - Vascular Surgery – UH/VA
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 the finer details of examination and learn to interpret vascular diagnostic studies.
Semester Credit Hours: 1.0–4.0

SURG 4049 - Surgical Internship Readiness Elective
The purpose of this elective is to prepare senior medical students who are interested in a surgical career for their surgical internship. This elective is a surgical “boot camp” to provide practical “hands on” experience for students.
Semester Credit Hours: 1.0–4.0
Prerequisites: Students will require a general surgery subinternship as a prerequisite. Students will also require a critical-care rotation as a prerequisite. Students can do a critical care rotation in the SICU, MICU, PICU, or CCU. These mandatory prerequisites can occur at the Health Science Center or at a remote site.

SURG 4050 - Congenital Cardiology and Cardiac Surgery
The students are required to attend daily rounds with cardiologists, cardiac surgeons, pediatric interns, and neonatologists on patients with congenital heart disease. They admit and discharge patients with congenital heart disease. They perform history and physical examinations and keep daily records on these patients. They participate in congenital heart operations and catheterization procedures. They participate in pre- and post-op care of these patients. They attend clinic with both cardiologists and surgeons. They attend conferences including congenital heart case review, M/M and PICU conferences weekly.
Semester Credit Hours: 1.0–4.0

SURG 4201 - General Surgery – Harlingen
Senior students function as “interns” under private practice general surgeons who are clinical faculty at the Regional Academic Health Center. 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 mentor third-year medical students on the surgical service.
Semester Credit Hours: 1.0–4.0

SURG 4202 - Clinical Anesthesiology – Harlingen
Senior students function as “interns” under private practice anesthesiologists who are clinical faculty at the Regional Academic Health Center. They perform preoperative anesthetic assessment on surgical patients in the outpatient clinics, in the ICUs, and on the general wards. They develop appreciation for medical conditions that affect choice of anesthetic agent. They have the opportunity to develop expertise in local, regional, and general anesthesia management. They have the opportunity to develop expertise in airway management. They have the opportunity to become knowledgeable in induction and maintenance anesthetic agents. They have the opportunity to develop expertise in intraoperative monitoring techniques of the anesthetized patient. They follow patients in the recovery room and develop appreciation for complications that may occur in the intra- and post-operative period. They present cases, attend all conferences, and take call as designated by the service. They mentor third-year medical students on the designated service.
Semester Credit Hours: 1.0–4.0

Urology

UROL 4027 - Urology
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.
Semester Credit Hours: 1.0–12.0

UROL 7000 - Urology Off Campus
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.
Semester Credit Hours: 1.0–42.0
School of Medicine Academic Calendar 2009–10

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<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Thursday, November 26, 2009</td>
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</tr>
<tr>
<td>Saturday, December 19, 2009</td>
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</tr>
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</tr>
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</tr>
<tr>
<td>Monday, March 15, 2010</td>
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<td>MD Years 1 &amp; 2</td>
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<td>Friday, March 19, 2010</td>
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<td>MD Years 1 &amp; 2</td>
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</tr>
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<td>MD Years 2 &amp; 4</td>
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<td>MD Year 1</td>
</tr>
<tr>
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<td>Monday, May 31, 2010</td>
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<td>All</td>
</tr>
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<td>Friday, June 25, 2010</td>
<td>Term Ends</td>
<td>MD Year 3</td>
</tr>
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MS 3 Clerkship Dates

<table>
<thead>
<tr>
<th>Date</th>
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<tbody>
<tr>
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<tr>
<td>Monday, June 22, 2009</td>
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<tr>
<td>Thursday, July 02, 2009</td>
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<tr>
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<td>Date</td>
<td>Period Begins/Ends</td>
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</tr>
<tr>
<td>Friday, August 14, 2009</td>
<td>Clerkship 1 Ends</td>
</tr>
<tr>
<td>Monday, August 17, 2009</td>
<td>Clerkship 2 Begins</td>
</tr>
<tr>
<td>Friday, September 25, 2009</td>
<td>Clerkship 2 Ends</td>
</tr>
<tr>
<td>Monday, September 28, 2009</td>
<td>Clerkship 3 Begins</td>
</tr>
<tr>
<td>Friday, November 6, 2009</td>
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</tr>
<tr>
<td>Monday, November 9, 2009</td>
<td>Clerkship 4 Begins</td>
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<tr>
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<tr>
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<td>Clerkship 5 Begins</td>
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<tr>
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<td>Clerkship 5 Ends</td>
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<tr>
<td>Monday, February 22, 2010</td>
<td>Clerkship 6 Begins</td>
</tr>
<tr>
<td>Friday, April 2, 2010</td>
<td>Clerkship 6 Ends</td>
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<td>Clerkship 7 Begins</td>
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<tr>
<td>Monday, May 17, 2010</td>
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### MS 4 Rotation Dates

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<tr>
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<tbody>
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</tr>
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<td>Friday, July 31, 2009</td>
<td>Period 1 Ends</td>
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<tr>
<td>Monday, August 3, 2009</td>
<td>Period 2 Begins</td>
</tr>
<tr>
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<tr>
<td>Monday, August 31, 2009</td>
<td>Period 3 Begins</td>
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<tr>
<td>Friday, September 25, 2009</td>
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</tr>
<tr>
<td>Monday, September 28, 2009</td>
<td>Period 4 Begins</td>
</tr>
<tr>
<td>Friday, October 23, 2009</td>
<td>Period 4 Ends</td>
</tr>
<tr>
<td>Monday, October 26, 2009</td>
<td>Period 5 Begins</td>
</tr>
<tr>
<td>Friday, November 20, 2009</td>
<td>Period 5 Ends</td>
</tr>
<tr>
<td>Monday, November 23, 2009</td>
<td>Period 6 Begins</td>
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<tr>
<td>Friday, December 18, 2009</td>
<td>Period 6 Ends</td>
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<tr>
<td>Monday, January 11, 2010</td>
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<tr>
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<tr>
<td>Monday, February 8, 2010</td>
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<tr>
<td>Friday, March 5, 2010</td>
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<tr>
<td>Monday, March 8, 2010</td>
<td>Didactics Begin</td>
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<tr>
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<td>Didactics End</td>
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<tr>
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<tr>
<td>Friday, May 7, 2010</td>
<td>Period 9 Ends</td>
</tr>
<tr>
<td>Friday, May 7, 2010</td>
<td>Term Ends</td>
</tr>
</tbody>
</table>
School of Nursing

Students are responsible for all information contained in this Catalog up to and including their school’s section.

- Mission
- Programs
- Philosophy
- Goals
- Scholarship
- Integrated Learning
- Transition
- Customization
- Guidelines for Professional Conduct
- Immunization
- Auditing Courses
- Graduation
- Dean’s List
- Dual Enrollment Processes
- Accreditation
- Scholarships
- Student Concerns
- Student Appeals and Grievances
- Procedure for Academic Review
- Classroom Attire and Decorum
- Learning Laboratory
- Clinical Practicum Experience
- Attendance Policy
- Undergraduate Program Policies and Procedures
- Graduate Program Policies
- Undergraduate Program in Nursing
- Masters Program
- Doctorate
- Doctorate Course listing
- School of Nursing Course Descriptions
- School of Nursing Academic Calendar

Mission

The UT School of Nursing at San Antonio was authorized by the Texas legislature in 1969 for the purpose of “preparing nurses to meet the needs of hospitalized patients in the state of Texas.” The School of Nursing, now a part of The UT Health Science Center San Antonio (HSC), has expanded its mission to include providing quality baccalaureate and graduate nursing programs to qualified students, supporting competent clinical nursing practice, participating in scholarly activity, and engaging in community service. The mission reflects the commitment of the faculty to the people of the state of Texas to accomplish its goals and purposes.

Programs

Three programs of instruction in nursing are offered at the Health Science Center. The undergraduate program and a continuing education program are presented by the School of Nursing; the graduate program is administratively directed by the Graduate School of Biomedical Sciences. The undergraduate program includes planned learning opportunities designed to meet the needs of beginning as well as registered-nurse students who are pursuing a degree. The graduate program is designed to provide opportunities for advanced clinical study, research, and preparation for teaching or administration. Both undergraduate and graduate programs are offered on a full-time or part-time basis. The continuing education program provides learning opportunities for the ongoing educational needs of registered nurses in South Texas.

Philosophy

The School of Nursing is one of five schools of the Health Science Center and shares the goal of assuring high quality health care for the people of Texas and beyond. The purpose is to promote excellent health care as an act of social justice for individuals and their diverse communities by creating dynamic interprofessional approaches to lead research and prepare professional nurses to deliver effective, compassionate, innovative, and culturally proficient care.

Goals

Teaching organization and effectiveness, research, and practice/service.

Scholarship

Nursing scholarship is a unique synthesis of knowledge from basic, behavioral, and biological sciences within the domain that is professional nursing. Nursing scholarship involves discovering, creating, structuring, testing, and refining knowledge needed for the practice of nursing. This process occurs through various partnerships among individuals, the Health Science Center, and local and world communities. The value of professional scholarship, to which faculty and students subscribe, is realized through its application in the role of provider,
leader/manager, and member/advocate of the profession, in response to specific human and societal needs.

Integrated Learning

Learning is a process that involves the totality of human experiences and facilitates lifelong transitions. Integrated learning has two unique dimensions. The first dimension acknowledges the interaction of the student’s personal components of need, ability, and style. The second acknowledges that the subject (nursing) necessitates incorporation of diverse information into a unified whole-knowledge. Active learning requires students who demonstrate commitment to their development and assume responsibility for their role in the learning process. This results in the preparation of professional practitioners with a broad perspective and understanding of multiple content areas, who are able to synthesize information from various disciplines, think logically, analyze critically, and communicate effectively with patients and other health care professionals. Settings that will optimize student learning are critical to efficient and effective teaching and learning.

Transition

“A transition denotes a change in health status, in role relations, in expectations, or in abilities.” (Meleis, 1991)

Many factors influence resilient and healthy transitions resulting in positive changes in bio-behavioral responses, relationships, capabilities, and outcomes relative to people, organizations, and society. The nurse as provider engages the patient in a partnership to evaluate, nurture, and sustain a healthy state. During times of health transitions due to developmental processes, disability, disease, or the process of dying, the nurse provider cares for the patient in a holistic, compassionate, and ethical manner. The nurse-patient partnership involves customized care to the individual patient. The outcomes of the nurse-patient partnership are manifested in changes in health status, knowledge level, nature of role relationships, behavioral changes, and attitudes.

Of particular importance in the educational area, is the School of Nursing’s commitment to serving a diverse student population, and providing education mobility. The faculty recognizes that various nursing programs share a common core and value the various life experiences, knowledge, skill, and abilities that students bring to the educational process. The Health Science Center fosters educational transitions by providing the prospective student with multiple entry options to minimize repetition of content between programs. Faculty and students in partnership customize learning experiences to assist the student in transition to the role of professional nurse at the undergraduate level and the roles of advanced practice nurse and scientist at the graduate levels. Faculty and students share the responsibility for an educational partnership that encourages growth toward learning outcomes in an innovative, evolving learning environment. Outcomes are founded in the cognitive, affective, and psychomotor domains and encourage growth from novice to expert levels.

Customization

Nursing care and education should be realized in a manner that maximizes resource utilization, quality, and access. Customization implies designing processes responsive to participant needs, understanding that ability to respond to change is critical to full participation of individuals and groups in the global future. Customization requires adaptability, an unbounded frame of reference, reconceptualizing ideas, realignment, cooperation, and focus on essentials. For the learner, needs, readiness and style are considered, as is curriculum design and implementation that allows for adaptability to best facilitate educational and professional transitions. Customization in care management and delivery involves interactions between health care providers from many disciplines within their collective contexts and requires active partnerships.

Partnership

Responsive to the changing health care environment, participants maintain a set of dynamic relationships with mutual responsibility for student education and the health of all partners. Faculty and students share the responsibility for an educational partnership that encourages growth toward learning outcomes in an innovative, evolving learning environment. Partnership implies a collegiality that facilitates implementing a learning environment where each participant contributes and receives something that matters, becomes more capable personally and in groups, and devises coordinated meaningful activity. Partners are responsible according to their role: teacher, student, patient*, health care provider, organization, family, community. Partnerships extend to multidisciplinary relationships and organizational contracts. The partnership generates strategic plans and positive creative energy to support the health care goals of the whole.

*patient (individual, family, aggregate, community, or society)

Guidelines for Professional Conduct

Students in the Health Science Center are expected to conduct themselves in a professional manner at all times, not only in interaction with patients, but also with peers, faculty, and staff. Students represent the School of Nursing and the nursing profession; thus, students assume responsibility towards society. These responsibilities are delineated in the Code for Nurses, American Nurses Association, 2001. The statements of the Code and their interpretation provide guidance for nurses’ behavior in relation to carrying out nursing responsibilities within the framework of ethical decision making. Students are obligated to function at all times within the framework of the Code for Nurses. [Copies of the Code for Nurses with interpretive statements (2001) are available in the bookstore for purchase.]

In support of the Code of Nurses we believe practicing professional nursing is an honor earned every day. We—the students, faculty, Department Chairs, Associate Deans, and the Dean of the School of Nursing of The UT Health Science Center—subscribe to the highest standards of conduct. Our aim is
professional behavior beyond reproach. In particular, we subscribe to the following points of conduct.

A. I will promote and maintain an honest and effective learning environment. I will:
   - Do my part to ensure that the environment promotes acquisition of knowledge and mastery of skills
   - Not tolerate harassment, flagrant disruption of the learning process, demeaning language or visual aids, disrespectful behavior, or lack of respect for life and living things;
   - Exhibit the highest standards of conduct, honesty, and professionalism;
   - Identify and report those who exhibit academic or professional misconduct following the chain of command;
   - Appreciate each individual as a person of value and help maintain dignity during the learning process.

B. I will place primary emphasis on the health and welfare of patients, students, and the School of Nursing community. I will:
   - Attain and maintain the most current knowledge in the healing arts and the skill to apply that knowledge;
   - Display respect and compassion for each patient, student, and members of the School of Nursing community;
   - Foster and preserve the trust that exists between nurses and patients, faculty and students, and among members of the School of Nursing community;
   - Respect and maintain the confidentiality of the patient, student, faculty, Department Chair, Associate Dean, and the Dean;
   - Not tolerate or support unprofessional behavior by others or myself.

C. I will conduct myself at all times in a professional manner. I will:
   - Exhibit honesty, openness, and evenhandedness in dealing with others;
   - Maintain professional and personal hygiene;
   - Not engage in language or behavior which is disrespectful, abusive, or insulting;
   - Take responsibility for my actions, acknowledge my limitations, and ask for assistance when needed;
   - Assure the welfare of others is not compromised as a result of my inadequacy or impairment;
   - Not be deceitful or self-serving;
   - Achieve satisfactory balance in personal, community, and professional activities;
   - Not allow personal conflicts to interfere with objectivity in relationships with colleagues or patients;
   - Accommodate a fellow professional’s request for my knowledge and expertise;
   - Refrain from the manifestation of bias, including sexual, marital, disability, racial, ethnic, or cultural harassment;
   - Support my fellow professionals if they should falter; and
   - Identify any whose ability is impaired, support them as they seek rehabilitation, and help them to reintegrate into the community.

*Adapted from the Health Science Center Student Guide, School of Medicine*

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, 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” of the Health Science Center 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.

**Immunization**

All students must complete the 3-injection series Hepatitis B immunization before registration. Failure to comply will prevent initial enrollment.

**Auditing Courses**

Students may not attend class without proof of registration, either as a matriculated or an auditing student. Anyone may audit a course in the School of Nursing with the approval of the appropriate Associate Dean; the Associate Dean then seeks the consent of the course instructor. Students pay an audit fee, and a permanent record of the audited course is kept by the Registrar. A student auditing a course is not permitted to participate in any clinical activity of the course.

**Graduation**

Official commencement ceremonies are held each year in May. Graduates cannot participate in commencement prior to completion of their program. Official School of Nursing graduation invitations are ordered at the Bookstore on the Health Science Center’s Long campus. Invitations must be paid for at the time they are ordered. Celebratory activities held in December, or at times other than the May official graduation, are not sanctioned by the university.

**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.
Dual Enrollment Processes

Students planning to take courses at both The University of Texas at San Antonio (UTSA) and the School of Nursing must complete an admission form for UTSA and a Certification of Dual Enrollment form. Forms are available in the Registrar’s Office; office personnel will complete the form. Students then must hand carry the form to UTSA. Correspondence from UTSA will go directly to the student. Deadlines for application at UTSA are:

<table>
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<tr>
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<th>Deadline</th>
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<tbody>
<tr>
<td>May 1</td>
<td>for summer sessions</td>
</tr>
<tr>
<td>July 1</td>
<td>for fall semester</td>
</tr>
<tr>
<td>December 1</td>
<td>for spring semester</td>
</tr>
</tbody>
</table>

Accreditation

The UT Health Science Center San Antonio School of Nursing’s baccalaureate program is approved by the Texas Board of Nursing, P.O. Box 430, Austin, Texas 78767-0430, (512) 305-6818. The Bachelor of Science in Nursing degree program and the Master of Science in Nursing degree program have received full accreditation through 2011 from the:

Commission on Collegiate Nursing Education
One Dupont Circle NW, Suite 530
Washington, D.C. 20036-1120
(202) 887-6791

Scholarships

Various scholarships are available to undergraduate and graduate nursing students. To become eligible for a nursing scholarship, an application for financial aid (FAFSA) must be on file with the Office of Financial Aid. Scholarship eligibility criteria are provided in the scholarship application guidelines. Scholarship criteria stipulate that recipients must meet nursing program progression requirements and maintain at least a 2.5 grade point average to retain eligibility for the scholarship.

Information about nursing scholarships is available in the School of Nursing Office for Students.

Student Concerns

Various mechanisms are available at all levels for student input regarding their concerns. Individuals and groups who respond to these concerns include primary instructors, department chairs, course coordinator, associate dean for admissions and student services, associate dean for Graduate Nursing Program, associate dean for Undergraduate Nursing Program, dean, or vice president for academic administration. Procedures for grievances can be found in this Catalog.

Student appeals and grievances are handled through established policies and procedures for the School of Nursing as outlined in the “General Regulations and Requirements” section of this Catalog.

Procedure for Academic Review

For Undergraduate and Graduate Students

Section I: Purpose of Procedure

The purpose of Academic Review is to provide students and faculty, who have a grievance, with the opportunity to voice their concerns. Administrative channels are provided to facilitate the academic review of a grievance. A grievance is an accusation or complaint about a grade or discriminatory actions regarding academic achievement in the nursing program. The student has a right to grieve a grade or discriminatory action if the following conditions are met: 1) grade received does not fairly or appropriately reflect student’s performance; 2) the discriminatory act negatively influences a grade or progression in the program. The student must realize that opening a grievance to appeal may result in her/his receiving a higher or lower grade, with acceptance of the recommendations by the faculty member.

A student may grieve grades on the following:

- Clinical performance
- Papers
- Projects

A student may not grieve:
a. Specific criteria for grading (course or instructor concern)

b. Specific exam questions or examination results (course or instructor concern)

c. Final course grade (course or instructor concern)

d. Personal conflict (individual faculty concern; see School of Nursing Handbook for definition of personal conflict and discriminatory action)

The student may appeal the same grade only once. A grievance is not the same as a request for a second person to a grade paper. Refer to second reader.

Confidentiality is essential for all academic review procedures. When a student discusses with faculty members the possibility of academic review, this information is not to be shared indiscriminately with other faculty or students. Faculty may seek counsel or advice from other faculty. 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 a grievance, the student must contact the faculty involved to discuss the concern. If resolution is not achieved, the student should pursue an academic review.

The student must submit a written petition to the Associate Dean for Admissions and Student Services within 72* business hours of receiving the grade in question. The written petition should include:

a. Name of student

b. Name of course

c. Grade which is being challenged

d. Date student received grade

e. Name of faculty member involved in evaluation of the item in question

f. Dates student met with the faculty

g. Student’s reason for grieving the grade (brief statement of concern) which may include a charge of discrimination

The Associate Dean for Admissions and Students will convene an academic review panel within 72** business hours of receiving the written petition.

**Business hours are recognized as Monday through Friday on official school days from 8:00 a.m. through 5:00 p.m. CST.

Section III: Composition and Function of the Academic Review Committee

The Academic Review Committee will be selected by the student in the following manner:

a. The student will choose whether the Academic Review Committee will be comprised of three faculty or two faculty and one student.

b. The student will select, by lot, six faculty names. The first three (or two) persons chosen will serve as members; the rest will serve as alternates.

c. If student representation is desired, the student will select, by lot, four students’ names. The students’ names will be determined by the following mechanism:

1. The undergraduate students select 20 students and the graduate students will select five students each semester to serve as potential student members of review boards (25 students in all).

2. The student petitioning will draw the four names from these names, after excluding the students who are in the same class as the petitioner.

3. The first student drawn will serve as a member and the others will be alternates.

d. In selecting members of the Academic Review Committee, the following guidelines should be used:

1. Faculty and/or students who have knowledge of the situation should not serve on the Committee.

2. Members selected for the Committee should not be eliminated because the student does not know them.

3. Part-time faculty and students may be asked to sit on the Committee.

Faculty selected will be notified by the Associate Dean for Admissions and Student Services. Selected faculty members have an obligation to serve on the Review Committee. In the rare instance when a member cannot serve, the first alternate will be appointed.

A temporary Chairperson of the Academic Review Committee, the faculty member with seniority in length of service on the Health Science Center faculty, will be designated by the Associate Dean for Admissions and Student Services. The three committee members may wish to alter this selection once the committee has convened.

The Chairperson of the Academic Review Committee will set a time for a hearing within 72 business hours of receipt of the request from the Associate Dean for Admissions and Student Services. The Chairperson will notify the student, faculty, witnesses, and committee members of the date, time, and place of the hearing.

The Academic Review Committee will hear all evidence presented and make a recommendation to the student and faculty member involved. The Committee may make only one of two recommendations:

a. The grade given is indicative of the student’s achievement and should stand.

b. The grade given is not indicative of the student’s achievement and the faculty member should reconsider it.
Section IV: Conduct of the Academic Review Committee Hearing

Prior to the hearing, the faculty member involved submits to the Academic Review Committee Chairperson any of the following materials appropriate to the item under consideration:

a. Criteria
b. Objectives
c. Non-corrected (clean) copy of the paper

d. Witnesses as requested by the student, faculty, or the re-
e. A student may bring legal representation

Prior to the hearing, the student submits a written petition describing the specific allegations and rationale for grieving and the request for findings regarding the grade. A student may include relevant evidence to support her/his grievance.

Members of the Committee should not discuss the student’s petition with the faculty member or the student prior to the Committee meeting. If the faculty or student involved approaches a Committee member for consultation, the Committee member should direct her/him to the Associate Dean for Admissions and Student Services.

Prior to the Committee meeting, the chair should share any material given to her/him by the faculty member or the student that is pertinent to the present situation with Committee members. This material must be kept confidential.

At the hearing, the Chairperson of the Academic Review Committee will be the spokesperson for the Committee. During the hearing, the Chairperson of the Academic Review Committee will be the spokesperson for the Committee.

Those who may be present at the Committee hearing are:

a. Committee members
b. Student involved in situation
c. Faculty member involved in situation
d. Witnesses as requested by the student, faculty, or the review committee
e. A student may bring legal representation

The Chairperson will review the procedure for the student and faculty member and clarify the function of the Committee as a data-gathering committee. The Chairperson will read the petition from the student and proceed with statements. During the hearing, participants/witnesses should be allowed to present their information without interruption. They should present only information relevant to the grievance. After witnesses have presented their information, they should leave the meeting.

The student will present the charge and rationale of her/his concern.

The faculty member will present her/his response to the charge.

The student, then the faculty member, may each offer one 3–5 minute summary statement.

Witnesses for either party may be called by the Committee Chairperson whenever appropriate during the hearing. Witnesses will wait in an adjoining room and will be present only for their testimony. Visitors are not allowed during a Committee review.

Academic Review Committee hearings will not be tape-

Only the charge presented in writing will be discussed during an Academic Review. The student and faculty member may respond only to the petition; the Committee Chairperson is responsible for monitoring responses and assuring adherence to this rule.

After the hearing, the Committee will be given a maximum of one week after the initial hearing to review each case. The Committee may reconvene at any time to request additional data.

When the Committee is ready to give its decision, a meeting with the Committee, faculty, and student will be conducted. At the meeting, the student and faculty member will be provided written copies of the decision.

The decision of the Committee will be directed specifically to the charge (grade is indicative of the student’s achievement or the grade given is not indicative of the student’s achievement and the faculty member should re-consider it). Rationale will be provided. If the Committee recommends reconsideration of the grade, the faculty member will consider the recommendation and inform the students and the Associate Dean for Admissions and Student Services of the actions within 72 hours*.

A written report of the review is provided to the Associate Dean for Admissions and Student Services following the hearing. The written record will be maintained in compliance with records retention for 75 years.

If the student or faculty member is not satisfied with the outcome of the review, the possibility of further review or other considerations may be discussed with the Dean.

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*72 hours is a suggested time period, not to be rigidly adhered to. Vacation, weekends, and holidays all necessitate extending the time. The Associate Dean for Students can make adjustments according to circumstances. If an appeal is initiated at the end of a semester and there is not adequate time to complete the appeal process, the appeal will be pursued beginning the first official class day of the next term.

Procedure for Second Readers of Papers

If a student disagrees with the grade given on a paper to which a numerical grade is assigned, he/she must discuss this with the faculty member who graded the paper. If agreement is not reached, the following procedure must be followed to request a second reader.

a. The student must submit a written petition for a second reader to the faculty member in charge of the course/ department chair no later than one week after receiving the grade. The petition should state which portions of the criteria are being challenged.
b. The student must also submit to the faculty member in charge of the course her/his copy of the paper.

c. The faculty member in charge of the course will obtain the unmarked duplicate of the paper, remove the student’s name from this copy, and select a faculty member within the course or familiar with course content to serve as second reader.

d. The second reader’s evaluation will be returned to the original instructor for her/his consideration with the original faculty member assigning a final grade.

e. A request for a second reading may result in a grade that is the same, higher, or lower than the first grade.

f. The grade from the second reader is final.

### Clinical Attire

Projecting a professional image is a responsibility of all students and faculty. Appearance reflects upon the individual, the School of Nursing, and the nursing profession. The following are guidelines for clinical attire. Individual agencies may determine further dress code requirements at their discretion.

Attire should be the official burnt orange scrub top with embroidered logo on left chest area and black scrub pants. Plain white undershirts and turtle neck sweaters (no writing, pictures, graphics or logos on them) may be worn under the scrub top. Halter tops, tank tops, tube tops, T-shirts, muscle shirts, sheer or sleeveless tops, and tight sweaters are not acceptable. Undergarments should not be conspicuous. White or solid color cardigan sweaters or white lab coats may be worn over uniforms.

Shoes should be conservative and businesslike, comfortable and well fitted, with good support and needed protection. White leather athletic shoes may be worn. Shoes should be clean and in good condition, with clean white shoelaces without attachments.

Plain hose (natural or black) or plain black socks should be worn; decorative hosiery, pom-pom attachments, etc. are not acceptable.

Hair should be neat, clean, dry, and worn in a conservative style. Long hair must be restrained, so that the hair does not come into contact with patients. Mustaches and beards should be clean and trimmed.

Makeup should be conservative. Use of perfume and cologne is inappropriate since patients may have allergies or unpleasant reactions (e.g., nausea, difficulty breathing, etc.). Fingernail length should be moderate; brightly colored nail polish or nail designs are not acceptable. Acrylic nails are not acceptable due to infection control concerns.

Good personal hygiene is essential. An unclean, unkempt appearance and unpleasant body or breath odors are not acceptable. This includes the smell of tobacco products.

Jewelry should be conservative and limited to school or service pins, wedding bands or small rings, and small stud earrings (no more than one in each ear). Visible piercings in any other site while in clinical are unacceptable (including but not limited to tongue, lip, eyebrow, and nose). Additionally, all students are expected to have a watch with a second hand. Bracelets, large or dangling earrings, and large or long necklaces are not acceptable. Both professionalism and safety should be considered when selecting and wearing jewelry. Visible body art should be covered to the extent possible.

Street clothes (collared shirt) may be worn to clinical agencies in certain circumstances (e.g., Mental Health Nursing, data collection, etc.). Attire consistent with professional standards (no jeans or shorts) should be worn and covered with a lab coat.

A name badge will be provided, at a small cost, and should be worn at all times when the student is in the clinical setting. The UTHSCSA School of Nursing logo should be worn on the pocket of the lab coat. The logo should be sewed on so the edges do not curl; do not pin the logo on the pocket. The name badge and/or logo may not be worn at any time other than when the student is functioning as a UT Health Science Center San Antonio nursing student.

The official school uniform should not be worn casually in public. It is recognized as a reflection on the student, the school, and the profession.

Students arriving at a clinical agency inappropriately attired will forfeit that day’s clinical time and will not be provided alternate or make up experiences to compensate for the lost time.

Individual clinical agencies and sites may have additional requirements to which students are expected to conform.

### Data Collection Attire

Students may wear either their clinical uniform with their lab coat or professional business casual attire with their lab coat for data collection. Nametags must be worn at all times while in the facility/at the site. Use of perfume and cologne in excess is inappropriate since others may have allergies or unpleasant reactions (e.g., nausea, difficulty breathing, etc.). Good personal hygiene is essential. An unclean, unkempt appearance and unpleasant body or breath odors are not acceptable. This includes the smell of tobacco products.

### Classroom Attire and Decorum

Clothing worn to classes at the HSC may range from dressy to casual. It is recommended that fashion excesses and extremes be avoided. This is a professional school and development of appropriate professional presentation is a part of belonging to the profession. Over exposure, excessively tight clothing, hats, pajamas, offensive/obscene sayings on clothing, etc. are not appropriate. Use of perfume and cologne in excess is inappropriate since others may have allergies or unpleasant reactions (e.g., nausea, difficulty breathing, etc.). Good personal hygiene is essential. An unclean, unkempt appearance and unpleasant body or breath odors are not acceptable. This includes the smell of tobacco products.

Students are expected to observe the following guidelines for classroom behavior:

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1. Neither children nor pets may be brought to classes. Children must not be left unattended in any area in the school.

2. Guests may be brought to class if permission is received from the faculty member in charge of the class.

3. Permission to tape record will be obtained from each person being recorded with each lecture.

4. No food, drinks, or smoking in classrooms or carpeted areas in the building is allowed.

5. Students are expected to be seated by the designated starting time for classes.

6. No audible beepers; place cell phones on mute or vibrate. Students will be located for emergencies via the undergraduate or graduate offices.

**Learning Laboratory**

The Nursing Learning Laboratory was designed as a specific area where clinical competence or psychomotor skills are learned and practiced within the curriculum. This center is an extension of the didactic classroom and provides an area where students can put into practice principles and techniques essential for good nursing care. The students participating in Learning Laboratory activities are expected to come fully prepared to participate in each laboratory period. They are expected to have completed assigned readings, viewed assigned tapes, and answered all study guide questions. Students are expected to participate in the laboratory through practice and attendance of demonstration sessions. The School of Nursing anticipates that students will leave the laboratory with an understanding of principles underlying any given procedure and with a greater understanding of how to perform various techniques. Students will not, however, be expected to have perfected the techniques. Perfection may be achieved by repetitive practice, which students will practice independently. Faculty Teaching Assistants and graduate assistants are available to supervise students’ learning in the Learning Laboratory. Teaching Assistants can monitor practice activities, demonstrate skills, and collaborate with course faculty regarding student performance. The Teaching Assistants and graduate assistants report to the Director of Learning Laboratory and Simulation Center and the Associate Dean for Undergraduate Programs. They closely collaborate with course faculty regarding learning activities occurring in the Laboratory during regularly scheduled labs.

**Learning Lab Attire**

Non-clinical uniform scrubs are to be worn during clinical skills lab. Nametags are to be worn at all times while in the Learning Lab. Use of perfume and cologne in excess is inappropriate since others may have allergies or unpleasant reactions (e.g., nausea, difficulty breathing, etc.). Good personal hygiene is essential. An unclean, unkempt appearance and unpleasant body or breath odors are not acceptable. This includes the smell of tobacco products.

Requirements for practice of clinical skills in the Learning Laboratory, other than those for regularly scheduled labs, are outlined below.

1. Students of the School of Nursing may practice only those nursing procedures that they have previously learned through attendance of regular Learning Lab classes.

2. Graduate students, undergraduate students, and faculty may schedule practice labs with the Director of Learning Laboratory and Simulation Center or her/his designees. This is a privilege not normally extended to students enrolled for courses taken credit by exam.

3. Scheduling of sessions is dependent upon availability of space and supplies.

4. All invasive procedures requiring needles, syringes, and intravenous supplies must be supervised by the Learning Lab teaching assistant or clinical faculty. Arrangements for such supervision are the student’s responsibility. Practice sessions not requiring supervision must also be scheduled with Learning Laboratory personnel. This is a privilege.

5. There are no make-up labs offered, unless specifically scheduled by the faculty. Make-up labs will be taught by faculty scheduling these labs.

6. Individuals who are not students of the School of Nursing may not attend lab sessions.

**Learning Laboratory Attendance**

Learning Laboratory is considered Clinical Time and it is mandatory. Attendance is essential to meet the objectives of the course. If a student must miss a scheduled lab, he/she must notify their clinical instructor and the Director of Learning Lab and Simulation Center or designee in advance. The student must contact their assigned clinical instructor to make-up the missed content. When a Learning Lab is missed, the student cannot perform the missed skills in the authentic clinical environment until the make-up activity has been completed. Students arriving late for Learning Laboratory are not given extra time for skill practice or performance.

The appropriate Associate Dean (Undergraduate or Graduate) will be notified in writing by the course coordinator and clinical faculty if a student is at risk of being removed from a clinical course because they have exceeded the maximum allowable missed hours in either Clinical or the Learning Laboratories. The appropriate Associate Dean will follow-up with clinical faculty and course coordinator to identify appropriate next action.

**Guidelines for Using the Learning Laboratory**

- **Hours of Service — Academic year**
  - 8 a.m. to 8 p.m., Monday through Thursday
  - 8 a.m. to 5 p.m., Friday

- **Hours of Service — Summer**
  - 8 a.m. to 5 p.m., Monday through Friday. The Learning Laboratory closes for published university holidays.

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. Equipment and materials should be returned to their proper places. Extra books and other nonessential items should be stored in lockers or cubicles before the student enters the Lab. If equipment or supplies are damaged or lost the student is responsible for replacement cost.

Clinical Practicum Experience

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. Faculty have 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 instructor 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.

Patient Safety

The nature of clinical nursing courses is such that students are involved in the direct 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.

Attendance Policy

The School of Nursing 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. Students who have missed clinical due to an illness or injury that has restricted their ability to perform in the clinical environment must provide written medical clearance stating that the student is ready and cleared to participate fully in clinical activities. The student will not be allowed to return to the clinical area until the physician's statement has been received. The Associate Dean will notify the appropriate faculty. Repeated or unexcused absences make it impossible to achieve course objectives.

1. Classroom Attendance, Written Work, and Testing Policy

Attendance in class is an expectation of each student. All students are expected to take all examinations and submit written work on the scheduled date(s). The student must contact the course coordinator prior to the scheduled exam time or written assignment due date if unable to complete the exam or assignment as scheduled. If the excuse is accepted as reasonable and necessary, arrangements will be made for a make-up exam or to receive extended time for the written project. Failure to notify will result in a grade of zero.

2. Clinical Attendance

Students are required to attend all clinical experiences. Students are to be prompt, prepared, and appropriately attired. A student who is unable to attend a clinical experience must contact the clinical faculty personally prior to the beginning of the clinical experience. Leaving a message or e-mail for the faculty is not acceptable. The faculty pager or the agency phone number should be used to reach the faculty member personally. Completion of missed clinical time is at the discretion of the clinical faculty.

3. Testing Policy

Students are expected to take all examinations on the scheduled date(s) and time(s). The student must contact the course coordinator prior to the scheduled exam time if unable to complete the exam as scheduled. If the excuse is accepted as reasonable and necessary, arrangements will be made for a make-up exam as soon as possible. Failure to notify will result in a grade of zero.

4. Written Assignments

All written work is to be submitted on the announced due date(s) and time(s) unless the student has made previous arrangements with the faculty member. Failure to notify will result in a grade of zero.

Computer Requirement

Students admitted into the School of Nursing undergraduate program will be required to purchase a laptop computer from the Health Science Center when entering the program. The
computer will be formatted with standard programs and online learning resources. Windows-based and Apple platforms will be available. Students are expected to have basic computer skills including the ability to use e-mail, the Internet, and word-processing software.

**Undergraduate Program Policies and Procedures**

**Leave of Absence**

Any student who is in good standing (passing all required courses) may, under special circumstances, take a leave of absence from the undergraduate program. A leave of absence may be granted for a maximum period of one year. Students, who are experiencing special circumstances that hinder their studies, should make an appointment to discuss their issues with the Associate Dean for Undergraduate Programs. If together the student and the Associate Dean agree that a leave of absence is appropriate, the student will be sent to the Registrar’s Office 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 Associate Dean for Undergraduate programs at least one month 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 voluntarily withdrawn from the nursing program and will have to apply for admission as a new student.

A student who wishes to apply for a leave of absence must follow the procedure outlined below:

1. Make an appointment to discuss their circumstances with the Associate Dean for Undergraduate Programs requesting permission to take a leave of absence.

2. The **Request for Leave of Absence** may be approved or disapproved based on the following criteria:
   - The student is currently passing clinical and theory coursework.
   - There is sufficient rationale for a Leave of Absence.

3. The student must plan to return to the School of Nursing within one year. The student is responsible for notifying the Undergraduate Office of her/his intent to return by the end of the semester proceeding the semester of planned return.

**Change of Part-Time/Full-Time Status**

Students may not change their program plan from part time to full time or vice versa without consultation with the Associate Dean for Undergraduate Programs. Any student requesting a change of status—part-time to full-time or full-time to part-time—must make an appointment with the Associate Dean for Undergraduate Nursing Program. All requests for change will be based upon space available in the requested course(s), and availability of courses based on curricular issues.

**Adding Courses**

After registration, during the first four class days of any semester or the first two class days of any summer session, a student may add a course with the approval of the instructor/department chair and the Associate Dean for Undergraduate Nursing Program.

**Withdrawal**

Withdrawal refers to the procedure by which students voluntarily remove themselves from some or all courses in which they are enrolled. Withdrawal from all courses constitutes withdrawal from the nursing program 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 the Academic Coordinator in the undergraduate office in the School of Nursing. When approved, the student must obtain and complete the **Student Clearance Form** from the Registrar’s Office (319L MED).

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 may withdraw from one or more courses, with the approval of the faculty(s), any time before the last official class day.

If a student withdraws before the first examination/graded assignment, the transcript will indicate withdrawal signified by the letter W.

If a student withdraws after the first examination/graded assignment, the symbol WP will be recorded for those courses in which a passing grade was earned, and the symbol WF for those in which a failing grade was earned. The symbol WF is recorded on the transcript but is not computed in the grade point average.

If a student withdraws from a required nursing course while failing, he or she may reenroll only once (see “Repeating a Failed Course”).

**Procedure for Withdrawal or Dropping a Course**

If a student withdraws from school or drops a course prior to the first examination/graded assignment, a grade of WIP or WIF will be recorded. (In case of withdrawal from school, the withdrawal will be noted on the transcript.) A student may drop a course, with the instructor’s permission, after the first examination/graded assignment with a WIP or WIF. If the student withdraws from school, a WIF or WIP will be recorded. The following procedures are to be followed:

A. The student discusses dropping with the clinical/course faculty.

B. The student makes an appointment with the Associate Dean of the Undergraduate Program to discuss the deci-
sion, explore options, and make necessary changes in the degree plan.

C. The Associate Dean notifies the Registrar and Financial Aid office of the change in status and change in the student's graduation date.

D. The student will have to have a "drop card" signed by the Course Coordinator/course faculty after the card has been provided and signed by the Associate Dean for Undergraduate Programs.

E. The completed "drop card" must be returned by the student to the Office of the Undergraduate Academic Coordinator for processing and filing.

The following procedure is to be followed by any student dropping an elective course:

A. Obtain a Drop Card from the Undergraduate Office, School of Nursing.

B. Obtain the instructor's signature on the Drop Card.

C. Return the Drop Card to the Undergraduate office.

A student may withdraw from the nursing program at any time. If a student wishes to withdraw from the nursing program, the student should consult the Associate Dean for Undergraduate Programs. Once the decision to withdraw from the nursing program is made the student must obtain campus clearance forms from the Registrar's Office and follow procedures for clearing 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.

Evaluation and Grading

All course assignments (papers, projects, exams, etc.) must represent the student's own accomplishments.

The faculty reserve the right to make additional or alternate assignments, to meet the needs of an individual student, or to assess the student's progress in the program.

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 course coordinator.

An Agreement for a Grade of Incomplete form must be signed by both the student and the course coordinator. Forms are available in the Undergraduate Nursing Office. The course coordinator may consult with the Associate Dean for Undergraduate programs regarding the effect of granting a grade of I on the student's progression in the nursing program.

Coursework must be completed by the end of the following semester. If coursework is not completed, the course grade of I will be converted to an F. 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. Therefore, if the student is not able to have the I grade converted to a letter grade before the beginning of the next semester, the student must notify the Associate Dean for Undergraduate programs to revise the student's program plan and planned graduation date.

Once the coursework is completed, the faculty member must obtain a Change of Grade Report form from the Undergraduate Nursing.

Examinations

Faculty believe course examinations serve two purposes:

1. To validate the student's knowledge of course content
2. To reinforce learning and promote understanding of content.

The following policies and procedures have been developed to accomplish these purposes.

To validate student's knowledge:

1. Faculty, as content experts, develop exam items that sample the course content.
2. The validity and reliability of each exam item are evaluated by the faculty through the use of statistical item analysis information.

Exam Policy

Exams are required. Students are expected to take examinations at the scheduled time. The student must notify the course coordinator prior to the scheduled exam time if they are unable to take the exam as scheduled. Failure to make this notification in advance will result in a "zero" for that examination. If the excuse is accepted as reasonable and necessary, arrangements will be made for a make-up examination.

Exam content is based on course, class, and clinical objectives. Included are all required readings, lecture and discussion, related material in the course packet, media presented in or required for class, material handed out or on Blackboard. Students cannot bring any items into the exam room (including purses, backpacks, cell phones, pagers, water bottles, caps, jackets, or other items). Student must wear the Health Science Center ID card clearly visible to enter the room. Pencils, erasers, and any other item needed to take the exam will be provided. If students arrive late, no extra time to complete the exam will be given. If the exam is not surrendered when time is called, a grade of zero will be assigned.

Each student is responsible for making sure that he or she has completed the exam before the exam is turned in to a proctor. Under no circumstances will a student be allowed to retrieve her or his exam materials after turning them in to the test proctor. If the exam uses a Scantron form for scoring, only the Scantron form will be used for final grade determination.

Review of a highlighted key may be provided at the discretion of the course faculty. Students may always review an examination with their course faculty by appointment following an examination.
To reinforce learning and promote understanding of content:

1. After the exam has been graded, course faculty will review the exam with students. Particular attention will be paid to those items on which students had difficulty, as demonstrated by the item analysis. The purpose of the review is to correct misconceptions and promote understanding of the content.

2. Exams may be reviewed either with the clinical group or with the total class outside regularly scheduled class time or clinical time. Exams may also be reviewed individually with course faculty.

3. Policies regarding faculty members’ review of exams with students individually are at the discretion of the faculty involved.

4. All exams/reviews must be completed within two weeks following the posting of grades for the respective exams.

**Guidelines for Written Work**

Guidelines for written work have been approved and adopted by the faculty. Every student is expected to follow these guidelines:

1. All students are required to use the official source book for citation and writing protocols. The official source book to be used at every level of the undergraduate curriculum and in the graduate program will be the most recent edition of the *Publication Manual of The American Psychological Association*, Washington, D.C.

2. Students are expected to follow the guidelines set forth in this manual; it is the only acceptable source book.

3. Students must provide two copies of submitted papers. One copy will be evaluated and returned to the student with written comments. The second copy will be retained by the School of Nursing for one year following the student’s graduation.

4. Written work should be generated from a word processor or typewriter on good quality 8 1/2” x 11” paper. Papers should be double-spaced and allow margins of one and one-half inches at the left and bottom of the page. Errors in spelling and grammar and an abundance of noticeable corrections will adversely affect the value of the paper.

**Guidelines for Documentation of Sources Used for Student Papers**

All written work must be stated in the student’s own words or must indicate clearly the portions quoted or paraphrased from the literature or spoken words of others following the guidelines presented in the *Publication Manual of the American Psychological Association*. The student is cautioned to use direct quotations sparingly. The majority of material presented within a paper should be the student’s own words. Criteria for all student papers require documentation of sources of information, research methods and results, thoughts, ideas, theories, etc. from the literature or from oral communications. The student should summarize in her or his own words the material used as documentation. Paraphrasing of literature, or merely rearranging a few of the source’s words or substituting words for a few others is not summarizing! Either the exact words from the source (quotation) or a true summary is acceptable and must be documented accordingly.

All written sources cited within the body of a paper must be listed in the reference list at the end of the paper. Examples of reference list entries for a wide variety of sources (books, chapters in edited books, journals, audiovisual media, etc.) are included in the *Publication Manual of the American Psychological Association*.

A student will be accused of plagiarism if he or she submits a paper that paraphrases and/or presents passages or ideas from writings or oral communication from others without citing the source of each or without identifying quoted material according to guidelines identified above. This Catalog addresses plagiarism in the section that addresses scholastic dishonesty under procedures and regulations governing “Student Conduct and Discipline,” Section 2.2. Any student found guilty of plagiarism is subject to disciplinary penalty ranging from written reprimand, zero on the work, failure in the course, through dismissal from the program.

**Repetition of a Failed Course**

Students must maintain an average of C in each required course in order to progress in the program. A student who earns a D, F, or WF in a required nursing 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 must request permission to repeat a clinical course that is not passed (either a D or an F, or WF constitutes a failing grade) during the semester immediately following receipt of a failing grade on a space-available basis from the Subcommittee on Admission, Progression, and Graduation (APG) of the Committee on Undergraduate Studies for the Undergraduate Program (COUS). Newly admitted students, enrolled students, and students who have withdrawn in good standing have priority over other students seeking to repeat a course.

Course and clinical faculty will review the performance of the failing student and will make recommendations to the APG based on the students 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 due to a documented pattern of significant unprofessional or unsafe performance will be dismissed from the nursing program.

Any student who wishes to repeat a clinical course should follow the procedure below:
Readmission refers to the process whereby a student who has previously attended and later withdrawn from the School of Nursing requests admission to the program. Students who apply for readmission to the School of Nursing must submit an Application for Readmission to the Subcommittee on Admission, Progression, and Graduation for the Undergraduate Program. The application form may be obtained from the Undergraduate Office. Students who have been dismissed academically may not be readmitted to the School of Nursing program for 10 years. After 10 years, a student may apply for admission to the current nursing program following the same standards as all students applying for admission.

Advisement Program for Readmitted Students

The 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 agreeing to participate in the advisement program. Failure to comply with the contract constitutes cause for dismissal.

A student who fails (D or F grade) or withdraws failing from two required nursing courses (or from the same course twice) will be dismissed from the nursing program and will be ineligible for readmission.

Readmission to the School of Nursing

Advisement

After acceptance, each student enrolled in the graduate program is assigned an academic advisor. When feasible, assignment is made on the basis of clinical area. The academic advisor serves as a resource person for the student in future program planning and academic counseling. Each student is expected to contact her/his advisor at least once a semester for academic counseling. Each student is assigned an academic advisor. When feasible, assignment is made on the basis of clinical area. The academic advisor serves as a resource person for the student in future program planning and academic counseling. Each student is expected to contact her/his advisor at least once a semester for academic counseling. Each student is assigned an academic advisor. When feasible, assignment is made on the basis of clinical area. The academic advisor serves as a resource person for the student in future program planning and academic counseling. Each student is expected to contact her/his advisor at least once a semester for academic counseling.

Independent Study

Graduate students may design their own independent study courses for one to four semester hours of credit. Guidelines for design and approval of Independent Studies are available from the Office of the Graduate Nursing Program. COGS and its subcommittee must approve the Independent Study before the student may register for the course. Courses for summer and fall must be approved in the spring; courses for spring must be approved during the fall semester. Assistance can be provided by the student’s academic advisor.

Thesis/Dissertation

The Graduate School Instructions for Preparation and Submission of Thesis, Dissertations, and Dissertation Abstracts and
forms for advisor approval are available from the Administrative Assistant. Doctoral students and students considering the thesis study should obtain a copy of the Guidelines which provide information about the thesis/dissertation process. These forms will be needed when the student decides to proceed with the thesis or dissertation. The signature of at least one faculty member who has agreed to serve as thesis advisor is required before the student may register for thesis. The doctoral student's dissertation proposal must be approved by the Nursing Committee on Graduate Studies and GSBS Graduate Faculty Council (GFC) before the student may register for dissertation.

Incomplete Grades
An “Incomplete” may be initially granted for a maximum of 3 months; at this point, a further extension must be renegotiated.

An Agreement for a Grade of Incomplete form must be signed by both the student and the faculty member. Forms are available in the Graduate Nursing Office. A student granted an Incomplete must either complete the coursework or renegotiate an extension.

Coursework must be completed within one year.

Once the coursework is completed, the faculty member must obtain a Change of Grade Report form from the Graduate Nursing Office to assign a grade.

Processes for Adding or Dropping Courses

Dropping Courses
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. If a student is enrolled in only one course and wishes to drop that course, he or she must withdraw from the School of Nursing or apply for a leave of absence.

The Official Add/Drop period is the first four days of class in session. Students who add courses should check with the Bursar’s Office to pay additional tuition and fees within the prescribed period. There is no penalty for dropping a course during the Official Add/Drop period of time. No grade will be assigned. After this period the student must obtain faculty permission to drop the course, and WP or WF will be assigned. Students withdrawing from the program will have this noted on their transcripts.

Adding Courses
Courses may be added through the Office of the Associate Dean for Graduate Nursing Program. Drop Cards may be obtained in the Office of the Associate Dean for the Graduate Nursing Program. The student is responsible for obtaining the faculty’s signature on the card, having the program plan reviewed by her/his advisor, having the advisor sign the card, and returning it to the Graduate Nursing Office which will assume responsibility for appropriate forwarding of the card to complete the procedure. The student’s program plan must be revised at this time with the faculty advisor. Students should note the last dates for adding or dropping courses that are listed in the academic calendar. The signed card must be received by the Graduate Nursing Office on or before the official date for the course to be added or dropped.

Processes for Transferring of Courses
Forms for transfer of credit are available from the Office of the Associate Dean for Graduate Nursing Program. Transfer of up to six semester hours of graduate elective credit may be approved by the student’s academic advisor. Courses must be no more than five years old. Approval of courses beyond the six semester hours or courses to be accepted in lieu of required, clinical major or minor courses must be submitted to the COGS Subcommittee on Admission, Progression, and Graduation and be approved by COGS. The student may obtain additional information about materials that must be submitted with the petition from the Associate Dean for Graduate Nursing Program. Approval of any course for transfer, prior to registration for the course, is strongly recommended.

Processes for Auditing a Graduate Course
Auditing a course requires approval by the Associate Dean for Graduate Nursing Program who will seek the consent of the instructor. When registering for such a course, the student should indicate, “Audit.”

Petitioning
Students may petition the Committee on Graduate Studies (COGS) through the appropriate Subcommittee for Admission, Progression, and Graduation (APG) for the consideration of relevant issues influencing program progression and/or completion. Students who wish to petition COGS should consult with their advisors, and then complete the Student Petition Form that is available from the Graduate Nursing Office. Decisions regarding the petition will be communicated in writing to the students.

Petitions for reconsideration of the decision of the COGS and APG subcommittee are reviewed by the Dean of the School of Nursing. The Dean’s decisions are final.
# Nursing Academic Calendar 2009–10

## Fall 2009

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday, May 01, 2009</td>
<td>Web Regular Registration Begins</td>
<td>All</td>
</tr>
<tr>
<td>Friday, May 15, 2009</td>
<td>Web Regular Registration Ends</td>
<td>Grad Students</td>
</tr>
<tr>
<td>Tuesday, June 30, 2009</td>
<td>Web Regular Registration Ends</td>
<td>Undergrad Students</td>
</tr>
<tr>
<td>Wednesday, July 01, 2009</td>
<td>Web Add/Drop/Late Registration Begins</td>
<td>Undergrad Students</td>
</tr>
<tr>
<td>Tuesday, August 18, 2009</td>
<td>Web Add/Drop/Late Registration Ends</td>
<td>Undergrad Students</td>
</tr>
<tr>
<td>Wed.--Fri., August 19–21, 2009</td>
<td>Orientation</td>
<td>New Students</td>
</tr>
<tr>
<td>Monday, August 24, 2009</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>All</td>
</tr>
<tr>
<td>Monday, September 07, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Wednesday, September 09, 2009</td>
<td>Census Date</td>
<td>All</td>
</tr>
<tr>
<td>Thursday, November 26, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Friday, November 27, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Wednesday, December 16, 2009</td>
<td>Term Ends</td>
<td>All</td>
</tr>
<tr>
<td>Friday, December 18, 2009</td>
<td>Final Grades Due</td>
<td>All</td>
</tr>
<tr>
<td>Saturday, December 19, 2009</td>
<td>Graduation (No Ceremony)</td>
<td>Grad Students</td>
</tr>
<tr>
<td>Thursday, December 24, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Friday, December 25, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Monday, December 28, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Tuesday, December 29, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Wednesday, December 30, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Thursday, December 31, 2009</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Friday, January 01, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
</tbody>
</table>

## Spring 2010

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday, November 01, 2009</td>
<td>Web Regular Registration Begins</td>
<td>All</td>
</tr>
<tr>
<td>Sunday, November 15, 2009</td>
<td>Web Regular Registration Ends</td>
<td>Grad Students</td>
</tr>
<tr>
<td>Monday, November 30, 2009</td>
<td>Web Regular Registration Ends</td>
<td>Undergrad Students</td>
</tr>
<tr>
<td>Tuesday, December 01, 2009</td>
<td>Web Add/Drop/Late Registration Begins</td>
<td>Undergrad Students</td>
</tr>
<tr>
<td>Tuesday, January 05, 2010</td>
<td>Web Add/Drop/Late Registration Ends</td>
<td>Undergrad Students</td>
</tr>
<tr>
<td>Wed.--Fri., January 06–08, 2010</td>
<td>Orientation</td>
<td>New Students</td>
</tr>
<tr>
<td>Monday, January 11, 2010</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>All</td>
</tr>
<tr>
<td>Monday, January 18, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Wednesday, January 27, 2010</td>
<td>Census Date</td>
<td>All</td>
</tr>
<tr>
<td>Monday, February 15, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Monday, March 15, 2010</td>
<td>Spring Break Begins</td>
<td>All</td>
</tr>
<tr>
<td>Friday, March 19, 2010</td>
<td>Spring Break Ends</td>
<td>All</td>
</tr>
<tr>
<td>Friday, April 23, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Wednesday, May 12, 2010</td>
<td>Term Ends</td>
<td>All</td>
</tr>
<tr>
<td>Friday, May 14, 2010</td>
<td>Final Grades Due</td>
<td>All</td>
</tr>
<tr>
<td>Sunday, May 23, 2010</td>
<td>Tentative Graduation Ceremony</td>
<td>Grad Students</td>
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</table>

## Summer 2010
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Group</th>
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</thead>
<tbody>
<tr>
<td>Thursday, April 01, 2010</td>
<td>Web Regular Registration Begins</td>
<td>All</td>
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<tr>
<td>Thursday, April 15, 2010</td>
<td>Web Regular Registration Ends</td>
<td>Graduate Students</td>
</tr>
<tr>
<td>Friday, April 30, 2010</td>
<td>Web Regular Registration Ends</td>
<td>Undergraduate Students</td>
</tr>
<tr>
<td>Saturday, May 01, 2010</td>
<td>Web Add/Drop/Late Registration Begins</td>
<td>Undergraduate Students</td>
</tr>
<tr>
<td>Thursday, May 20, 2010</td>
<td>Web Add/Drop/Late Registration Ends</td>
<td>Undergraduate Students</td>
</tr>
<tr>
<td>Mon.–Tue., May 24–25, 2010</td>
<td>Orientation</td>
<td>New Students</td>
</tr>
<tr>
<td>Wednesday, May 26, 2010</td>
<td>Term Begins (Official 1st Class Day)</td>
<td>All</td>
</tr>
<tr>
<td>Monday, May 31, 2010</td>
<td>Tentative University Holiday</td>
<td>All</td>
</tr>
<tr>
<td>Monday, June 07, 2010</td>
<td>Census Date</td>
<td>All</td>
</tr>
<tr>
<td>Friday, August 13, 2010</td>
<td>Term Ends</td>
<td>All</td>
</tr>
<tr>
<td>Tuesday, August 17, 2010</td>
<td>Final Grades Due</td>
<td>All</td>
</tr>
<tr>
<td>Saturday, August 21, 2010</td>
<td>Graduation (No Ceremony)</td>
<td>Graduating Students</td>
</tr>
</tbody>
</table>
Undergraduate Program in Nursing

- Description of Baccalaureate Prepared Nurse
- Program Objectives
- Admission and Application
- Grades and Progression
- Graduation
- General Policies
- The Generic Process
- The Flexible Process
- School of Nursing Course Descriptions

The Committee on Undergraduate Studies revised the curriculum for the undergraduate programs in the spring of 2009. The changes were approved by the Faculty Assembly and in the Fall of 2009, the changes were submitted to the Texas Board of Nursing, the Commission on Collegiate Nursing Education, and SACs for approval. Once approvals are officially obtained, the new curriculum will be implemented. Students enrolling in the nursing program after this time will be subject to the new curriculum. The current curriculum will be phased out. Therefore, students entering the program under the current curriculum may find that they will not be able to elect a part-time study option.

Description of Baccalaureate-Prepared Nurse

The baccalaureate-prepared professional nurse provides comprehensive care across the lifespan in diverse settings following a Community-Partnership model. The nurse is skilled in case and system management, as well as intra/interdisciplinary coordination of individual and population-based health care. The professional nurse is accountable for high-quality, cost-effective, accessible care in implementing and integrating primary, acute, and tertiary care for patients* as they move across settings. The professional nurse maintains a global view of health, health policy, health care, and health services. As a scholar, the nurse is capable of making valuable contributions to an understanding of health, illness, and healing.

*patient (individual, family, aggregate, community, or society)

Program Objectives

The baccalaureate program provides opportunities for the learner to develop the following behaviors:

1. Design nursing processes to provide comprehensive care across the lifespan in structured-unstructured settings, simple-complex situations, and predictable-unpredictable circumstances.
2. Create partnerships with patients* in the customized therapeutic care process to protect, promote, and restore optimal health.
3. Incorporate therapeutic communication skills when enacting professional practice.
4. Evaluate practice decisions using critical thinking.
5. Evaluate strategies to improve nursing care through scholarship.
6. Manage, lead, and collaborate with health care providers from multiple disciplines to deliver quality care across levels of prevention and within organizational structures of diverse health care settings.
7. Account for ethical and legal conduct under the standards of nursing practice.
8. Analyze issues and trends in health care that affect the health care environment, locally and globally.
9. Adhere to ethical and legal conduct that reflects the standards of nursing practice.
10. Display behaviors that demonstrate the values of a self-directed professional engaged in continuing development.

Admission and Application

Requirements for admission to the undergraduate program are detailed in the Applicant Viewbook of the School of Nursing. Prospective students must have completed 62 hours of prescribed lower-division coursework at any regionally accredited college or university prior to enrollment. Admission is competitive. Official application forms and procedures for applicants also can be found in the Viewbook. Applicants must pass a Criminal Background Check prior to admission.

In addition to the admission requirements described herein and on the School of Nursing Web site, applicants to the Flexible Process program must have met one of the conditions listed below to be eligible for consideration of admission to that program:

- RN licensed in Texas

Application for admission to the School of Nursing must be made by January 10 for fall semester admission and July 1 for spring semester admission. Admission criteria for the BSN
program are based on several factors. Applicants must successfully complete the 62 hours of Texas Core Curriculum and Field of Study Requirements for Nursing (Texas Higher Education Coordinating Board) and achieve a minimum grade point average (GPA) of 3.0 (on a 4.0 scale) for the cumulative and nursing prerequisite courses to be eligible for admission. Admission is competitive, so a higher GPA is preferred. Applicants will have to complete a pre-entry nursing assessment test (see Assessment Technologies Institute (ATI) below). Applicants must provide evidence of good written and verbal communication skills and complete a personal interview. Due to the competitive nature of the admission criteria, other criteria may also be considered, such as: race/ethnicity; bilingual ability; current rural residency; educational attainment of applicant's family; hometown or county of residence designated as medically underserved; willingness to work in an underserved and/or health professions shortage area, especially South Texas; and public/community service and volunteer activity, specifically in the health care field.

Applicants must have passed all sections of the Texas Success Initiative (TSI) and must meet minimum standards before they may enroll in upper-division coursework. Students may not enroll in upper-division nursing courses until they have completed the 62 semester credit hours of prerequisite courses and have been formally accepted by the Health Science Center.

Applicants admitted to the School of Nursing must be certified in Health Care Provider cardiopulmonary resuscitation (CPR) before registration. Applicants must provide documentation of current health insurance and have their immunizations current. Applicants must have completed their Hepatitis B immunization series before enrolling in the nursing program.

Assessment Technologies Institute (ATI)

The faculty of the School of Nursing has adopted the comprehensive program developed by Assessment Technologies Institute, LLC (ATI) as an assessment of student learning and preparation for success on the NCLEX-RN licensing examination. It is also hoped that this program will promote retention because it provides tutorial materials in book form, CD, and computerized practice tests that will help students and faculty evaluate acquisition of knowledge relative to content that may be seen in the licensing examination.

The ATI program is initiated during the application process for incoming students when the TEAS (Test of Essential Academic Skills) is administered and continues with learning assessments used throughout the program. Purchase of the ATI materials for each semester is mandatory. Completion of all ATI materials/exams as designated by each course syllabi that fall within the semester is required for all undergraduate nursing students to complete the semester course, receive a grade, and progress through the School of Nursing Curriculum. The learning and testing 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.

We have received very positive feedback from other schools in Texas and the nation on satisfaction with the ATI comprehensive program. Our goal is to assure that our students are well prepared academically and experientially for the licensing examination and practice in the rapidly changing healthcare environment.

Core Performance Standards for Evaluating Need for Special Accommodations at the School of Nursing

Nursing education and nursing practice require significant emotional, intellectual, and physical capabilities. Professional nurses must have the knowledge and the ability to address the biological, psychological, intellectual, social, cultural, environmental, and spiritual dimensions of clients. We therefore believe it is important for prospective nursing students to have a realistic view of the demanding nature of the baccalaureate nursing curriculum before they commit to this field of study and practice. The baccalaureate nursing student must be able to demonstrate attainment of those competencies needed to provide patient-centered care “built on nursing knowledge, theory and research; including the adaptation and application of knowledge derived from a wide array of other fields and disciplines.” (AACN Essentials of Baccalaureate Education for Professional Nursing Practice, Draft 18 Dec. 2007).

“Baccalaureate prepared nurses provide patient-centered care which identifies, respects and addresses patients’ differences, values, preferences and expressed needs (IOM, 2003). Patient-centered care also involves the coordination of continuous care, listening to, communicating with, and educating patients and caregivers regarding health, wellness, and disease management and prevention. The generalist nurse provides the human interface between the health care system and the patient by translating interventions, communications, and needs for patients. A broad-based bio-psycho-socio-behavioral skill set is required to fill this human interface role.” [The Essentials of Baccalaureate Education (October 20, 2008) American Association of Colleges of Nursing (AACN)]. Baccalaureate nurses are providers of direct and indirect care; designers, coordinators and managers of care; and members of the profession [The Essentials of Baccalaureate Education (October 20, 2008) American Association of Colleges of Nursing (AACN)].
Core Performance Standards*

Essential eligibility requirements for participation in the nursing program

Nursing is a practice discipline, with cognitive, sensory, affective, and psychomotor performance requirements. The following Core Performance Standards identify essential eligibility requirements for participation in the nursing program.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Standard</th>
<th>Examples of Necessary Activities (not all-inclusive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Thinking</td>
<td>Critical thinking ability sufficient for clinical judgment</td>
<td>Identify cause-effect relationships in clinical situations, develop nursing care plans</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>Interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds</td>
<td>Establish rapport with patients/clients and colleagues</td>
</tr>
<tr>
<td>Communication</td>
<td>Communication abilities sufficient for interaction with others in verbal and written form</td>
<td>Explain treatment procedures, initiate health teaching, document and interpret nursing actions and patient/client responses</td>
</tr>
<tr>
<td>Mobility</td>
<td>Physical abilities sufficient to move from room to room and maneuver in small spaces</td>
<td>Move around in patient rooms, work spaces, and treatment areas; administer cardio-pulmonary procedures</td>
</tr>
<tr>
<td>Motor skills</td>
<td>Gross and fine motor abilities sufficient to provide safe and effective nursing care</td>
<td>Calibrate and use equipment, lift and position patients/clients</td>
</tr>
<tr>
<td>Hearing</td>
<td>Auditory ability sufficient to monitor and assess health needs</td>
<td>Hears monitor alarm, emergency signals, auscultatory sounds, cries for help</td>
</tr>
<tr>
<td>Visual</td>
<td>Visual ability sufficient for observation and assessment necessary in nursing care</td>
<td>Observes patient/client responses</td>
</tr>
<tr>
<td>Tactile</td>
<td>Tactile ability sufficient for physical assessment</td>
<td>Perform palpation, functions of physical examination and/or those related to therapeutic intervention, e.g., insertion of a catheter</td>
</tr>
</tbody>
</table>


Registered Nurse licensure requirements are tied to statutes and regulations—the minimal, essential requirements for safe, competent practice. It is the School of Nursing’s responsibility to assure that this requirement is met before a graduate is certified to take the NCLEX. Texas does not have a limited licensure for the practice of nursing. Therefore, all graduates of the baccalaureate program for initial licensure must be able to practice competently and safely in all areas required in the curriculum and reflected in the School of Nursing Core Performance Standards.

The School of Nursing Undergraduate Program faculty endorse the recommended “Core Performance Standards” of the Southern Council on Collegiate Education for Nursing. The standards follow this section and an example is provided for each standard. Nursing students are required to perform each of these Core Performance Standards successfully to complete the program. These core performance standards are congruent with the Texas Board of Nursing expectations of any individual seeking initial licensure as a registered nurse, as well as with The Essentials of Baccalaureate Education (October 20, 2008) American Association of Colleges of Nursing (AACN) established by the American Association of Colleges of Nursing (AACN).
Policy on Criminal Background Checks

It is increasingly common for clinical agencies in the metropolitan San Antonio area, and health care agencies in other parts of the state, where students may pursue clinical experiences, to require that students placed in their agencies pass a criminal background check in order to practice in their facilities. In the past, a number of these agencies have done the criminal background checks on students enrolled in selected courses. In response to this policy of increasing incidence and rigor of criminal background checks used by the cooperating clinical agencies, the School of Nursing requires a nationwide database search for criminal background checks for all competitive applicants for admission, or continuing students in the School.

The Texas Board of Nursing (TBON) has the legally granted power to deny permission for applicants to take the NCLEX-RN examination if it is demonstrated that they do not have “good professional character.” 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 convicted of a felony, a misdemeanor involving moral turpitude, or engaged in conduct resulting in revocation of probation imposed pursuant to such conviction (Texas Occupations Code and Statutes Regulating the Practice of Professional Nursing, Rules and Regulations Relating to Nursing Education, Licensure and Practice). The Board has a procedure in place that requires individuals who have arrests for other than minor traffic violations to apply for a Declaratory Order (Nursing Practice Act & Nursing Peer Review Act). The information regarding Declaratory Orders and the circumstances for which Declaratory Orders must be obtained are clearly stated on the application for undergraduate students. While students are enrolled in undergraduate programs in schools of nursing they are held to the same level of accountability as Registered Nurses in the state of Texas for good professional character.

All undergraduate and graduate students, and those who are already licensed registered or vocational nurses in this state, must continue to show evidence of good professional character while enrolled as students in any nursing programs or while maintaining a license to practice.

To that end, the following policy and procedures are enforced for applicants to and students enrolled in undergraduate programs at the School of Nursing:

Applicants to the undergraduate and graduate nursing programs at the Health Science Center School of Nursing will have a criminal background check performed prior to admission. The initial screening performed by the Texas Board of Nursing (TBON).

At the time when the School of Nursing offers admission to the prospective student, the school of nursing will submit a roster of the prospective students being offered admission to TBON.

Within ten (10) business days after TBON has confirmed receipt of the roster, TBON will issue a “FAST PASS” to the school of nursing for each prospective student listed on the roster. The prospective student will use the FAST PASS to arrange an appointment with L1 Identity Solutions using the originator number provided. The prospective student will pay for the fingerprint scanning services and the cost of the background check.

Identity Solutions will complete the background check and submit the results to TBON.

- Prospective students with a clear background check will be notified by TBON of the outcome of the search.
- Prospective students with a positive background check will also be notified by TBON and request will be made that the prospective student submits a petition for a “Declaratory Order.”
- The declaratory order is a public record and will be shared with the school.
- If the criminal issue identified in the initial background check is beyond the delegated authority of TBON Operations Department to review, the issue will be transferred to the Enforcement Department for review. At that time, the prospective student will be billed an extra fee to cover the costs of the higher-level review.
- The prospective student with a positive history must have a declaratory order prior to being admitted to the nursing program.

If the fingerprint scan is rejected for some reason, TBON will notify the prospective student and request a repeat scan be completed.

- Prospective students are NOT to call TBON requesting results; you will have to wait for results. If TBON does not receive results from L1, TBON will notify the school by means of an updated roster of those who have NOT completed the process. The school receives updated rosters weekly.

Students who complete a criminal background check through TBON prior to entering the nursing program will not have to complete another check upon graduation and application for licensure. However, some clinical agencies require that active student must complete their specific background check prior to being allowed to complete a clinical practicum at that agency. If that is the case, the requesting agency will bear the cost of the new check.

1. Prospective students with a positive criminal history will not be admitted to the nursing program without a declaratory order from TBON.

Continuing students (those enrolled with a clear background check) who are charged or convicted of an offense while enrolled in the nursing program will be required, at the time of the offense, to notify the Associate Dean for Undergraduate Programs immediately and to petition TBON for a declaratory order. The student will be required to take a
leave of absence while obtaining a Declaratory Order. Failure to report any new incidents following the initial background check to the School may potentially cause the student to be released from the program. The Board investigates each incident based on its own information, but many of the factors used by the Board can be viewed at: http://www.bne.state.tx.us/disciplinaryaction/discp-guide.html

2. Additional criminal background checks or screening activities (including drug screens) may be required as a result of changes to clinical agency contracts held between agencies and the School of Nursing while students are enrolled in the School of Nursing. Clinical agencies may also perform additional Criminal Background Checks according to their policies.

3. Costs for conducting the initial required criminal background check will be the applicant’s/student’s responsibility.

4. Refunds for tuition and fees due to students because of their leave of absence shall follow the established Health Science Center policy.

Non-Degree Students
Non-degree student status may be granted to an individual who wishes to enroll in a course(s) presented by the School of Nursing without entering a degree program. Those who are eligible for Non-Degree Student Admission include:

- a graduate of a baccalaureate program in nursing, or
- a student currently enrolled and in good standing in a baccalaureate nursing program at another institution.

Non-degree Students will be allowed to take a maximum of 12 semester hours of courses. It is the student’s responsibility to determine if the course is transferable to her or his school. Credit for these courses toward a Bachelor of Science in Nursing degree from the Health Science Center will be considered only if the student is subsequently admitted to the program.

Currently enrolled students have priority for courses. Non-degree Students are admitted on a first-come, first-served basis for spaces remaining in a course. Final decisions on admission will be made by the Committee on Admission, Progression and Graduation for the Undergraduate Program.

Transfer Students
Individuals who wish to transfer into the BSN program of the School of Nursing must have completed the 62 hours of pre-nursing coursework required by this institution and accumulated a minimum grade point average of 2.5 in required courses and an overall grade point average of 2.5. 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 School of Nursing. Application deadlines are January 10 (fall) and July 1 (spring). The GPA of transfer students must be competitive for the current incoming class.

Students transferring from private or out-of-state colleges who have not been required to meet ACCUPLACER requirements must take and pass the ACCUPLACER test prior to the accumulation of 9 or more credit hours at the School of Nursing. (See “General Academic Policies.”) Information and procedures for applying as a Non-degree Student or a Transfer Student may be obtained by contacting:

UT Health Science Center San Antonio
Office of Student Services
Nursing Admissions
Mail Code 7702
7703 Floyd Curl Drive
San Antonio, Texas 78229-3900
210-567-2670

Registration
In order to hold their place in the class, entering students must register and pay tuition and fees on the date of official registration listed in the Academic Calendar. Continuing students will not be registered after the fourth day of a regular session without the permission of the Associate Dean. Registration for summer session(s) is during a registration period in the spring.

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 Credit (CR) or Fail and no letter grade is assigned. All required nursing courses in the Bachelor of Science in Nursing program (Generic Process and Flexible Process) 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.

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 (70–79)
- D = 1 point (60–69)
- F = 0 points (59 or below)

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 nationally normed tests throughout the curriculum and to make satisfactory scores on
such tests. In the last semester of the curriculum, students will be required to take a comprehensive exam and to make a satisfactory score on such an exam prior to graduation and/or taking the licensing exam.

**Scholastic Probation**

A student whose GPA falls below 2.0 but who 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.

A student who fails or withdraws failing from two required nursing courses (or from the same course twice) 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.

**Intrasemester Report**

At the middle of each semester, the faculty report to the Associate Dean for Undergraduate Nursing Program all students doing work below the passing grade. The Associate Dean, in turn, sends notification to the student(s).

**Semester Reports**

Grade reports are available to students, at the end of each semester, via “Inside.UTHSCSA” — the university’s portal.

**Leave of Absence**

Under special circumstances, the student who is in good standing may be granted a leave of absence from the undergraduate program for a maximum period of one year, upon written application of the student. A leave of absence indicates that the student will be permitted to reenroll within a one-year time limit. A student who does not return within the time limit must apply for readmission. When approved by the associate dean, the student must complete a Student Clearance Form at the time of withdrawal. The form is available from the Registrar’s Office (319L MED).

**Repetition of a Failed Course**

A student may repeat a course in the School of Nursing in which he or she has made less than a C, failed, or from which he or she has withdrawn failing. Students newly admitted and enrolled students have priority consideration for admission to the course over students desiring to repeat the course. If the course is prerequisite to the next clinical course, it must be repeated with at least a C before the student proceeds to the next course.

If a student is allowed to repeat a course failed in the undergraduate program, both clinical and theory are required to be repeated and the official grade recorded is the last one made. The official grade will be the one used in computing a student’s grade point average, and although the failing grade will be on the permanent record, it will not be included in computation. A student may not repeat a course for credit in which the final grade was C or better.

**Changing Course Registration To or From Pass/Fail**

If the course has an option for a pass/fail or letter grade, the student may change her or his registration from a pass/fail basis to a letter-grade basis, or from a letter-grade basis to a pass/fail basis, not later than the end of the official drop period which is the first four weeks of the regular semester and the first two weeks of the summer session.

**Correspondence Courses**

Students wishing to enroll for correspondence courses and/or courses in another institution while enrolled in the School of Nursing must obtain permission from the Associate Dean for such courses to be accepted for credit by the School of Nursing. Students must be in good scholastic standing and must have demonstrated their ability to carry the increased course load to receive such permission. Not more than 12 hours of the 122 hours required for the degree may be taken by correspondence.

**Transferring Grades**

An applicant, whether a new student or a former student of the School of Nursing who has attended another college, must submit all previous college records when applying for admission to the School of Nursing. Transferred grades are recorded as submitted. Former students who attended another institution are responsible for providing a transcript of their records to the School of Nursing before reentering.

**Graduate Credit**

Undergraduate students may be admitted to graduate courses in nursing only in the last semester of the senior year. Three 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 may be applied toward the graduate degree only after the student has been admitted to and is enrolled in the graduate program.

**Auditing**

Students may audit nursing courses only with the permission of the instructor teaching the course. Fees for auditing nursing courses are required of students who are not enrolled full-time. Students who are enrolled less than full-time in nursing courses may audit additional nursing courses for a fee of $5 per course. Individuals who are not enrolled in nursing courses may audit nursing courses for a fee of $25 per course. Stu-
Transfer of Upper-Division Electives

Upper-division nursing electives taken through another NLN- or CCNE-accredited baccalaureate program may be accepted for credit. The course must be approved by the Committee on Admission, Progression, and Graduation for the Undergraduate Program before credit is granted. Grades earned for upper-level electives can be transferred only to the School of Nursing for credit.

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 in San Antonio. Courses completed through credit by examination on this campus will be considered to have been completed in residence.

Procedures for Degree Candidates

Degree candidates who are taking upper-division electives off campus must supply the School of Nursing with a transcript from each school where work is done. Transcripts must be submitted as each course is completed.

A candidate for a degree must (1) register in the semester in which the degree is to be received and (2) file a degree application form with the Office of the Registrar during the semester prior to the term in which the degree is to be granted.

It is a requirement that a candidate for the degree be enrolled in the semester or summer session in which the degree is awarded. Candidates who have completed requirements at the Health Science Center but must complete elective requirements at another university during the final term may register in absentia for the purpose of having the degree conferred.

Graduation with Honors

Students whose upper-division grade point average is above 3.4 will be awarded the degree with honors. The honors designation is noted on the diploma and the transcript, and honor students receive special recognition at graduation ceremonies.

Honors designations are based on the following scale:

- 3.4–3.59 Cum Laude
- 3.6–3.79 Magna Cum Laude
- 3.8–4.0 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) administered by the Board of Nurse Examiners for the state of Texas. 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 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, 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?

If the answer to any of these questions is “yes,” the student must contact the Board of Nurse Examiners.

- The student will receive information about Initial Licensure and instructions about FBI background checks through the School of Nursing.
- All 122 hours for the degree must be completed before the student is eligible to take the NCLEX-RN.
- 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.

General Policies

Student Employment

The nursing program permits students to be enrolled full-time or part-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 in either long-session semesters or summer terms.

Students may be employed as patient care 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, 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 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, as persons who are convicted of violation of the Nurse Practice Act may not be eligible to take the NCLEX-RN 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 patch or student name badge at their place of employment.

Professional Liability Insurance

All students enrolling in nursing courses will be required to show evidence of professional liability insurance coverage in at least a minimum amount of $1,000,000 limit each claim and $3,000,000 limit aggregate in order to complete registration. Such insurance must be purchased through the university at the time of registration. Coverage is required from the student’s first day of class throughout her or his program of study. Liability insurance purchased through the university is applicable to the student role only.

Change of Address

If a student, after registration, changes her or his home or campus address, he or she is expected to notify the Office of Student Services (or go to http://inside.uthscsa.edu) and the Undergraduate Office in the School of Nursing. The student will be held responsible for any communication from the school offices sent to the address last given.

Full-Time Student Status

A full-time undergraduate student is one who is registered for 12 or more semester credit hours during a regular semester. Full-time enrollment is six or more semester credit hours in one summer session or nine semester credit hours in two sessions of one summer.

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.

Classes and Clinical Practicum

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 the completion of the Generic Process curriculum or Flexible Process curriculum.

Organizations

Organizations for students of the School of Nursing as well as groups whose membership is open to all Health Science Center students are described in the Student Guide.

Expenses

Approximate costs are available through Office of Student Services.

Curriculum

The undergraduate nursing curriculum is completed in two phases, the first of which is the 62 semester hours of basic liberal arts required for admission to the School of Nursing (Pre-nursing Course Requirements).

The second phase encompasses the major in nursing and is presented in the junior and senior years. The curriculum includes 51 semester hours of required nursing courses and 9 semester hours of electives. Three of the 9 semester hours must be in nursing while the remaining 6 semester hours may be in nursing or any other upper-level subjects that are approved by the School of Nursing and awarded by an accredited four-year institution of higher education. (These 9 hours may be taken on a pass/fail basis.)

Students may complete the 51 hours of required nursing courses through the Generic Process or the Flexible Process. Successful completion of either pattern and the 9 hours of electives results in the awarding of the Bachelor of Science in Nursing degree. Both the Generic Process and Flexible Process can be taken either full-time or part-time; however, the School of Nursing reserves the right to revise curriculum to remain current with nursing practice standards. Such revisions may impact the availability of part-time options during times of transition.

Time Limit

Undergraduate students must successfully complete all coursework toward the degree within four years of the date of initial enrollment in the program.

The Semester Credit Hour

The unit measure for credit purposes is the semester credit hour. One semester credit hour of credit is given for each one hour of class or three hours of laboratory/clinical lab experience per week per semester, with the exception of the sum-

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mer session during which the class and clinical hours are concentrated but provide equivalent course time.

Course Numbers

NURS designates all required nursing courses given in the School of Nursing. NURE designates nursing electives. A four-digit number follows: the first digit indicates the earliest semester at which a course may be taken or at which a course is usually taken; the second digit indicates the semester hours credit given for the course; the last two digits are the course identification number.

Independent Study

Undergraduate nursing 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 undergraduate or graduate program in the Student Information Office in the School of Nursing. The Committee on Undergraduate Studies or Committee on Graduate Studies must approve the Independent Study before a student can register for the course. Deadlines for submission of Independent Studies are April 15 for summer and fall semesters and October 15 for spring semesters.

The Generic Process

This curricular pattern is designed for the majority of the student body who enter the School of Nursing without prior nursing knowledge or skills. Completion of the program usually requires four semesters of full-time study.* Part-time enrollment in the program is an option although changes in curriculum may limit continued offerings of required courses as current curriculum is phased out and new courses are initiated. Be sure to consult with the Associate Dean for Undergraduate Programs regarding planning for part-time study.

*Courses listed in this Catalog are subject to change without notice. Required courses are scheduled to be offered each fall and spring semester. Electives are offered each semester and summer session.

<table>
<thead>
<tr>
<th>Program Plan (Full-time Study)**</th>
<th>Semester III</th>
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<tbody>
<tr>
<td>Semester I</td>
<td>Semester Hours</td>
</tr>
<tr>
<td>NURS 3209 - Introduction to Professional Nursing</td>
<td>2.0</td>
</tr>
<tr>
<td>NURS 3312 - Strategies for Professional Nursing: Pharmacotherapeutics</td>
<td>3.0</td>
</tr>
<tr>
<td>NURS 3802 - Strategies for Professional Nursing: The Nature of Health Transitions</td>
<td>8.0</td>
</tr>
<tr>
<td>Semester II</td>
<td></td>
</tr>
<tr>
<td>NURS 3203 - Strategies for Professional Nursing: Research</td>
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</tr>
<tr>
<td>NURS 3520 - Strategies for Professional Nursing: Mental Health Transitions</td>
<td>5.0</td>
</tr>
<tr>
<td>NURS 3525 - Strategies for Professional Nursing: Childbearing Families</td>
<td>4.0</td>
</tr>
<tr>
<td>NURS 4425 - Strategies for Professional Nursing: Childbearing Families</td>
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</tr>
<tr>
<td>NURS 4410 - The Nurse as Professional: Leader-Manager</td>
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</tr>
<tr>
<td>NURS 4203 - The Nurse as a Professional</td>
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</tr>
<tr>
<td>NURS 4614 - Strategies for Professional Nursing: Major Health Transitions</td>
<td>6.0</td>
</tr>
<tr>
<td>NURS 4514 - Strategies for Professional Nursing: Community as Partner</td>
<td>5.0</td>
</tr>
<tr>
<td>Upper-division Electives (3 semester hours must be in nursing)</td>
<td>9.0</td>
</tr>
<tr>
<td>Total</td>
<td>60.0</td>
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</tbody>
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**Curriculum subject to revision and approval by the Board of Nursing Examiners for the State of Texas

School of Nursing Course Descriptions

Required Courses

Course descriptions

- NURS 3209 - Introduction to Professional Nursing
- NURS 3312 - Strategies for Professional Nursing: Pharmacotherapeutics
- NURS 3802 - Strategies for Professional Nursing: The Nature of Health Transitions
- NURS 3203 - Strategies for Professional Nursing: Research
- NURS 3520 - Strategies for Professional Nursing: Mental Health Transitions
- NURS 3610 - Strategies for Professional Nursing: Mental Health Transitions
- NURS 4425 - Strategies for Professional Nursing: Childbearing Families
- NURS 4435 - Strategies for Professional Nursing: Childbearing Families
- NURS 4410 - The Nurse as Professional: Leader-Manager
- NURS 4514 - Strategies for Professional Nursing: Community as Partner
- NURS 4614 - Strategies for Professional Nursing: Major Health Transitions

Electives

Generic students must take nine (9) hours of upper-division electives, with three (3) hours in nursing.

School of Nursing Course Descriptions
The Flexible Process

The Flexible Process is an alternative approach within the undergraduate program to acquiring the Bachelor of Science in Nursing degree (BSN). This track is restricted to Registered Nurses. The content of the Flexible Process is the same as that of the Generic Process, but the material has been reorganized to facilitate concentrated study. The student enrolled for full-time study will find it difficult to maintain full-time employment. RNs will receive 30 semester hours nursing course credit.

Through the Flexible Process, the student has the option of taking coursework and/or acquiring credit through Credit by Examination process (CBE). Credit by Examination is validation of the candidate’s competencies and awarding of course credit based upon demonstration of satisfactory achievement of course objectives by means of examination and, for clinical courses, completion of specified clinical activities.

All courses in the Flexible Process RN track may be completed by CBE.

Eligibility:

Students who are accepted into or registered for the undergraduate Flexible Process options for the Early Master’s program may take CBE if the following conditions are met:

• All prerequisite courses being challenged have been completed. Students have not been enrolled in the specific course previously.
• Students have not failed the specific CBE or course previously.

Registration for CBE:

The student must register for the course in sequence designated in the program/catalog.

Process for completing CBE:

Students wishing to take CBE will:

• Consult with the Associate Dean for Undergraduate Programs no later than midterm of the semester in which the examination will be taken.
• Register for the examination with the Office of Associate Dean for Undergraduate Programs Academic Coordinator.
• Register for the official course for the following semester.
• Submit the non-refundable fee to the Academic Coordinator in the Office of the Associate Dean for Undergraduate Programs at the time of registration for CBE (NOTE: fees are subject to change without notice).
• Obtain study/course materials to include:
• General Web syllabus, which is available under schedules and syllabi for the Flexible Process program on the nursing home page.
• Course packets, which are available from the Office of the Associate Dean for Undergraduate Programs. There is a printing fee.
• Prepare for and take the examination as scheduled.
  • CBE schedules are posted under schedules and syllabi for the Flexible Process Program during the semester proceeding the semester during which the examination will be taken.
  • All CBE activities for a course (examination, assignments/papers, and clinical activities, if applicable) must be completed successfully as scheduled before credit is awarded for the CBE.

Grading for CBE:

• Examination grades will be available on the day of testing or e-mailed to students within 48 hours of taking the examination.
• Final course grades are reported to the Office of the Associate Dean for Undergraduate Programs within 2 weeks from the date when the final element of the CBE was submitted.
• The official grade for the CBE will be posted to the student’s transcript during the semester following successful (C or better grade) completion of CBE.
• If unsuccessful (grade of D or F) the student must take the course and pay tuition. If the course is not completed within 12 months following the failure on CBE, the CBE grade will be officially recorded on the student’s transcript.
• CBE cannot be repeated.
• Grades are final. Because CBE is an assessment of knowledge and competencies acquired elsewhere, no instruction beyond the examination blueprint and an outline of course requirements will be provided to CBE candidates.

Part-time enrollment in the program is an option. All work toward the degree must be completed within four years of the date of initial enrollment in the program.

Program Plan (Full-time Study)

<table>
<thead>
<tr>
<th>RN</th>
<th>Semester I (senior year)</th>
<th>Semester II (senior year)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>NURS 4212 - Professional Nursing: Health Assessment</td>
<td>NURS 4203 - The Nurse as a Professional</td>
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<td>NURS 4214 - Strategies for Professional Nursing: Research</td>
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<tr>
<td></td>
<td>NURS 4512 - Strategies for Professional Nursing: Health Promotion</td>
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<tr>
<td></td>
<td>NURS 4312 - The Nurse as Professional: Leadership (RNs only)</td>
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NURS 4310 - Strategies for Professional Nursing: The Family Across the Lifespan
NURS 4514 - Strategies for Professional Nursing: Community as Partner

Note: 3 credits nursing elective and 4–5 credits non-nursing electives are also required for graduation. Students have the option of taking these fall, spring, or summer semester(s).

Required Courses

Course descriptions

The curriculum is subject to revision and approval by the Board of Nursing Examiners for the state of Texas.

- NURS 4203 - The Nurse as a Professional
- NURS 4212 - Professional Nursing: Health Assessment
- NURS 4214 - Strategies for Professional Nursing: Research
  - NURS 4310 - Strategies for Professional Nursing: The Family Across the Lifespan
- NURS 4312 - The Nurse as Professional: Leadership (RNs only)
- NURS 4410 - The Nurse as Professional: Leader-Manager
- NURS 4512 - Strategies for Professional Nursing: Health Promotion
- NURS 4514 - Strategies for Professional Nursing: Community as Partner

Electives (NURE)

Eight (8) hours of upper-division electives are required for RNs in the Flexible Process to complete the program. At least three (3) hours must be in nursing. Seven (7) hours of upper-division electives are required for LVNs, three of which must be in nursing.

Although electives are available each semester and summer session, offerings vary depending upon expressed student interest and faculty availability.

Elective offerings will be published each semester/session.

Electives may be taken on a pass/fail basis. Challenge examinations are not offered for electives.

Course descriptions

- NURE 3010 - Mentored Research Practicum: Health Transitions
- NURE 3011 - Mentored Research Practicum: Chronic Health Transitions
- NURE 3012 - Mentored Research Practicum: Health and Illness
- NURE 3013 - Mentored Research Practicum: Children and Families
- NURE 3014 - Mentored Research Practicum: Community
- NURE 3015 - Mentored Research Practicum: Policy
- NURE 3016 - Bridge Course University Hospital
- NURE 3090 - Topics of Special Interest in Nursing
- NURE 3091 - Independent Study in Nursing
- NURE 3105 - Laughter is the Best Medicine: Interdisciplinary Elective about Humor, Healing, and Health Care
- NURE 3115 - Applications of Research in Nursing: Mentored Research Scholars
- NURE 3215 - Teaching Scholars Program
- NURE 3260 - Home Health Nursing the Adult and Pediatric Client
- NURE 3301 - Perioperative Nursing I
- NURE 3304 - Contemporary Issues Related to Death and Dying
- NURE 3305 - Topics of Special Interest to Nursing: Scholarly Writing for Nurses
- NURE 3306 - Introduction to the Role of Childbirth Educator
- NURE 3309 - Renal Disease, Transplantation, Complications
- NURE 3366 - Interdisciplinary Course on Minority Women’s Health
- NURE 3369 - Hispanic Health Concerns: A Nursing Perspective
- NURE 3373 - Oncology Nursing
- NURE 3383 - Nursing Care of Children with Developmental Disabilities in the Community
- NURE 3356 - Nursing Interventions in Pain
- NURE 3310 - Introduction to Computing in Health Care
- NURE 3312 - Theoretical Foundations of Complementary and Alternative Therapies in Nursing
- NURE 3316 - Chronic Respiratory Illness in Children and Adults
- NURE 3321 - Animal-Assisted Activities and Therapy in Health Care
- NURE 3324 - Speaking Spanish to Patients
- NURE 3365 - Understanding Health Disparities and Caring for Racial and Ethnic Minorities
- NURE 3384 - Complementary/Alternative Therapies in Nursing
- NURE 3385 - Speaking in Spanish
- NURE 3386 - Environmental Health
- NURE 3387 - Care of the Client with HIV
- NURE 4302 - Flex Bridge in Critical Care
Graduate Program in Nursing

- Administration
- Admission and Application
- Grades and Progression - (MSN and PhD)
- Progression in the Graduate Program
- Readmission
- General Policies for Graduate Nursing Program
- Graduate Programs in Nursing

The introductory sections of this Catalog apply to all schools. Students are also responsible for all information contained in those sections.

The Health Science Center’s Graduate Program in Nursing is designed to provide qualified individuals with educational opportunities which will enable them to make significant contributions to the improvement of health care, the science of nursing, and the advancement of nursing practice. The purpose of this program, leading to the degrees Master of Science in Nursing or Doctor of Philosophy, is to provide nurses with opportunities to become prepared for advanced clinical practice, for roles as educators or administrators, or as clinical nurse scientists.

Administration

The Graduate Program in Nursing is administered through the Health Science Center’s Graduate School of Biomedical Sciences. While faculty of the School of Nursing determine the curriculum, the graduate nursing program shares common policies related to students’ admission, progression, and graduation with other academic programs in the Graduate School which are within the administrative responsibility of the Dean of the Graduate School and the Graduate Faculty Council.

The Committee on Graduate Studies (COGS) of the nursing program has responsibility to the Graduate School of Biomedical Sciences in administrative policy matters and to the School of Nursing relative to curriculum. The committee is responsible for recommending the admission of students to the nursing program, determining the curriculum, attesting to the eligibility of students for admission to candidacy for a degree, and certifying to the Graduate Faculty Council that students have fulfilled the requirements for the awarding of the degree. The Graduate Faculty Council establishes and maintains academic policy and makes recommendations to the President for the awarding of all master’s and doctoral degrees.

Consistent with the philosophy of the School of Nursing, graduate nursing education at The UT Health Science Center San Antonio is designed to offer professional nurses the opportunity to prepare themselves to assume leadership roles in patient care activities, teach in schools of nursing, manage patient care services within institutions or health care agencies, and conduct independent research. Preparation for the master’s degree is available through two options: the registered nurse with a baccalaureate in nursing will proceed with the master’s program. The registered nurse with an associate degree in nursing or a diploma in nursing may qualify for admission to a special early master’s option, the ADN/Diploma—MSN. The doctoral degree is a post-baccalaureate degree program.

In order to provide nurses with the opportunity to develop the high level of competence and expertise necessary for leadership positions, the graduate nursing curriculum includes content in the theory and practice of nursing, development of skills in the research process, consideration of nursing’s present and future role in the health care system, and analysis of the social and ethical problems associated with professional issues. Through the curriculum, nursing educators, administrators, researchers, and consultants are being provided with the opportunity to practice their unique skills in a variety of settings.

Admission and Application

Requirements for admission to the graduate program are detailed in the Applicant Viewbook of the School of Nursing. Official application information and deadlines for submission also are included in the Viewbook.

Admission Criteria

New Admission Criteria—Effective Year 2010–2011

Admission to the Doctor of Philosophy in Nursing Program is based on a holistic review of applicants. Consideration of multiple criteria is used to determine admission. The School of Nursing faculty believe that the student-centered learning environment is enhanced by differences in educational backgrounds, language and expression, social, ethnic, and racial diversity of students. From such differences evolve innovation of thought and perspective, a synergy of talent and capability, and, ultimately expansion of our intellectual capacity and range of problem-solving possibilities. Building and maintaining an academic environment which is inclusive to all will help insure the future diversity of our academic program and profession.
Factors that are included in consideration of applicants are:

- Bachelors or Masters in Nursing
- Basic statistics course
- Licensure as a Registered Nurse in Texas
- Ability to obtain professional liability insurance coverage
- Current CPR certification
- Current immunizations
- Current health insurance
- Basic computer skills
- Ability to pass criminal background check
- Professional goal statement/essay
- Personal Interview
- Grade Point Average of “B” (3.0 on a 4.0 scale) or higher preferred
- 1,000 on the Graduate Record Examination General (Aptitude) Test (verbal and quantitative sections) preferred, or 400 on the Miller Analogies Test (scores not more than 5 years old)
- Four (4) professional references who can evaluate applicant’s qualifications for doctoral education in nursing
- Race/ethnicity
- Employment history/work experience
- Educationally &/or economically disadvantaged
- Additional language proficiencies


Statement of Goals and Research Interests

You are asked to write a two-part essay. Please address each bulleted item using the requested format.

Part I – The Admissions Committee is interested in your background and preparation for doctoral study.

- How has your background prepared you for doctoral study?
- What personal and/or academic strengths and weaknesses do you have that may affect your doctoral studies?
- Discuss how having a PhD in Nursing degree fits your career plan.

The PhD in Nursing program at this School of Nursing prepares clinical nurse scientists. The PhD is a research degree. Having a research idea is an important first step. You may change, modify or enlarge your topic during your program of study.

Part II – Tell the Admissions committee about your research interests.

- Prior work, if any, on the topic of interest.
- Any relevant readings (literature) on your topic that would be important to your research.
- Visit the School of Nursing Web site to learn about the research interests of our faculty. Identify any faculty whose research fits with your research interest (http://nursing.uthscsa.edu/LandingFaculty.aspx).
- Attach any of your published abstracts/publications.

The essay should be approximately 2 double-spaced, typed pages. Please include any references on a separate page.

Grades and Progression — (MSN and PhD)

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.

Other symbols used in reporting the standing of students in their classes are: S=satisfactory; U=unsatisfactory; Q=course dropped, no penalty; WP=withdrawal from course passing; WF=withdrawal from course failing; I=incomplete; IP=in progress (thesis/dissertation courses only). AU records an audited course.

Courses in which a student receives a D or F will not be counted toward the total number of courses and/or hours required for a graduate degree in 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 (70–79)
- D = 1 point (60–69)
- F = 0 points (Below 60)

Repetition of a Course

Credit for courses in which a D or F is received may be obtained only by repetition of the course. If a course is repeated, only the second grade will be used in calculating the cumulative grade point average. Courses which the student completes with a C or higher cannot be repeated. No course can be repeated more than one time.

^Top
Incompletes

With the permission of the course instructor, an Incomplete (I) may be recorded if a student has not completed all assignments before the conclusion of the course. Prior to the recording of an Incomplete (I), a written agreement must be signed by the instructor and student designating a specified time period (initially, 3 months and not to exceed one year total) in which the I will be removed. Should the student fail to meet the terms of the agreement, the grade will be changed to an F. Registration in a sequential course requires that an Incomplete be removed.

Satisfactory-Unsatisfactory Computations

Courses selected as electives by students may be taken on a Satisfactory-Unsatisfactory basis, with the permission of the instructor. If the course taken on this basis is passed, the symbol S will be recorded on the transcript; if unsatisfactory, the symbol U is recorded. S or U grades are not included in the computation of the grade point average.

Thesis and Dissertation Course Reporting

Thesis and dissertation courses will be reported as In Progress (IP) until the work is completed, at which time they will be reported as Satisfactory or Unsatisfactory. Thesis and dissertation courses are not counted in the grade point average.

Auditing

Nursing graduate students may audit nonclinical courses taught by the Nursing faculty with the approval of the instructor and the Associate Dean for Graduate Nursing Program providing there is space available after registered students have been accommodated. 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. There is a fee for audited courses.

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.

Semester Reports

Grade reports are sent to all students at the end of each semester.

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) if conditionally admitted;

• receive no more than one C in clinical major courses;

• maintain a minimum cumulative grade point average of B (3.0) for all courses taken while enrolled in the graduate program; and

• maintain a minimum cumulative grade point average of B (3.0) for all nursing courses taken while enrolled in the graduate program.

• Should a student fail to meet criteria, a, b, or c for continuance in the program, her/his progress will be reviewed by the Committee on Graduate Studies 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 Graduate School of Biomedical Sciences.

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 master’s program 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 two consecutive terms must apply for readmission unless they were previously granted official permission for leave of absence.

Those seeking readmission are subject to all requirements, procedures, and acceptance considerations outlined in this Catalog.

General Policies for Graduate Nursing Program

Full-Time Student Status

Full-time student status in the Master of Science in Nursing program is nine (9) semester hours of coursework in a regular semester, or six (6) semester hours of summer.

Uniforms

Graduate students are responsible for purchasing uniforms and laboratory coats. Name badges are issued by the Office of Student Services. Laboratory coats may be purchased from the Health Science Center Bookstore.

Change of Address

If a student’s home or campus address changes after registration, that student is expected to notify the Office of Student Services and the Office of the Graduate Nursing Program. Students will be held responsible for any communication from school offices sent to them at the address last given.
Teaching Assistants

Opportunities are available for graduate nursing students enrolled part-time to work as teaching assistants in the School of Nursing Learning Laboratory. Teaching assistants work with undergraduate students, assisting them to learn technical skills. Interested applicants should contact the School of Nursing for additional information.

Transfer of Credit

Academic work for the Master of Science in Nursing is usually completed within The UT Health Science Center San Antonio. However, students may, with the approval of their advisors, 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 degree. Additional graduate courses may be transferred from other accredited institutions upon the approval of the Committee on Graduate Studies, with the number not to exceed an additional six semester credit hours. The doctoral program provides special opportunities for an increased number of hours of transfer credit.

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 her/his advisor with an official course description from the Catalog and must ascertain 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.

Upper-Division Coursework

The maximum number of credit hours of upper-division level coursework which may be included is three, and such undergraduate coursework must be completed within the School of Nursing. This coursework is for elective credit only.

Correspondence Courses

Courses completed by correspondence are not accepted for graduate credit.

Residence

Each degree candidate must complete two semesters of full-time study, or the part-time equivalent, in residence at the Health Science Center. No student may receive advice and assistance from a member of the faculty in the preparation of the thesis or dissertation without being registered (if necessary for multiple semesters) for the thesis/dissertation course.

Scholastic Probation

A student whose cumulative grade point average or nursing grade point average falls below 3.0 will be placed on probation and warned that continuation in the graduate program is in jeopardy.

The probation period shall extend no longer than two consecutive semesters of enrollment. No more than one probationary period shall be permitted. NURE (elective) courses may not be taken during the probationary period, and the student may not drop any course after the first class day.

To be removed from probation, the student must achieve a 3.0 cumulative grade point average by the completion of the probationary period. Failure to accomplish the required average will result in the student’s dismissal from the program.

The progress of students on probation will be reviewed by the Committee on Graduate Studies each semester. A student on 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 may terminate a student’s enrollment at any time if the student does not meet the criteria for continuance in the program.

Adding Courses

After registration, during the first four days of any semester or the first two class days of the summer session, a student may add a course with the approval of the instructor and Associate Dean for Graduate Nursing Program. After the add-course card has been completed, it must be submitted to the Registrar for recomputation of tuition and fees.

Dropping Courses

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.

With the approval of the instructor and the Associate Dean for Graduate Nursing Program, a student may drop a course at any time before the last official class day in the semester if a passing grade has been maintained. The symbol WP will be recorded. Courses dropped by a student who has not maintained a passing grade will be noted on the transcript with the symbol WF. A student may not drop a course if all assignments have been submitted to the faculty for grading, nor may a student drop a course for which an Incomplete (I) has been assigned.

Withdrawal

Permission for withdrawal from the Graduate Program in Nursing may be granted by the Associate Dean for Graduate Nursing Program on written request by the student, and after consultation with the student’s faculty advisor. In the case of withdrawal before the end of the semester or the summer session (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 or summer session, the appropriate grading symbol, A through F, will be recorded for each completed course and WP or WF for each
course not completed. The student must meet with the Associate Dean for Graduate Nursing Program to initiate the withdrawal process. Any student who withdraws at any time must complete a Student Clearance Form at the time of withdrawal. A student who discontinue class attendance in any course without completing formal drop or withdrawal procedures shall receive a grade of WF for the 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.

Completion of Clinical Preceptorship
Clinical preceptorships, whether elective or required for the clinical major, must be completed during the semester in which the course is taken.

Leave of Absence
Permission for a leave of absence from the Graduate Program in Nursing for a maximum period of one year may be granted upon written application of the student. To be eligible to request a leave of absence, a student must have maintained a 3.0 grade point average, must have resolved all grades of Incomplete (I), and must not have dropped any course(s) with a WF. The student must meet with the Associate Dean for Graduate Nursing Program to initiate the Leave of Absence process. The student must obtain and complete a Student Clearance Form from the Registrar’s Office (319L MED). A leave of absence indicates that the student will be permitted to reenroll within a one-year time limit. Students who do not return within the time limit must apply for readmission.

Student Responsibility
Students are held responsible for knowing degree requirements and for enrolling in courses that fit their degree programs. Students are likewise held responsible for knowing the Graduate School of Biomedical Sciences and School of Nursing program regulations with regard to the standard of work required for continuance in the graduate programs. Additional information should be obtained from the graduate advisor.

Deferred Enrollment
Each applicant accepted to the graduate program is admitted for a specific semester. If an applicant chooses to defer enrollment to a subsequent semester, he/she must be reconsidered for admission. The applicant must submit a written request indicating intent to defer and specify the desired semester for enrollment. Admission in a subsequent semester cannot be assured.

Professional Liability Insurance
All students enrolling in nursing courses will be required to show evidence of professional liability insurance coverage in at least a minimum amount of $1,000,000 limit each claim and $3,000,000 limit aggregate in order to complete registration. Such insurance must be purchased through the University at the time of registration. Coverage is required from the student’s first day of class throughout her or his program of study. Liability insurance purchased through the university is applicable to the student role only. Nurse practitioner students are required to pay an additional insurance fee. (See Financial Information in this Catalog.)

Honors
A graduate nursing students whose grade point average is 4.0 is awarded her/his degree with High Honors.

(The Doctor of Philosophy Program follows the Master’s Programs below.)

Master of Science in Nursing

NOTE: Effective immediately, applications to the Critical Care Nursing (CCN) Clinical Nurse Specialist (CNS) are suspended.

Objectives
The objectives of the master’s program are designed to offer the student the opportunity to:

1. Design and evaluate theory-based programs of care that will promote, protect, and restore health in partnership with patients
2. Mobilize partnerships with patients* to facilitate theory-based programs of care
3. Employ expert therapeutic communication when enacting the advanced professional nursing role
4. Evaluate advanced practice decisions using critical thinking
5. Critique, utilize, and/or generate nursing knowledge to improve patient* care through scholarship
6. Demonstrate leadership in collaborative partnerships with communities to deliver quality care across levels of prevention
7. Model ethical and legal conduct that reflects standards of advanced professional practice
8. Maintain behaviors that demonstrate the value of integrated learning

*patients (individuals, families, aggregated, communities, society)

Degree Requirements
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: 1) required courses, 2) major, 3) thesis or elective credit, and 4) minor (elective). Graduate electives are offered in the School of Nursing or they may be taken at other universities.

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 clinical major course, and no incomplete grades.
Students must be recommended by the Nursing Program Committee on Graduate Studies and approved by the Graduate Faculty Council of the Graduate School of Biomedical Sciences for admission to candidacy for the MSN degree and for graduation.

The program is designed to be completed in 18–24 months of full-time study for students entering in the fall semester; 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 three regular semesters. A clinical preceptorship also may be required.

Admission to Candidacy

A student who has satisfactorily completed a minimum of 20 semester credit hours of coursework applicable to the degree may be admitted to candidacy for the Master of Science in Nursing degree upon such recommendation of the Committee on Graduate Studies to the Dean of the Graduate School of Biomedical Sciences. A student must be admitted to candidacy no later than the beginning of the semester in which he or she expects to graduate.

Curriculum

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, one clock hour of seminar, or three clock hours of laboratory/practicum/computer lab experience per week, per semester, with the exception of selected and summer sessions during which the class, seminar, and practicum hours may be concentrated but provide equivalent clock hours.

Course Numbers

NURS designates all required, major, minor, or special nursing courses. NURE designates nursing electives. A four-digit course identification number follows: the first digit indicates the earliest level at which a course may be taken or at which a course is usually taken (5, 6, and 7 indicate graduate level); the second digit indicates the semester credit hours given for the course.

MSN Semester Credit Hour Requirements

Of the minimum 36 semester credit hours of upper-division and graduate courses required for the MSN, 24 credit hours of coursework must be taken in residence. (Elective courses may be taken outside the School of Nursing.) The program may be completed in five semesters of full-time study. Part-time enrollment is an option.

<table>
<thead>
<tr>
<th>Graduate Required Courses</th>
<th>Semester Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 6316 - Statistical Analysis for Nursing Science</td>
<td>3.0</td>
</tr>
<tr>
<td>NURS 5307 - Using Research for the Practice of Nursing</td>
<td>3.0</td>
</tr>
<tr>
<td>NURS 5356 - Financial and Economic Evidence in Health Care</td>
<td>3.0</td>
</tr>
<tr>
<td>NURS 5339 - Leadership for Quality, Safety and Health Policy</td>
<td>3.0</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>12.0</strong></td>
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Major Semester Credit Hours

<table>
<thead>
<tr>
<th>Major</th>
<th>Semester Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>Acute Care Nurse Practitioner</td>
<td>36.0</td>
</tr>
<tr>
<td>Administration in Community and Healthcare Systems in Nursing</td>
<td>20.0</td>
</tr>
<tr>
<td>Critical Care Nursing (Clinical Nurse Specialist)</td>
<td>33.0</td>
</tr>
<tr>
<td>Family Nurse Practitioner</td>
<td>36.0</td>
</tr>
<tr>
<td>Pediatric Nurse Practitioner</td>
<td>36.0</td>
</tr>
<tr>
<td>Thesis or Elective Courses</td>
<td>2.0-6.0</td>
</tr>
</tbody>
</table>

School of Nursing Course Descriptions

Associate Degree in Nursing/Diploma in Nursing — Master of Science in Nursing Option*  

The ADN/Diploma — MSN, or early master's option, requires completion of 20 semester credit hours of undergraduate nursing courses at the School of Nursing with a grade point average of 3.0 or higher. Of the minimum 36 semester credit hours of upper-division and graduate courses required for the MSN, 24 credit hours of coursework must be taken in residence. (Elective courses may be taken outside the School of Nursing.) The program may be completed in five semesters of full-time study. Part-time enrollment is an option.

*Students admitted to the ADN/Diploma to Masters Degree option who have completed NURS 4514 Strategies for Professional Nursing: Community as Partner, and who have attained a minimum 3.0 grade point average in all courses taken at the undergraduate level, are immediately eligible to enroll in graduate courses. These students may enroll in any of the four (4) graduate core courses, and/or a total of six (6) hours of electives. These students may petition for admission to the graduate program in the next semester (fall, spring, or summer). Credit for all courses taken at the graduate level may be applied toward the graduate degree after the student has been admitted to and is enrolled in the graduate program.
Undergraduate Required Courses

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Semester Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>NURS 4212 - Professional Nursing: Health Assessment</td>
<td>2.0</td>
</tr>
<tr>
<td>NURS 4512 - Strategies for Professional Nursing: Health Promotion</td>
<td>5.0</td>
</tr>
<tr>
<td>NURS 4214 - Strategies for Professional Nursing: Research</td>
<td>2.0</td>
</tr>
<tr>
<td>NURS 4312 - The Nurse as Professional: Leadership (RNs only)</td>
<td>3.0</td>
</tr>
<tr>
<td>NURS 4310 - Strategies for Professional Nursing: The Family Across the Lifespan</td>
<td>3.0</td>
</tr>
<tr>
<td>NURS 4514 - Strategies for Professional Nursing: Community as Partner</td>
<td>5.0</td>
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Graduate Required Courses

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</tr>
<tr>
<td>Family Nurse Practitioner</td>
<td>36.0</td>
</tr>
<tr>
<td>Family Psychiatric Mental Health Nurse Practitioner</td>
<td>36.0</td>
</tr>
<tr>
<td>Pediatric Nurse Practitioner</td>
<td>36.0</td>
</tr>
<tr>
<td>Thesis or Elective Courses</td>
<td>2.0–6.0</td>
</tr>
</tbody>
</table>

Course descriptions

Required Courses

- NURS 5307 - Using Research for the Practice of Nursing
- NURS 5339 - Leadership for Quality, Safety and Health Policy
- NURS 6316 - Statistical Analysis for Nursing Science

Graduate Majors

NOTE: Effective immediately, applications to the Critical Care Nursing (CCN) Clinical Nurse Specialist (CNS) are suspended.

Acute Care Nurse Practitioner (ACNP)

The role of the Acute Care Nurse Practitioner (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. This care is continuous and comprehensive. The population in acute care practice includes acutely and critically ill patients experiencing episodic illness, exacerbation of chronic illness, or terminal illness. The ACNP practices in any setting in which patient care requirements include complex monitoring and therapies, high-intensity nursing intervention, or continuous nursing vigilance with the range of high-acuity care. While most ACNP’s practice in acute care and hospital-based settings including subacute care, emergency care, and intensive care settings, the continuum of acute care services spans the geographic settings of home, ambulatory care, urgent care, and rehabilitative care.

In addition to managing patient care, the ACNP utilizes invasive interventions and procedures to promote physiologic stability. ACNPs perform a wide variety of skills and procedures, and the skill set of an ACNP is often dependent on the specific patient population and specialty-based area of practice.

Restorative care is the focus of the ACNP, and short-term goals include patient stabilization, minimization of complications, and promotion of physical and psychological well being. The long-term goal is to restore maximal health potential while evaluating risk factors in achieving this outcome.

Applicants must have a minimum of two years of acute care/critical care experience and be Advanced Cardiac Life Support (ACLS) certified.

NOTE: may be required to travel for completion of clinical requirements.

Acute Care Nurse Practitioner (ACNP) Program Courses

<table>
<thead>
<tr>
<th>Course Description</th>
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</thead>
<tbody>
<tr>
<td>NURS 5338 - Advanced Pathophysiology</td>
<td>3.0</td>
</tr>
<tr>
<td>NURS 6302 - Advanced Pharmacotherapeutics</td>
<td>3.0</td>
</tr>
<tr>
<td>NURS 6110 - Advanced Health Assessment and Clinical Reasoning: Clinical Application</td>
<td>1.0</td>
</tr>
</tbody>
</table>
NURS 6101 - Advanced Mental Health Concepts: Clinical Applications 1.0
NURS 6201 - Advanced Mental Health Concepts 2.0
NURS 5311 - Nursing Assessment of Populations 3.0
NURS 5650 - Acute Care Nurse Practitioner (ACNP) Diagnosis and Management: Concepts and Theory I 6.0
NURS 5651 - Acute Care Nurse Practitioner (ACNP) Diagnosis and Management: Concepts and Theory II 6.0
NURS 5936 - Acute Care Nurse Practitioner (ACNP): Role and Preceptorship 9.0

Total Semester Hours 36.0

Above courses +11 semester hours required courses for a total of 47 semester hours.

In the post-MSN option, each applicant is evaluated individually to determine the need for additional coursework.

A graduate is eligible for national certification and recognition by the Board of Nurse Examiners for the state of Texas as an Advanced Practice Nurse.

*The Graduate Program in Nursing reserves the right to discontinue program majors.

- School of Nursing Course Descriptions

Courses

Course descriptions

- NURS 5338 - Advanced Pathophysiology
- NURS 6302 - Advanced Pharmacotherapeutics
- NURS 6307 - Health Assessment Across the Lifespan for Advanced Practice Nurses
- NURS 5650 - Acute Care Nurse Practitioner (ACNP) Diagnosis and Management: Concepts and Theory I
- NURS 5651 - Acute Care Nurse Practitioner (ACNP) Diagnosis and Management: Concepts and Theory II
- NURS 5936 - Acute Care Nurse Practitioner (ACNP): Role and Preceptorship
- NURS 5501 - Financial Management and Decision Support Systems for Nursing Administrative Practice
- NURS 5561 - Advanced Nursing Practicum in Policy and Management

Family Nurse Practitioner (FNP)

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.

Courses

Course descriptions

- NURS 5311 - Nursing Assessment of Populations
- NURS 5338 - Advanced Pathophysiology
- NURS 6302 - Advanced Pharmacotherapeutics
- NURS 6307 - Health Assessment Across the Lifespan for Advanced Practice Nurses
- NURS 6603 - Family Nurse Practitioner Diagnosis and Management: Concepts & Theory I
- NURS 6604 - Family Nurse Practitioner Diagnosis & Management: Concepts and Theory II
- NURS 6906 - Family Nurse Practitioner (FNP): Role and Preceptorship

Family Psychiatric Mental Health Nurse Practitioner (FPMHNP)

This major pulls together the content from core courses in physiology, pathophysiology, pharmacotherapeutics, and health assessment as a foundation for advanced practice. The roles of the nurse in advanced practice are experienced through patient care management in outpatient and inpatient facilities and private practice settings.

Courses

Course descriptions

- NURS 5603 - Family Psychiatric Mental Health Nurse Practitioner (FPMHNP) Diagnosis and Management: Concepts and Theory I
- NURS 5604 - Family Psychiatric Mental Health Nurse Practitioner (FPMHNP): Diagnosis and Management: Concept and Theory II
- NURS 5934 - Family Psychiatric Mental Health Nurse Practitioner (FPMHNP): Role and Preceptorship

Pediatric Nurse Practitioner (PNP)

Applicants for the PNP clinical major must have clinical practice experience focused among pediatric age-group clients.
Courses

Course descriptions

- NURS 6307 - Health Assessment Across the Lifespan for Advanced Practice Nurses
- NURS 5338 - Advanced Pathophysiology
- NURS 6302 - Advanced Pharmacotherapeutics
- NURS 5631 - Pediatric Nurse Practitioner (PNP) Diagnosis and Management: Concepts and Theory I
- NURS 5632 - Pediatric Nurse Practitioner (PNP) Diagnosis and Management: Concepts and Theory II
- NURS 5933 - Pediatric Nurse Practitioner (PNP): Role and Preceptorship

School of Nursing Course Descriptions

Doctorate

Announcing a future offering of Clinical Nurse Leader (CNL) degree

Profound changes in the increasingly complex health care systems mandates change to improve quality of care while reducing costs, improving access, eliminating disparities, and promoting safe practice. The CNL is an advanced generalist in nursing who 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. The CNL provides for lateral integration at the point of care that promotes quality care outcomes.

Standards for the CNL MSN program are established by the American Association of Colleges of Nursing. Graduates are eligible for certification as a CNL.

Announcing a future offering of Doctor of Nursing Practice (DNP) degree

Profound changes in the increasingly complex health care systems mandates change to improve quality of care while reducing costs, improving access, eliminating disparities, and promoting safe practice. The DNP is a practice-focused doctoral program designed to prepare experts in specialized advanced nursing practice. Emphasis is on advanced competencies for complex practice and research utilization for the improvement of clinical care delivery, patient outcomes, and system management. Bachelor’s prepared nurses and master’s prepared nurses who hold positions as nurse executives, nurse practitioners, clinical nurse specialists, nurse educators, nurse informaticians, nurse midwives are ideal candidates for this terminal professional doctoral degree.

Note: The DNP program is pending approval from the Texas Higher Education Coordinating Board and the Southern Association on Colleges and Schools.

Doctor of Philosophy in Nursing

Objectives

The objectives of the doctoral program are designed to provide the student the opportunity to:

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 specified area of nursing.
4. Advance clinical practice through research utilization.
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 health care and nursing.

The PhD in nursing program is offered by The UT Health Science Center San Antonio School of Nursing (UTHSCSASN). The PhD degree is awarded by The UT Health Science Center San Antonio Graduate School of Biomedical Sciences.

Degree Requirements

Full-time and part-time study options are available. Part-time study for doctoral students is defined as six credit hours or two courses per semester.

Students entering the program post-BSN have a total maximum enrollment time of seven years. Post-MSN students have a five-year total maximum enrollment for acquiring the PhD degree.

All students will be required to complete a qualifying exam. The qualifying examination, which is completed near the end or following the completion of coursework, determines continuation in the program.

Any PhD student must be enrolled in a minimum of one (1) semester hour of course work at the Health Science Center in order to be enrolled in the PhD program of study. If the student is not enrolled, the student must take a Leave Of Absence (LOA) or withdraw from the program. Coursework 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 PhD degree, must be repeated or specifically approved by the Committee on Graduate Studies. All doctoral work is subject to review by the Graduate Faculty Council and the Dean, Graduate School of Biomedical Sciences.

All policies of the Graduate School of Biomedical Sciences are applicable to this program of study.
Curriculum

A minimum of 80 semester credit hours of graduate courses is required for the Doctor of Philosophy degree. The MSN-prepared applicant will be given advanced placement dependent upon an evaluation of master’s-level courses. Support courses may be taken outside the School of Nursing.

• School of Nursing Course Descriptions

<table>
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<tr>
<th>Course Description</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td><strong>Theory/Research/Science</strong></td>
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<td>NURS 7310 - Theory Development, Analysis, and Evaluation in Nursing</td>
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<td>NURS 7380 - Qualitative Inquiry for Clinical Nursing Research</td>
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<td>NURS 7383 - Qualitative Methods II: Application in Nursing Science</td>
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<tr>
<td>NURS 6374 - Nursing—Content and Practice: Quantitative Research Methodology I</td>
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<tr>
<td>NURS 6373 - Nursing—Quantitative Research Methods II</td>
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<tr>
<td>NURS 7381 - Synthesis and Application of Clinical Research</td>
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<td>NURS 6376 - Mixed Methods for Clinical Nurse Scientists (available spring 2006)</td>
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<td>NURS 6225 - Philosophy of Nursing Science</td>
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<tr>
<td>NURS 6375 - Regression Models for Nursing Science</td>
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<td>NURS 7382 - Structural Equation Models for Nursing Science</td>
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<td>NURS 6226 - Ethics of Nursing Science</td>
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<tr>
<td>NURS 6105 - Role of the Clinical Nurse Scientist</td>
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<td>NURS 6071 - Supervised Teaching</td>
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<td><strong>Substantive Courses</strong></td>
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Dissertation

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<tr>
<th>Course Description</th>
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<td>NURE 7090 - The Dissertation Proposal Process in Nursing</td>
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<td>NURS 7099 - Dissertation</td>
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Doctoral Courses

**Course descriptions**

- NURS 6071 - Supervised Teaching
- NURS 6105 - Role of the Clinical Nurse Scientist
- NURS 6225 - Philosophy of Nursing Science
- NURS 6226 - Ethics of Nursing Science
- NURS 6373 - Nursing—Quantitative Research Methods II
- NURS 6374 - Nursing—Content and Practice: Quantitative Research Methodology I
- NURS 6375 - Regression Models for Nursing Science
- NURS 6376 - Mixed Methods for Clinical Nurse Scientists (available spring 2006)
- NURS 7310 - Theory Development, Analysis, and Evaluation in Nursing
- NURS 7380 - Qualitative Inquiry for Clinical Nursing Research
- NURS 7381 - Synthesis and Application of Clinical Research
- NURS 7382 - Structural Equation Models for Nursing Science
- NURS 7383 - Qualitative Methods II: Application in Nursing Science

Dissertation

- NURE 7090 - The Dissertation Proposal Process in Nursing
- NURS 7099 – Dissertation

Minor Courses

**Course descriptions**

Administration in Nursing

- NURS 5310 - Administrative Strategies and Nursing Systems
- NURS 5501 - Financial Management and Decision Support Systems for Nursing Administrative Practice

Gerontology

- NURS 5303 - Aging, Cognition, and Dementia
- NURS 5304 - Health Issues in Gerontology

Teaching of Nursing

- NURS 5371 - Curriculum and Instruction in Nursing
- NURS 5372 - Roles of the Teacher in Nursing
Women’s Health
- NURS 5346 - Health Care of Women I
- NURS 5347 - Health Care of Women II
- NURS 5348 - Health Care of Women for Nurse Administrators

Informatics in Nursing
- NURS 5317 - Healthcare Information Systems and Patient Care Technology

Thesis
- NURS 6298 - Development of a Thesis Proposal
- NURS 6098 - Thesis

Special Courses
- NURS 6306 - Social Cultural Concepts in Public Health Practice

Elective Courses

Course descriptions

The specific electives offered vary from semester to semester and are listed in the course schedule for each semester and summer session. The school reserves the right to cancel a class with insufficient student enrollment. Classes and practicums offered during summer sessions may be in a concentrated format.

- NURE 5001 - Mentored Research Practicum: State of the Science
- NURE 5002 - Mentored Research Practicum: Proposal Development
- NURE 5003 - Mentored Research Practicum: Instrumentation
- NURE 5004 - Mentored Research Practicum: Statistical Methods
- NURE 5005 - Mentored Research Practicum: Proposal Testing
- NURE 5006 - Mentored Research Practicum: Research Results/Policy
- NURE 5007 - Clinical Applications in Advanced Nursing Practice
- NURE 5195 - Mentored Research Scholars
- NURE 5242 - Psychotherapy with Groups
- NURE 5314 - Nursing Interventions in Pain
- NURE 5334 - Nursing Care of the Patient in Crisis in the Emergency Department
- NURE 5341 - Psychotherapy with Families
- NURE 5344 - Psychiatric Nursing of Children and Adolescents
- NURE 5351 - Nursing Management of Dysrhythmias
- NURE 5362 - Ethical-Legal Aspects in Nursing and Health Care
- NURE 5367 - Hispanic Health Concerns: A Nursing Perspective
- NURE 5412 - Gross Anatomy for Advanced Practice Nurses
- NURE 5415 - Psychiatric Mental Health Therapy/Individual
- NURE 5445 - Mental Health Liaison/Consultation Nursing
- NURE 5091 - Independent Study in Nursing
- NURE 5110 - Interdisciplinary Team Approach to Pain Management
School of Nursing Course Descriptions

Electives

MMED 6071 - Supervised Teaching
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.
Semester Credit Hours: 1.0-9.0

NURS 3110 - Health Assessment: Clinical Application
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 Hour Allocation: 1 semester hour (1 hour clinical skills laboratory).
Semester Credit Hours: 1.0
Prerequisites: NURS 3272, 3303, and 3304

NURS 3170 - Foundations of Nursing Care: Theoretical Foundations
In this course the student will have the opportunity to acquire a theoretical foundation for developing clinical competencies to provide safe, quality patient care.
Credit Hour Allocation: 1 semester hour (1 hour theory).
Semester Credit Hours: 1.0
Prerequisites: admission to the Accelerated Undergraduate Program

NURS 3171 - Pharmacotherapeutics: Family Nursing Care
This course focuses on the nurse’s role in safe, effective pharmacotherapeutics for childbearing and childrearing families.
Credit Hour Allocation: 1 semester hour (1 hour theory).
Semester Credit Hours: 1.0
Prerequisites: successful completion of Semester I

NURS 3172 - Pharmacotherapeutics: Psychiatric and Mental Health Nursing
This course focuses on the nurse’s role in safe, effective pharmacotherapeutics for persons with psychiatric and mental health alterations.
Credit Hour Allocation: 1 semester hour (1 hour theory).
Semester Credit Hours: 1.0
Prerequisites: successful completion of Semester I

NURS 3201 - Foundations of Clinical Nursing Practice: Theoretical Foundations
This course provides an introduction to clinical decision making and interventions with individuals in diverse settings using a patient-centered, holistic, caring framework.
Credit Hour Allocation: 2 semester hours (2 hours theory).
Semester Credit Hours: 2.0
Prerequisites: NURS 3303 and 3304

NURS 3203 - Strategies for Professional Nursing: Research
The role of research in the conduct of professional nursing is examined. Classroom discussions and learning experiences focus on the value of research-based knowledge as a means to promote quality patient care. The research process provides content for evaluating quality and/or usefulness of research utilization/evidence-based practice in development of nursing intervention strategies.
2 Cr Theory
Semester Credit Hours: 2.0
Prerequisites: completion of first semester Generic Process

NURS 3204 - Health Assessment: Theoretical Foundations
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.
Credit Hour Allocation: 2 semester hours (2 hours theory).
Semester Credit Hours: 2.0
Prerequisites: NURS 3303 and 3304

NURS 3209 - Introduction to Professional Nursing
This course provides an introduction to professional nursing and the role of the nurse in customizing the promotion and maintenance of health. Course content includes the nature and history of professionalism and processes underlying professional nursing, basic concepts of health and illness transitions, and legal considerations in nursing practice.
2 Cr Theory
Semester Credit Hours: 2.0
Prerequisites: admission to the program

NURS 3220 - Strategies for Professional Nursing: Mental Health Transitions
This course focuses on the therapeutic use of self in the care of patients experiencing psychiatric-mental health transitions. Psychiatric and mental health transitions and therapeutic modalities are analyzed and integrated to customize care. A clinical practicum provides an opportunity to implement therapeutic relationships and customize nursing process with individuals and families experiencing mental health transitions. Culturally sensitive assessment and intervention strategies with diverse patients are addressed.
1 Cr Theory, 1 Cr Clinical
Semester Credit Hours: 2.0
Cross-listed/Concurrent Concurrent: NURS 3312 (Flexible Process)

NURS 3270 - Professional Socialization II
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).
Semester Credit Hours: 2.0
Prerequisites: admission to the Accelerated Undergraduate Program
NURS 3271 - Principles of Pharmacotherapeutics
This course focuses on the nurse's role and responsibilities in drug therapy emphasizing safety related to drug therapy including principles of pharmacology and accurate calculations.
Credit Hour Allocation: 2 semester hours (2 hours theory).
Semester Credit Hours: 2.0
Prerequisites: admission to the accelerated Undergraduate Program

NURS 3272 - Health Assessment and Promotion: Theoretical Foundations
This course focuses on the theory and practice of health assessment of individuals and families across the lifespan.
Credit Hour Allocation: 2 semester hours (2 hours theory).
Semester Credit Hours: 2.0
Prerequisites: admission to the Accelerated Undergraduate Program

NURS 3273 - Health Assessment and Promotion: Clinical Application
This course focuses on the theory and practice of health assessment of individuals and families across the lifespan.
Credit Hour Allocation: 2 semester hours (2 hours theory).
Semester Credit Hours: 2.0
Prerequisites: NURS 3272

NURS 3274 - Psychiatric and Mental Health Nursing: Theoretical Foundation
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).
Semester Credit Hours: 2.0
Prerequisites: successful completion of Semester I

NURS 3275 - Psychiatric and Mental Health Nursing: Clinical Applications
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).
Semester Credit Hours: 2.0
Prerequisites: NURS 3172 and NURS 3274

NURS 3304 - Pharmacotherapeutics
This course provides the opportunity for students to learn the foundation for safe, effective drug therapy and the role of the nurse in health promotion, disease prevention, and management.
Credit Hour Allocation: 3 semester hours (3 hours theory).
Semester Credit Hours: 3.0
Prerequisites: admission to the Traditional Undergraduate Program

NURS 3305 - Foundations of Clinical Nursing Practice: Clinical Application
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.
Credit Hour Allocation: 3 semester hours (3 hours clinical).
Semester Credit Hours: 3.0
Prerequisites: NURS 3201, 3303, and 3304.

NURS 3312 - Strategies for Professional Nursing: Pharmacotherapeutics
This course introduces basic concepts of pharmacotherapy and the scientific basis of pharmacotherapeutics with legal/ethical guidelines for the nursing profession. The role of drug therapy in health promotion and in the prevention and treatment of specific health transitions will be emphasized. In addition, the customization of drug therapy and the partnership role of the professional nurse in drug therapy will be introduced.
Computer-Use fee: $15.
3 Cr Theory
Semester Credit Hours: 3.0
Prerequisites: Generic Process: NURS 3209; Flexible Process: admission to the Program

NURS 3313 - Strategies for Professional Nursing: Clinical Skills
This course focuses on clinical nursing skills commonly employed by professional nurses in the provision of competent nursing care to patients experiencing transitions in health status. Emphasis is on the theoretical basis for the skills, correct psychomotor techniques, and customization of these skills in various simulated patient situations. Students are expected to integrate knowledge from the basic physical and psychosocial sciences into the acquisition of new skills. Learning experiences include content presentation/discussions, independent study with various modalities, and supervised laboratory practice.
Computer Use fee: $15.
1 Cr Theory, 2 Cr Clinical
Semester Credit Hours: 3.0
Prerequisites: admission to the Flexible Process

NURS 3370 - Pathophysiology
This course focuses on the concepts of pathophysiology essential to understanding alterations in body systems and developing clinical decision making for health promotion, risk reduction, and disease management.
Credit Hour Allocation: 3 semester hours (3 hours theory).
Semester Credit Hours: 3.0
Prerequisites: admission to the Accelerated Undergraduate Program

NURS 3371 - Foundations of Nursing Care: Clinical Applications
In this course the student will have the opportunity to develop foundational clinical competencies for providing safe, quality patient care in a simulated practice setting.
Credit Hour Allocation: 3 semester hours (3 hours clinical skills laboratory).
Semester Credit Hours: 3.0
Prerequisites: NURS 3372

NURS 3372 - Family Nursing Care: Theoretical Foundations
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.
Credit Hour Allocation: 3 semester hours (3 hours theory).
Semester Credit Hours: 3.0
Prerequisites: successful completion of Semester I

NURS 3373 - Family Nursing Care: Clinical Applications
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).
Semester Credit Hours: 3.0
Prerequisites: NURS 3372 and NURS 3171

NURS 3374 - Research and Evidenced-Based Practice
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).
Semester Credit Hours: 3.0
Prerequisites: completion of Semester I

NURS 3409 - Strategies for Professional Nursing: Transition to Professional Nursing Practice
This course focuses on assuming the professional nursing role and its application in practice. Emphasis is on the care of the individuals and families requiring different levels of nursing interventions. This is accomplished in partnership with other health care professionals in various structured settings. Students will have the opportunity to develop scholarly inquiry as they integrate professional nursing concepts with previous learning and experience.
Computer-Use fee: $20.

2 Cr Theory, 2 Cr Clinical
Semester Credit Hours: 4.0
Prerequisites: NURS 3220, 3312, and 3313 (Flexible Process) (prerequisite or concurrent)

NURS 3520 - Strategies for Professional Nursing: Mental Health Transitions
This course focuses on the therapeutic use of self in the care of patients experiencing mental health transitions. Mental health transitions and therapeutic modalities are analyzed and integrated to customize care. A clinical practicum provides an opportunity to implement therapeutic relationships and customize nursing process with individuals and families experiencing mental health transitions. Culturally sensitive assessment and intervention strategies with diverse patients are addressed.
2 Cr Theory, 3 Cr Clinical
Semester Credit Hours: 5.0
Prerequisites: completion of first semester Generic Process

NURS 3610 - Strategies for Professional Nursing: Chronic Health Transitions
This course focuses on patients who are experiencing transitions in health status due to chronic illness. The effects of chronic health problems with individuals and their significant others are analyzed through integrated learning experiences. A clinical practicum provides an opportunity to demonstrate professional nursing and to apply the nursing process in a customized plan of care, developed in partnership with individuals and their significant others, to manage chronic illness. Scholarship will be developed through critical thinking and applications of theoretical concepts to clinical practice and scholarly writing.
Computer Use fee: $30.
3 Cr Theory, 3 Cr Clinical
Semester Credit Hours: 6.0
Prerequisites: completion of first semester and completion of or concurrent enrollment in NURS 3520

NURS 3802 - Strategies for Professional Nursing: The Nature of Health Transitions
This course provides an introduction to professional nursing care of adults with transitions in health status requiring basic nursing care. The effects of health transitions and the process of adaptation of individuals and their significant others are analyzed through integrated learning experiences. A clinical practicum based upon health assessment principles provides an opportunity to plan, implement, and evaluate customized care in partnership with individuals and their significant others, to manage chronic illness. Scholarship will be developed through critical thinking and application of theoretical concepts to clinical practice and scholarly writing.
Computer-Use fee: $30.
4 Cr Theory, 4 Cr Clinical
Semester Credit Hours: 8.0
Prerequisites: NURS 3209 and NURS 3312 (prerequisite or concurrent)
NURS 4203 - The Nurse as a Professional
This course focuses on the nursing profession and its professional organizations. Ethical and professional issues and corresponding laws affecting the individual, the practice of professional nursing, and the nursing profession are explored. Laws that govern the role of the professional nurse are applied. Concepts of autonomy, accountability, and advocacy are integrated throughout the course.

2 Cr Theory
Semester Credit Hours: 2.0
Prerequisites: completion of first, second, and third semesters in Generic Process; completion of first and second semesters in Flexible Process

NURS 4212 - Professional Nursing: Health Assessment
This course focuses on the theory and skills of health assessment, including health history and physical examination of infants and adults. Students apply selected principles and skills in a simulated practice setting.

Computer Use fee: $30.
1 Cr Theory, 1 Cr Lab
Clock Hours: 1 1/2 class hours and 2 1/2 lab hours per week.
Semester Credit Hours: 2.0
Prerequisites: NURS 3220, 3312, 3313, 3409, LVNs only

NURS 4214 - Strategies for Professional Nursing: Research
The role of research in the conduct of professional nursing is examined. Classroom discussions and learning experiences focus on the value of research-based knowledge as a means to promote quality patient care. The research process provides content for evaluating quality and/or usefulness of research utilization/evidence-based practice in the development of nursing intervention strategies.

2 Cr Theory
Semester Credit Hours: 2.0
Prerequisites: completion of first-semester courses Flexible Process if LVN

NURS 4310 - The Nurse as Professional: Leadership (RNs only)
This course focuses on the role of the professional nurse as a leader and as a manager in the collaborative design and delivery of customized health care for patients. Traditional management theories and practices are built upon, including the organization, planning, staffing, directing, and controlling of various resources in diverse health care systems. A strong emphasis is placed on the development of transformational leadership. The clinical practicum provides the student with the opportunity to partner with leaders and managers to explore and influence health care delivery system issues that affect quality of care. (This course builds on the management theory and experience RN Flex students have had in their ADN and Diploma Programs).

1 Cr Theory, 2 Cr Clinical
Semester Credit Hours: 3.0
Prerequisites: NURS 4212 and 4512 (Flexible Process) - prerequisite or concurrent

NURS 4410 - The Nurse as Professional: Leader-Manager
This course focuses on the role of the professional nurse as a leader and as a manager in the collaborative design and delivery of customized health care for patients. Traditional management theories and practices are explored, including the organization, planning, staffing, directing, and controlling of various resources in diverse health care systems. A strong emphasis is placed on the development of transformational leadership. The clinical practicum provides the student with the opportunity to partner with leaders and managers to explore and influence health care delivery system issues that affect quality of care.

2 Cr Theory, 2 Cr Clinical
Semester Credit Hours: 4.0
Prerequisites: completion of first and second semesters Generic Process, NURS 4425 and 4435; Flexible Process: concurrent or prerequisite, NURS 4512

NURS 4425 - Strategies for Professional Nursing: Childbearing Families
This course focuses on the application of theories to the nursing care of childbearing families in transition. Emphasis is on the nurse's partnership role with childbearing families and other health care professionals in the provision of care. In addition, the course examines issues related to women's health during the childbearing years. Ethical and legal issues relating to reproduction and to newborn nursing practice are explored.

Computer Use fee: $30.
2 Cr Theory, 2 Cr Clinical
Semester Credit Hours: 4.0
Prerequisites: completion of first and second semesters; must be completed before enrollment in Nurse as a Professional: Leader-Manager

NURS 4435 - Strategies for Professional Nursing: Childrearing Families
This course focuses on the application of theories to the nursing care of children and their families in transition. Emphasis is on the nurse’s partnership role with children and their families and with other health care professionals in the provision of care. Ethical and legal issues relating to the nursing care of childrearing families are examined.

Computer Use fee: $30.
2 Cr Theory, 2 Cr Clinical
Semester Credit Hours: 4.0
Prerequisites: completion of first and second semesters Generic Process; NURS 4425 prerequisite or concurrent; must be completed before enrollment in Nurse as a Professional: Leader-Manager

NURS 4512 - Strategies for Professional Nursing: Health Promotion
This course is the study of factors contributing to the health of an individual and the role of the nurse in assessing and meeting needs of the individual. Concepts include wellness, stress, patienthood, groups, crisis, communication, nursing process, teaching/learning, and professionalism. The clinical practicum provides an opportunity for students to care for individuals experiencing health disturbances and to assist them in establishing and/or maintaining healthy living patterns.
3 Cr Theory, 2 Cr Clinical
Clock Hours: three class hours; eight practicum hours per week.
Semester Credit Hours: 5.0
Prerequisites: NURS 3312, 3220, 3313, 3409; NURS 4212/or concurrently (Flexible Process)

NURS 4514 - Strategies for Professional Nursing: Community as Partner
This course focuses on the roles of nursing in establishing partnerships with communities in customizing therapeutic care in order to protect, promote, and restore optimal community health. The clinical practicum provides students with opportunities to deliver quality community health care across all levels of prevention and to explore the planning and implementation of customized community health programs. Students collaborate with agencies/institutions and health care delivery systems as leader/manager partners in community health.
2 Cr Theory, 3 Cr Clinical
Semester Credit Hours: 5.0
Prerequisites: Generic Process: completion of first, second, and third semesters, NURS 4614 or concurrent; Flexible Process: concurrent or prerequisite, NURS 4310

NURS 4614 - Strategies for Professional Nursing: Major Health Transitions
This course focuses on nursing care of individuals across the life span whom are experiencing transitions in health requiring complex nursing judgment and interventions. The clinical practicum provides an opportunity to integrate learning within varied environments, including acute-care settings and non-institutional settings in partnership with patients and other professionals.
Computer Use fee: $30.
3 Cr Theory, 3 Cr Clinical
Semester Credit Hours: 6.0
Prerequisites: completion of first, second, and third semesters Generic Process; NURS 4203 or concurrent

NURS 5140 - Critical Care Nursing – Clinical Nurse Specialist: Skills Competencies
This course focuses on the skills and procedures that critical-care nurses use in the monitoring and management of critically ill patients. The content is designed to build on the student’s previous critical care experience and to enhance knowledge of new and current technology for optimal patient care. Skills and procedures are reviewed and students have the opportunity to demonstrate competency with these skills in a critical-care setting or through laboratory-simulated activities. 45 clock hours practicum.
Semester Credit Hours: 1.0
Prerequisites: NURS 6307

NURS 5141 - Roles of the Teacher in Contemporary Nursing Education
This course focuses on the investigation of the roles of the educator in contemporary nursing education. The course provides the opportunity to design, refine, and evaluate teaching and learning experiences for settings such as nursing programs, staff development, and/or continuing education opportunities. Emphasis is on extending an understanding of adult learning principles and evidence-based teaching and evaluation strategies appropriate for nursing education.
Clock hours: one clock hour class (15 clock hours).
Semester Credit Hours: 1.0
Prerequisites: NURS 5371 or equivalent
Cross-listed/Concurrent Concurrent: NURS 5241

NURS 5241 - Application of Roles of the Teacher in Contemporary Nursing Education
This course focuses on the integration and application of the roles of the educator in contemporary nursing for the clinical, laboratory, and/or simulation environments. The course provides the opportunity to implement adult teaching and learning experiences in nursing areas of academia, staff development, and/or continuing education.
Clock hours: six clock hours practicum (90 clock hours).
Semester Credit Hours: 2.0
Prerequisites: NURS 5371 or equivalent
Cross-listed/Concurrent Concurrent enrollment in NURS 5141

NURS 5303 - Aging, Cognition, and Dementia
Cognition and Dementia will be explored from biological and psychosocial perspectives focusing particularly on assessing cognition and executive function to identify cortical and non-cortical dementias, conditions commonly associated with dementia such as Alzheimer’s disease, and the nursing management of patients and their caregivers and family. The most recent research of the correlates of dementia and cognitive decline will be evaluated. Local, state, and national resources will be explored. Community agencies providing services for elders will offer opportunities for students to conduct dementia screening, collaboration with other health care providers, and community education. Strategies to manage communication, wandering behavior, incontinence, and other behavioral manifestations of dementia will be used in interventions with caregivers in institutional and community settings. Includes 45-clock-hour practicum.
Semester Credit Hours: 3.0
Prerequisites: Graduate standing and completion of a graduate level research course

NURS 5304 - Health Issues in Gerontology
This is a survey course of physical, psychological, and social perspectives of aging with emphasis on health and healthcare of older adults. The impact of an aging society on socioeconomic, political, and healthcare systems will be explored.
NURS 5306 - Advanced Theory for the Practice of Nursing
This course explores and analyzes theories and propositions from social, psychological, medical, nursing, and interpersonal relations as a foundation to understanding research, practice and scholarship in nursing.
Clock hours: three semester clock hours class (45 clock hours).
Semester Credit Hours: 3.0
Prerequisites: Graduate standing

NURS 5307 - Using Research for the Practice of Nursing
This course provides the foundations for the use of research in nursing science and healthcare. Emphasis is on designing, interpreting, and evaluating research.
Clock hours: three clock hours class (45 clock hours).
Semester Credit Hours: 3.0
Prerequisites: NURS 5306

NURS 5310 - Administrative Strategies and Nursing Systems
This course examines contemporary influences, theories, principles, and functional strategies related to organizational and management science. Included are the influence of the external and internal environment on complex systems, role relationships, planning, structure, communication, negotiation, and consultation as they apply to health care management concerns.
Clock hours: three class hours per week.
Semester Credit Hours: 3.0
Prerequisites: NURS 5226 or concurrently and NURS 5339 or concurrently.

NURS 5311 - Nursing Assessment of Populations
This course explores the acquisition of knowledge about a community of interest and its health problems. Communities of interest may include populations within organizations, neighborhoods, or communities. Sources of both qualitative and quantitative information about selected populations and their health problems will be used to develop health statements about communities. Students are given an opportunity to gain experience in the identification of population characteristics, problem health measurement, and the identification of “communities of solution.” For their clinical activities, students may choose population aggregates in a variety of settings compatible with their area of interest. *May be required to travel for completion of clinical practicum experiences.*
A 45-clock-hour practicum is required.
Semester Credit Hours: 3.0
Prerequisites: Graduate standing

NURS 5317 - Healthcare Information Systems and Patient Care Technology
This course is an introduction to the health care and nursing informatics and computing environment. It provides a basis for understanding the impact of information technology on health care practice and critical thinking in clinical decision making. Theoretical and applied approaches furnish a basis for understanding and participating in the use of informatics systems in health care and nursing. Emphasis is on the use of technology to access knowledge and to create science-based practice protocols for informed clinical decision making in health care and nursing. *NOTE: First course of two in Informatics Minor - or - may be taken as an Elective course.*
Clock hours: three clock hours class.
Semester Credit Hours: 3.0
Prerequisites: Graduate standing

NURS 5338 - Advanced Pathophysiology
This course focuses on pathophysiological processes across the lifespan and the development of clinical reasoning skills that distinguish the relationship between normal physiology and specific system alterations produced by injury and disease. Particular attention will be given to etiology, pathogenesis, developmental and environmental influences, and clinical manifestations of major health problems. *Laboratory fee: $5.*
3 clock hours class (45 hours class).
Semester Credit Hours: 3.0
Prerequisites: Graduate standing

NURS 5339 - Leadership for Quality, Safety and Health Policy
The course focuses on the principles and theories germane to leadership in complex organizations; models, tools, and processes to measure health care outcomes; and forces that influence health policy and nursing practice.
*Clock Hours: 3 clock hours class (45 hours class)*
Semester Credit Hours: 3.0
Prerequisites: Graduate standing

NURS 5346 - Health Care of Women I
This course will focus on women’s health care across the lifespan and during the antepartum and postpartum period at the advanced practice level. Health promotion of women will be stressed, as well as the management of minor acute and chronic problems. The content of this course will cover topics such as reproductive tract, preconception health and counseling, physiology of pregnancy, prenatal care, and psycho-social influences on women’s health.
Semester Credit Hours: 3.0
Prerequisites: Graduate standing

NURS 5347 - Health Care of Women II
This course will focus on complex women’s health issues at the advanced-practice level. Through the implementation of theory, research, and evidence-based knowledge, and culturally competent communication skills, experience is gained in providing women’s health care to rural and urban populations of South Central Texas. Experience in the use of clinical management skills as direct caregiver or in an administrative role will occur in a variety of health care settings such as rural health clinics, county health departments, health maintenance organizations, ambulatory clinics, antenatal clinics, physician’s offices, community coalitions, and family planning clinics. The content of this course will cover topics such as complicated gynecologic and obstetrical care, lifespan gynecologic care,
substance abuse, chronic pain, eating disorders, sexuality issues, health care of women with disabilities, and cultural variations in women’s health beliefs and practices.

Includes 45-clock-hour practicum.
 Semester Credit Hours: 3.0
Prerequisites: APN track NURS 5306, 5307, 5226, 6307, 5339, 6302, 6308, 5338, 5311, & 5346.

NURS 5348 - Health Care of Women for Nurse Administrators

This course will focus on complex women’s health issues at the advanced-practice level. Experience in the use of management skills in an administrative role will occur in a variety of health care settings such as rural health clinics, county health departments, health maintenance organizations, ambulatory clinics, antenatal clinics, physician’s offices, community coalitions, and family planning clinics. The course will cover topics such as complicated gynecologic and obstetrical care, lifespan gynecologic care, substance abuse, chronic pain, eating disorders, sexuality issues, health care of women with disabilities, and cultural variations in women’s health beliefs and practices.

Includes 45-clock-hour practicum.
 Semester Credit Hours: 3.0
Prerequisites: Administrator track NURS 5306, 5307, 5226, 5339, 5311, 5409, & 5346.

NURS 5356 - Financial and Economic Evidence in Health Care

This course focuses on principles of health care economics; third-party reimbursement; costing; budget types, process and monitoring; economic evaluation methods; and business plan importance, components and writing.

Clock Hours: 3 hours class (45 clock hours).
 Semester Credit Hours: 3.0
Prerequisites: Graduate standing

NURS 5371 - Curriculum and Instruction in Nursing

This course is designed to introduce students to the process of curriculum development. The teaching, learning, and evaluation principles are examined from the standpoint of and the effect on various curriculum patterns. The course provides opportunity for examination of factors that influence curriculum development, implementation, and evaluation.

Clock Hours: three class hours per week.
 Semester Credit Hours: 3.0

NURS 5409 - Program Planning and Evaluation

This course and practicum provide an opportunity to explore problems that affect client population aggregates in a variety of health care settings. The emphasis of this course is 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.

2 semester hours class, 2 semester hours practicum (90 clock hours practicum).
 Semester Credit Hours: 4.0
Prerequisites: NURS 5311

NURS 5501 - Financial Management and Decision Support Systems for Nursing Administrative Practice

This course considers advanced financial management concepts (financial statements, capital budgeting, forecasting, rate setting, costing out of nursing services) and is an introduction to the concepts of decision-support systems in the administration of community and health care services.

Clock hours: three class hours and six practicum hours per week.
 Semester Credit Hours: 5.0
Prerequisites: NURS 5226

NURS 5502 - Critical Care Nursing - Clinical Nurse Specialist III: Role and Preceptorship

This course can be a synthesizing experience in the development and implementation of the Clinical Nurse Specialist role in a collaborative, interdisciplinary model. The focus of this course is ongoing clinical experiences and practice that integrate the theoretical and practical knowledge for the health and disease management of critically ill adult patients. Emphasis is on clinical decision making, which incorporates nursing and medical diagnosis, disease management, and treatment to include prescriptive practices.

Clock Hours: Includes 180 clock hours clinical practicum.
 Semester Credit Hours: 5.0
Prerequisites: completion of all major coursework.

NURS 5532 - Medical-Surgical Nursing—Clinical Nurse Specialist III: Role and Preceptorship

This course can be a synthesizing experience in the development and implementation of the Medical-Surgical Nursing – Clinical Nurse Specialist role in a collaborative, interdisciplinary model. The focus of this course is ongoing clinical experiences and practice that integrate the theoretical and practical knowledge needed to contribute to the health and disease management of acutely or chronically ill adult patients. Emphasis is on clinical decision making, which incorporates nursing and medical diagnosis, disease management, and treatment to include prescriptive practices.

Clock Hours: 180 clinical hours.
 Semester Credit Hours: 5.0
Prerequisites: completion of all major coursework

NURS 5561 - Advanced Nursing Practicum in Policy and Management

The purpose of this course is to provide the student with the opportunity to examine the role of the nurse executive in a health care agency. Emphasis is placed on the development of interdisciplinary relationships, long-range planning skills, organizational priority setting, fiscal management, marketing, policy setting, care systems, and support systems for patient-care delivery. The student will be assigned to an institutional or community-based health care setting under the preceptorship of an experienced nurse executive for the practicum portion of the course.

Clock Hours: one seminar and twelve practicum hours per week.
 Semester Credit Hours: 5.0
Prerequisites: NURS 5306, 5307, 5409, and 5501
NURS 5601 - Critical Care Nursing--Clinical Nurse Specialist I: Health Management

This course addresses the unique and autonomous roles of the Critical Care Nursing—Clinical Nurse Specialist as an Advanced Practice Nurse. The content focuses on human responses to health and illness, and identifying and modifying etiologies that interfere with health. Concepts covered include health promotion, disease prevention, risk reduction, and management of symptoms and functional problems. Theories and current evidence-based interventions are explored for application to special populations. Developing a customized patient-based framework for Clinical Nurse Specialist practice in the contemporary health care system is emphasized.

Clock Hours: Includes 112.5 clock hours practicum.
Semester Credit Hours: 6.0
Prerequisites: NURS 6307, 5338, 5306, and 6308 (or concurrent); NURS 6302 (or concurrent)

NURS 5602 - Critical Care Nursing--Clinical Nurse Specialist II: Diagnosis and Management

This course builds on Critical Care Nursing – Clinical Nurse Specialist – and is designed to transition the graduate nursing student into the Clinical Nurse Specialist role as a practitioner and provider of care. The focus of this critical-care specialty is adults with life-threatening, critical illness or injury who require advanced technology and monitoring. Students have the opportunity to develop, apply, and evaluate in-depth knowledge of pathophysiological processes and evidenced-based interventions for disease management. The focus of the theoretical and clinical portions of the course is on nursing and medical diagnosis and management, pharmacological and nonpharmacological treatments, and an interdisciplinary approach to critically ill patients. Clinical experiences include the implementation and evaluation of Clinical Nurse Specialist roles in tertiary and other settings that comprise the continuum of care for critically ill patients.

Clock Hours: Includes 135 clock hours practicum.
Semester Credit Hours: 6.0
Prerequisites: NURS 5226, 5339, 5307 (or concurrent), 5311 (or concurrent), 5601, and 5140

NURS 5603 - Family Psychiatric Mental Health Nurse Practitioner (FPMHNP) Diagnosis and Management: Concepts and Theory I

The focus of this course is the transition of the RN to the role of the Family Psychiatric Mental Health Nurse Practitioner in health promotion, diagnosis and management of common mental illnesses in psychiatric practice across the lifespan attending to differences in focused populations. Research and theory are used to identify strategies that are integral to advanced nursing practice for promotion of health and prevention of illness. Using problem-based and integrated learning strategies, disorders of approximately one half of the physiologic systems and the relationship to mental health are examined, critical thinking processes required for development of differential diagnosis are utilized, and therapeutic regimens for common diseases/disorders identified. Emphasizes collaborative partnerships among patient*, family, and other health care disciplines. May be required to travel for completion of clinical practicum experiences.

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*In accordance with the philosophy of the School of Nursing, the term "patient(s)" indicates individuals, families, and aggregates.

Clock Hours: 4 clock hours class (90 hours clinical practicum).
Semester Credit Hours: 6.0
Prerequisites: NURS 5306, 5226, 6307, 6302, 6308, 5338, 5311 (may be taken concurrently), and 5307 (may be taken concurrently)

NURS 5604 - Family Psychiatric Mental Health Nurse Practitioner (FPMHNP): Diagnosis and Management: Concept and Theory II

The focus of this course is the progression of development of the Family Psychiatric Mental Health Nurse Practitioner in health promotion, diagnosis, and management of common illnesses in psychiatric practice across the lifespan attending to differences in focused populations. Research and theory are used to identify strategies that are integral to advanced nursing practice for promotion of health and prevention of illness. Using problem-based and integrated learning strategies, disorders of approximately one half of the physiologic systems and the relationship to mental health are examined, critical thinking processes required for development of differential diagnosis are utilized, and therapeutic regimens for common diseases/disorders identified. Emphasizes collaborative partnerships among patient*, family, and other health care disciplines. May be required to travel for completion of clinical practicum experiences.

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Clock Hours: 135 Hours of clinical practicums.
Semester Credit Hours: 6.0
Prerequisites: NURS 5306, 5226, 6307, 6302, 6308, 5338, 5311 (may be taken concurrently), 5307 (may be taken concurrently), and 5603

NURS 5605 - Adult Psychiatric Mental Health Nurse Practitioner (APMHNP): Diagnosis and Management: Concepts and Theory I

The focus of this course is the transition of the RN to the role of the Adult Psychiatric Mental Health Nurse Practitioner in health promotion, diagnosis, and management of common mental illnesses in psychiatric practice of the adult attending to differences in focused populations. Research and theory are used to identify strategies integral to advanced nursing practice for the promotion of health and prevention of illness. Using problem-based and integrated learning strategies, disorders of approximately one half of the physiologic systems and their impact on mental health are examined, critical thinking processes required for development of differential diagnosis are utilized, and therapeutic regimens for common diseases/disorders identified. Emphasizes collaborative partnerships among patient*, family, and other health care disciplines.

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Clock Hours: 4 clock hours class (90 hours clinical practicum).
Semester Credit Hours: 6.0
Prerequisites: NURS 5306, 5226, 6307, 6302, 6308, 5338, 5311 (may be taken concurrently), and 5307 (may be taken concurrently)
NURS 5606 - Adult Psychiatric Mental Health Nurse Practitioner (APMHN): Diagnosis and Management: Concepts and Theory II

The focus of this course is the progression of development of the Adult Psychiatric Mental Health Nurse Practitioner in health promotion, diagnosis, and management of common illnesses in psychiatric practice with adults attending to differences in focused populations. Research and theory are used to identify strategies that are integral to advanced nursing practice for promotion of health and prevention of illness. Using problem-based and integrated learning strategies, disorders of approximately one half of the physiologic systems are examined, critical thinking processes required for development of differential diagnosis are utilized, and therapeutic regimens for common diseases/disorders identified. Emphasizes collaborative partnerships among patient*, family, and other health care disciplines.

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Clock Hours: 135 hours of clinical practicums.
Semester Credit Hours: 6.0
Prerequisites: NURS 5605

NURS 5631 - Pediatric Nurse Practitioner (PNP) Diagnosis and Management: Concepts and Theory I

The focus of this course is the progression of development of the Pediatric Nurse Practitioner in health promotion, diagnosis, and management of common illnesses in primary health care practice across the lifespan attending to differences in focused populations. Research and theory (scholarship) are used to identify strategies integral to advanced nursing practice for the promotion of health and prevention of illness. Using problem-based and integrated learning strategies, disorders of approximately one half of the physiologic systems and the relationship to mental health are examined, critical thinking processes required for development of differential diagnosis are utilized, and therapeutic regimens for common diseases/disorders identified. Emphasizes collaborative partnerships among patient*, family, and other health care disciplines.

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Clock Hours: 135 hours of clinical practicums.
Semester Credit Hours: 6.0
Prerequisites: NURS 5605

NURS 5632 - Pediatric Nurse Practitioner (PNP) Diagnosis and Management: Concepts and Theory II

The focus of this course is the progression of development of the Pediatric Nurse Practitioner in health promotion, diagnosis and management of common illnesses in primary health care practice across the lifespan, attending to differences in focused populations. Research and theory are used to identify strategies that are integral to advanced nursing practice for promotion of health and prevention of illness. Using problem-based and integrated learning strategies, disorders of approximately one half of the physiologic systems are examined, critical thinking processes required for development of differential diagnosis are utilized, and therapeutic regimens for common diseases/disorders identified. Emphasizes collaborative partnerships among patient*, family, and other health care disciplines.

*In accordance with the philosophy of the School of Nursing, the term “patient(s)” indicates individuals, families, and aggregates.

Clock Hours: 135 clinical hours.
Semester Credit Hours: 6.0
Prerequisites: NURS 5605, 5226, 6307, 5339, 6302, 6308, 5311 (may be taken concurrently), 5330, and 5307 (may be taken concurrently)

NURS 5640 - Medical-Surgical Nursing--Clinical Nurse Specialist I: Health Management

This course addresses the unique and autonomous roles of the Medical-Surgical Nursing—Clinical Nurse Specialist as an Advanced Practice Nurse. The content focuses on human responses to health and illness, and identifying and modifying etiologies that interfere with health. Concepts covered include health promotion, disease prevention, risk reduction, and management of symptoms and functional problems. Theories and current evidence-based interventions are explored for application to special populations. Developing a customized patient-based framework for Medical-Surgical—Clinical Nurse Specialist practice in the contemporary health care system is emphasized.

Clock Hours: 112.5 clinical hours.
Semester Credit Hours: 6.0
Prerequisites: NURS 6307, 5338, 5306, 6308 (or concurrent), and 6302 (or concurrent)

NURS 5641 - Medical-Surgical Nursing—Clinical Nurse Specialist II: Diagnosis and Management

This course builds on Medical-Surgical Nursing—Clinical Nurse Specialist I and is designed to transition the graduate nursing student into the Clinical Nurse Specialist role as a practitioner and provider of care. The medical-surgical specialty focus is adults with acute and chronic illness across the continuum of care. Students have the opportunity to develop, apply, and evaluate in-depth knowledge of pathophysiological processes and evidence-based interventions for disease management. The focus of the theoretical and clinical components of the course is on nursing and medical diagnosis and management, pharmacological and nonpharmacological treatments, and an interdisciplinary approach to patients experiencing acute and chronic diseases. Clinical experiences include the implementation and evaluation of Medical-Surgical Nursing—Clinical Nurse Specialist roles in primary, secondary, and/or tertiary settings.

Clock Hours: 135 clinical hours.
Semester Credit Hours: 6.0
NURS 5650 - Acute Care Nurse Practitioner (ACNP) Diagnosis and Management: Concepts and Theory I

The focus of this course is the transition of the RN to the role of the Acute Care Nurse Practitioner in health promotion, diagnosis, and management of common illnesses in adult patients with complex acute, critical, and chronic health conditions, including the delivery of acute care services. Research and theory (scholarship) are used to identify strategies integral to advanced nursing practice for the promotion of health and prevention of illness. Using problem-based and integrated learning strategies, disorders of approximately one half of the physiologic systems are examined, critical thinking processes required for development of differential diagnoses are utilized, and invasive interventions and procedures and therapeutic regimens for common diseases/disorders in patients with acute and critical health problems are identified. This course emphasizes collaborative partnerships among patient*, family, and other health care disciplines. May be required to travel for completion of clinical practicum experiences.

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Clock Hours: 4 clock hours class, 6 clock hours clinical (90 hours clinical practicum).
Semester Credit Hours: 6.0
Prerequisites: NURS 6307, 6302, 6308, 5338, and 5311 (may be taken concurrently)

NURS 5651 - Acute Care Nurse Practitioner (ACNP) Diagnosis and Management: Concepts and Theory II

The focus of this course is the progression of development of the Acute Care Nurse Practitioner in health promotion, diagnosis and management of common illnesses in adult patients with complex acute, critical and chronic health conditions, including the delivery of acute care services. Research and theory are used to identify strategies integral to advanced nursing practice for the promotion of health and prevention of illness. Using problem-based and integrated learning strategies, disorders of approximately one half of the physiologic systems are examined, critical thinking processes required for development of differential diagnoses are utilized, and invasive interventions and procedures and therapeutic regimens for common diseases/disorders in patients with acute and critical health problems are identified. This course emphasizes collaborative partnerships among patient*, family, and other health care disciplines. May be required to travel for completion of clinical practicum experiences.

* In accordance with the philosophy of the School of Nursing, the term “patient(s)” indicates individuals, families, and aggregates.

Clock Hours: 4 clock hours class, 6 clock hours clinical (90 hours clinical practicum).
Semester Credit Hours: 6.0
Prerequisites: NURS 6307, 6302, 6308, 5338, 5311, and 5650

NURS 5701 - Adult Psychiatric Mental Health Nurse Practitioner (APMHNP): Role and Preceptorship

This course focuses on health maintenance for adult patients*. It requires the student to demonstrate integration, synthesis, and application of assessment, diagnosis, and management of patients* with acute and/or stable chronic mental health conditions. Practice and mastery of these skills will occur in preceptored clinical settings specific to psychiatric mental health care and will reflect progressive competency of the Nurse Practitioner student in health promotion, diagnosis, and management of patient* and family care for a culturally diverse population. The student will have the opportunity to use problem-based integrated learning strategies and scholarship to identify and implement strategies to promote health, prevent illness, develop and implement treatment plans, and evaluate outcomes of common and complex disorders. Critical thinking processes required for development of differential diagnosis and evaluation are required, and progressive independence of practice is expected. This course emphasizes collaborative partnerships with patient*, family, and other health care disciplines.

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Clock Hours: 180 Hours of clinical practicum.
Semester Credit Hours: 7.0
Prerequisites: NURS 5606

NURS 5933 - Pediatric Nurse Practitioner (PNP): Role and Preceptorship

This course focuses on health maintenance for patients, professionalism, and ethical roles and responsibilities of Pediatric Nurse Practitioners in the health care setting; transition to an advanced practice role (marketing, negotiations, contracts); understanding the political arena of legal and social issues governing advanced practice in primary health care (including prescriptive authority); and maintaining professional partnerships within professional advanced practice nursing and health-care professionals in other disciplines. It requires the student to demonstrate integration, synthesis, and application of assessment, diagnosis, and management of patients* with acute and/or stable chronic health conditions. Practice and mastery of these skills will occur in preceptored clinical settings specific to the population focus of specialty track (PNP) and will reflect progressive competency of the Nurse Practitioner student in health promotion, diagnosis, and management of patient* and family care for a culturally diverse population. The student will use problem-based integrated learning strategies and scholarship to identify and implement strategies to promote health, prevent illness, develop and implement treatment plans, and evaluate outcomes of common and complex disorders. Critical thinking processes required for development of differential diagnosis and evaluation are required, and progressive independence of practice is expected. This course emphasizes collaborative partnerships with patient*, family, and other health care disciplines.

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Laboratory fee: $30.
NURS 5934 - Family Psychiatric Mental Health Nurse Practitioner (FPMHNP): Role and Preceptorship
This course focuses on health maintenance for patients*. It requires the student to demonstrate integration, synthesis, and application of assessment, diagnosis, and management of patients* with acute and/or stable chronic mental health conditions. Practice and mastery of these skills will occur in preceptorized clinical settings specific to psychiatric mental health care and will reflect progressive competency of the Nurse Practitioner student in health promotion, diagnosis and management of patient* and family care for a culturally diverse population. The student will have the opportunity to use problem-based integrated learning strategies and scholarship to identify and implement strategies to promote health, prevent illness, develop and implement treatment plans, and evaluate outcomes of common and complex disorders. Critical thinking processes required for development of differential diagnosis and evaluation are required, and progressive independence of practice is expected. This course emphasizes collaborative partnerships with patient*, family and other health care disciplines. May be required to travel for completion of clinical practicum experiences.
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Clock Hours: 360 hours clinical practicum.
Semester Credit Hours: 9.0
Prerequisites: all coursework specific to the major

NURS 5936 - Acute Care Nurse Practitioner (ACNP): Role and Preceptorship+
This course focuses on health maintenance for patients, professionalism, and ethical roles and responsibilities of the Acute Care Nurse Practitioner in the health care setting; transition to an advanced practice role (marketing, negotiations, contracts); understanding the political arena of legal and social issues governing advanced practice in primary health care (including prescriptive authority); and maintaining professional partnerships with other advanced practice nurses, as well as health care professionals in other disciplines. It requires the student to demonstrate integration, synthesis, and application of assessment, diagnosis, and management of patients* with complex acute, critical, and chronic health conditions. Practice and mastery of these skills will occur in preceptor clinical settings specific to the population focus and will reflect progressive competency of the Acute Care Nurse Practitioner student in health promotion, diagnosis, and management of patient* and family care for a culturally diverse population. May be required to travel for completion of clinical practicum experiences.
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Clock Hours: 1 clock hour class, 24 clock hours clinical (360 hours clinical practicum).

NURS 6071 - Supervised Teaching
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)

Semester Credit Hours: 1.0–4.0
Prerequisites: all courses for the major

NURS 6098 - Thesis
A total of 6.0 semester credit hours (including 2.0 Semester credit hours for NURS 6298 Development of a Thesis Proposal) is required for thesis credit. (Completion of thesis is recommended but not required within the master's program. Specific policies regarding theses are available from the Office of the Graduate Nursing Program.)

Semester Credit Hours: 1.0–4.0
Prerequisites: consent of thesis advisor

NURS 6101 - Advanced Mental Health Concepts: Clinical Applications
The focus of this course is developing advanced practice mental health nursing skills by providing holistic care through assessment, crisis intervention, pharmacological management, biological or other therapies, and consultation/referral.

Clock Hours: 3 clock hours clinical (45 hours clinical).
Semester Credit Hours: 1.0
Prerequisites: Graduate standing

NURS 6105 - Role of the Clinical Nurse Scientist
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.

Semester Credit Hours: 1.0

NURS 6110 - Advanced Health Assessment and Clinical Reasoning: Clinical Application
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)
Semester Credit Hours: 1.0
Prerequisites: An undergraduate health assessment course or comparable equivalent
Cross-listed/Concurrent with NURS 6210

NURS 6201 - Advanced Mental Health Concepts
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.

Clock Hours: 2 clock hours class (30 hours class).
NURS 6210 - Advanced Health Assessment and Clinical Reasoning
This course focuses on developing theoretical and clinical basis for advanced nursing assessment across the lifespan including compiling a comprehensive database, using advanced problem-solving approaches and communicating findings.
Laboratory fee: $30.
Clock Hours: 2 clock hours class (30 hours class).
Semester Credit Hours: 2.0
Prerequisites: undergraduate health assessment course/comparable experience; NURS 5338 or concurrent

NURS 6225 - Philosophy of Nursing Science
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: four seminar hours per week.
Semester Credit Hours: 2.0
Prerequisites: study of advanced professional elements and issues; role(s) socialization

NURS 6226 - Ethics of Nursing Science
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.
Semester Credit Hours: 2.0

NURS 6298 - Development of a Thesis Proposal
The focus of this course is development and refinement of the thesis proposal. The course is completed when the proposal is approved by the thesis advisors.
Semester Credit Hours: 2.0
Prerequisites: NURS 5306, NURS 5307, and consent of thesis advisor

NURS 6302 - Advanced Pharmacotherapeutics
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).
Semester Credit Hours: 3.0
Prerequisites: NURS 5338

NURS 6306 - Social Cultural Concepts in Public Health Practice
This is a basic theory course for public health nursing/public health practice. It stresses biological, social, and cultural concepts related to health and illness in society. The focus is the role of these concepts in determining disease, treating disease, promoting health, and organizing health services. The course examines the relationship between these concepts and community value systems for application to planning interventions in public health.
Semester Credit Hours: 3.0

NURS 6307 - Health Assessment Across the Lifespan for Advanced Practice Nurses
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 practitioner 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.
Laboratory fee: $30.
Clock Hours: A 45-clock-hour clinical practicum is required.
Semester Credit Hours: 3.0
Prerequisites: undergraduate health assessment course/comparable experience; NURS 5338 or concurrent

NURS 6316 - Statistical Analysis for Nursing Science
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.
Semester Credit Hours: 3.0
Prerequisites: Graduate standing

NURS 6373 - Nursing—Quantitative Research Methods II
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.
Semester Credit Hours: 3.0
Prerequisites: NURS 6225, 6226, 6374, 7310, 7380, 6375; Co-requisite: NURS 7381

NURS 6374 - Nursing—Content and Practice: Quantitative Research Methodology I
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.
Semester Credit Hours: 3.0
Prerequisites: NURS 7490

NURS 6375 - Regression Models for Nursing Science
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.
Semester Credit Hours: 3.0
Prerequisites: Graduate standing

NURS 6376 - Mixed Methods for Clinical Nurse Scientists (available spring 2006)
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 quantitative and qualitative methods classes to devise a mixed method proposal that integrates readings on mixed methods with the student's own research interests will be used.
Semester Credit Hours: 3.0
Prerequisites: NURS 6374 and 7380

NURS 6603 - Family Nurse Practitioner Diagnosis and & Management: Concepts & Theory I
The focus of this course is the transition of the RN to the role of the Family Nurse Practitioner in health promotion, diagnosis, and management of common illnesses in primary health care practice across the lifespan attending to differences in focused populations. Research and theory are used to identify strategies integral to advanced nursing practice for promotion of health and prevention of illness. Using problem-based and integrated learning strategies, disorders of approximately one half of the physiologic systems are examined, critical thinking processes required for development of differential diagnosis are utilized, and therapeutic regimens for common diseases/disorders identified. Emphasizes collaborative partnerships among patient*, families, and other health care disciplines. May be required to travel for completion of clinical practicum experiences.
*In accordance with the philosophy of the School of Nursing, the term "patient(s)" indicates individuals, families, and aggregates.
Laboratory fee: $30.
Clock Hours: 3 clock hours class (135 hours clinical practicum).
Semester Credit Hours: 6.0
Prerequisites: NURS 6603

NURS 6610 - Gerontological Nurse Practitioner (GNP): Diagnosis and Management: Concepts and Theory I
The focus of this course is the transition of the RN to the role of the Gerontological Nurse Practitioner in health promotion, diagnosis, and management of common illnesses in primary health care practice across the lifespan attending to differences in focused populations. Research and theory (scholarship) are used to identify strategies integral to advanced nursing practice for promotion of health and prevention of illness. Using problem-based and integrated learning strategies, disorders of approximately one half of the physiologic systems are examined, critical thinking processes required for development of differential diagnosis are utilized, and therapeutic regimens for common diseases/disorders identified. This course emphasizes collaborative partnerships among patients*, families, and other health care disciplines. Student must be willing to travel to clinical sites. May be required to travel for completion of clinical practicum experiences.
*In accordance with the philosophy of the School of Nursing, the term "patient(s)" indicates individuals, families, and aggregates.
Laboratory fee: $30.
Clock Hours: 90 Hours of clinical practicums.
Semester Credit Hours: 6.0
Prerequisites: NURS 5306, 5226, 5339, 6307, 6302, 6308, 5338, and 5311

NURS 6611 - Gerontological Nurse Practitioner (GNP): Diagnosis and Management: Concepts and Theory II
The focus of this course is the progression of development of the Gerontological Nurse Practitioner in health promotion, diagnosis, and management of common illnesses in primary health-care practice across the lifespan, and attending to differences in focused populations. Research and theory (scholarship) are used to identify strategies that are integral to advanced nursing practice for promotion of health and prevention of illness. Using problem-based and integrated learning strategies, disorders of approximately one half of the physiologic systems are examined, critical thinking processes required for development of differential diagnosis are utilized,
NURS 6906 - Family Nurse Practitioner (FNP): Role and Preceptorship

This course focuses on health maintenance for patients, professionalism, and ethical roles and responsibilities of Family Nurse Practitioners in the health care setting; transition to an advanced practice role (marketing, negotiations, contracts); understanding the political arena of legal and social issues governing advanced practice in primary health care (including prescriptive authority); and maintaining professional partnerships within professional advanced practice nursing and health care professionals in other disciplines. It requires the student to demonstrate integration, synthesis and application of assessment, diagnosis, and management of patient(s) with acute and/or stable chronic health conditions. Practice and mastery of these skills will occur in preceptored clinical settings specific to the population focus and will reflect progressive competency of the Nurse Practitioner student in health promotion, diagnosis, and management of patient(s) and family care for a culturally diverse population. The student will have the opportunity to use problem-based integrated learning strategies and scholarship to identify and implement strategies to promote health, prevent illness, develop and implement treatment plans, and evaluate outcomes of common and complex disorders. Critical thinking processes required for development of differential diagnosis and evaluation is required, and progressive independence of practice is expected. This course emphasizes collaborative partnerships with patient(s), family, and other health care disciplines. May be required to travel for completion of clinical practicum experiences.

*In accordance with the philosophy of the School of Nursing, the term "patient(s)" indicates individuals, families, and aggregates.

Laboratory fee: $30.
Clock Hours: 360 hours of clinical practicums.
Semester Credit Hours: 9.0
Prerequisites: all coursework for major

NURS 7099 - Dissertation

Semester Credit Hours: to be arranged
Prerequisites: admission to candidacy for Doctor of Philosophy degree; registration for two terms is required of PhD candidates.

NURS 7310 - Theory Development, Analysis, and Evaluation in Nursing

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 dialog about 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.

Semester Credit Hours: 3.0
Prerequisites: Masters level theory/research; Pre- or Co-requisites: NURS 6225 and 6226

NURS 7380 - Qualitative Inquiry for Clinical Nursing Research

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.

Semester Credit Hours: 3.0
Prerequisites: NURS 6225, 6226, and 7310 (prerequisite or concurrent)
Cross-listed/Concurrent NURS 6225, 6226, and 7310 (prerequisite or concurrent)

NURS 7381 - Synthesis and Application of Clinical Research
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.

Semester Credit Hours: 3.0
Prerequisites: NURS 6225, 6226, 7310, 6374, 6375, and 6105

NURS 7382 - Structural Equation Models for Nursing Science
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.

Semester Credit Hours: 3.0
Prerequisites: Intermediate Statistics

NURS 7383 - Qualitative Methods II: Application in Nursing Science
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.

Semester Credit Hours: 3.0
Prerequisites: NURS 6225, 6226, 6374, and 7380

Nursing Electives
NURE 3010 - Mentored Research Practicum: Health Transitions
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. The student must be concurrently enrolled in NURE 3115 Applications of Research in Nursing: Mentored Research Scholars. During this practicum course the student actively participates in selected aspects of a research project with a faculty mentor.

Semester Credit Hours: 1.0–2.0
Prerequisites: receipt of a Research Scholar award, file completed, signed contract in student’s Undergraduate/Graduate Nursing Office file

NURE 3011 - Mentored Research Practicum: Chronic Health Transitions
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)

Semester Credit Hours: 1.0–2.0
Prerequisites: concurrent enrollment in NURE 3115, receipt of a Research Scholar award, file completed, signed contract in student’s Undergraduate/Graduate Nursing Office file

NURE 3012 - Mentored Research Practicum: Health and Illness
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)

Semester Credit Hours: 1.0–2.0
Prerequisites: concurrent enrollment in NURE 3115, receipt of a Research Scholar award, file completed, signed contract in student’s Undergraduate/Graduate Nursing Office file

NURE 3013 - Mentored Research Practicum: Children and Families
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)

Semester Credit Hours: 1.0–2.0
Prerequisites: concurrent enrollment in NURE 3115, receipt of
NURE 3014 - Mentored Research Practicum: Community
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)
Semester Credit Hours: 1.0–2.0 Variable
Prerequisites: concurrent enrollment in NURE 3115, receipt of a Research Scholar award, file completed, signed contract in student's Undergraduate/Graduate Nursing Office File

NURE 3015 - Mentored Research Practicum: Policy
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)
Semester Credit Hours: 1.0–2.0
Cross-listed/Concurrent concurrent enrollment in NURE 3115

NURE 3016 - Bridge Course University Hospital
"Bridge to Success" is a clinical preceptorship program. The goals of the program are to provide a more intensive one-on-one clinical learning experience with a clinical role model and better prepare the Graduate Nurse to assume the roles of the professional nurse in a more efficient and timely manner. This is an intense hands-on course.
Semester Credit Hours: 1.0–3.0
Prerequisites: good academic standing; enrolled in 3rd or 4th semester undergraduate, Generic Program or senior level Flex Program; must meet with faculty prior to enrollment

NURE 3090 - Topics of Special Interest in Nursing
Various topics offered. Topics include, but are not limited to:

"Adolescent Pregnancy: Nursing Implications of Biological, Psychological, and Sociological Perspectives"
3.0 Semester Credit Hours
Prerequisite: NURS 4425
This course 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.

"Healthcare of Women in their Reproductive Years"
1.0–4.0 Variable Semester Credit Hours
Prerequisites: completion of Semester 2 Generic Program or enrollment in Flex Program
This course will focus on the health of the young adult woman.

It will provide lecture and classroom discussion on menstrual cycling, fertility management, health risk assessments, access to care issues, and psychosocial influences on women’s health. This will include sexual practices, substance abuse, nutrition, domestic violence, and psychological stressors. Students will be required to research and provide a brief presentation on a relevant topic.

“Application of Theory and Scientific Inquiry”
3.0 Semester Credit Hours
Prerequisites: minimum 3.0 GPA; senior standing
This course focuses on the development and implementation of a plan for scientific inquiry. A major emphasis is placed on how theory and research affect nursing practice. Attention is given to the selection and study of nursing practice issues pertinent to beginning nursing practice. Each student is guided through a literature review and analysis regarding her/his selected focus. A proposal is developed for a project to study the nursing practice issue and subsequently to explore further the issue through direct experience, e.g., observation and/or participation. Students will have the opportunity to demonstrate leadership qualities through self-directed activities, assessment of findings from activities, and communication of project results. Attention is given to the process of scientific inquiry and the potential implications of results on nursing practice and the health care community.
Semester Credit Hours: see topics

NURE 3091 - Independent Study in Nursing
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.
Semester Credit Hours: 1.0–4.0
Prerequisites: consent of instructor

NURE 3105 - Laughter is the Best Medicine: Interdisciplinary Elective about Humor, Healing, and Health Care
The course focuses on the integration of humor and laughter into interdisciplinary partnerships with patients and families. Physiological and psychological effects of humor and their impacts on healing and health are explored. Stress and coping processes associated with humor are customized with professional practices and therapies. Impacts of cultural similarities and differences in humor are discussed within the context of the professional role in providing health care to patients and families.
Semester Credit Hours: 1.0

NURE 3115 - Applications of Research in Nursing: Mentored Research Scholars
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.
Semester Credit Hours: 1.0
Prerequisites: receipt of Research Scholar award; file completed, signed contract in student’s Nursing Office file
NURE 3215 - Teaching Scholars Program
This course is designed to provide an integrated learning experience for students interested in the pursuit of scholarship and professionalism within the context of a career in nursing education. The course will allow undergraduate and graduate students to participate in a Scholarly Program as an introduction to the education of professional nurses. The course will be structured to allow the students to work closely with a selected faculty member participating in the scholarship of teaching. Students will be mentored by the faculty member selected, working alongside her/him in the completion of an identified project. In addition, students will be required to participate in weekly seminars.
Semester Credit Hours: 2.0
Prerequisites: successful completion of Semesters I and II for Generic students; enrollment in the program for Flex RN students; successful completion of Semester I for Flex LVN students; current enrollment in the Program

NURE 3260 - Home Health Nursing the Adult and Pediatric Client
This course will focus on the delivery of customized, therapeutic nursing care that is provided to the adult and pediatric client in the home. The nursing process will provide a framework for exploring the dynamics and logistics of providing home health care within the context of the client’s rights and responsibilities. Health care regulations and guidelines specific to home care will be explored. Case studies, classroom discussion, and mentored clinical practicum will give the student the opportunity to develop an understanding of home health care with an adult or pediatric client.
Semester Credit Hours: 2.0
Prerequisites: Generic Adult Clinical: completion of NURS 3610 and 3520; Pediatric Clinical: completion of NURS 4425 and 4435; Flex LVN: completion of first semester Flex Program; Flex RN: admission to the Flex Program

NURE 3301 - Perioperative Nursing I
This “hands-on,” 15-week course is designed to provide the opportunity for students to learn to be able to function as beginning staff nurses in the operating room (OR) following graduation. The course reviews the framework of Perioperative Nursing and adds the needed depth and breadth necessary to work in ORs as novices. Theory and roles of perioperative nursing, introduced in Semester I, will be expanded upon. (It differs from the elective course, “Intro. to Perioperative Nursing,” where only a general orientation to the OR is presented in a three-week course.) The clinical practicum is based on the utilization and application of research. Students are expected to provide perioperative care to select populations such as general and OB/Gyn surgery patients. The role of the professional circulating nurse will be emphasized, with an exposure to the scrub role. Critical thinking, problem solving, and decision making are integral parts of the course and are incorporated into both didactic and practicum experiences. The student will be required to demonstrate basic perioperative competencies by the conclusion of the course.
Semester Credit Hours: 3.0
Prerequisites: NURE 3802, students entering final semester, permission of the instructor

NURE 3304 - Contemporary Issues Related to Death and Dying
This course provides an opportunity to explore in-depth issues related to death and dying at both the personal and professional level. Emphasizing the positive and necessary values of compassion, listening, and tolerance for the views of others, this course encourages participants to engage in a constructive process of self-discovery about death and dying. Areas of discussion include: valuing, definitions of death, stages of dying, emotions surrounding loss, the business of death (autopsy, funeral, cremations, burial), the ethics of death (advance directives, euthanasia, suicide, assisted suicide, organ donation), and transcultural aspects related to death and dying.
Semester Credit Hours: 3.0
Prerequisites: Generic Process—NURS 3802 and 3209; admission to Flexible Process or permission of instructor

NURE 3305 - Topics of Special Interest to Nursing: Scholarly Writing for Nurses
This course is designed to provide the opportunity for the undergraduate and graduate nursing students to learn to communicate more effectively in writing. Emphasis is placed on the importance of making every word work toward the goal of clear, concise communication. The knowledge and skills necessary to analyze and critique nursing/health-related articles and to write articles for nursing journals or patient education newsletters will be covered.
Semester Credit Hours: 3.0

NURE 3306 - Introduction to the Role of Childbirth Educator
This course will focus on an in-depth exploration of childbirth education. It will utilize the nursing process in an exploration of a nurse’s role in family-centered childbirth education. Students will examine the philosophy of childbirth education and the roles of the childbirth educator in consumer advocacy. Essential childbirth preparation core content and coping techniques will be emphasized in light of family needs and effective teaching strategies. Students will have the opportunity to examine their own values and sociocultural aspects of clients in the assessment, planning, implementation, and evaluation of patient and family teaching.
Semester Credit Hours: 3.0
Prerequisites: NURE 3209, 3310, 3802, 4425 or admission to Flexible Process

NURE 3309 - Renal Disease, Transplantation, Complications
This course is an in-depth exploration of the plight of patients as they deal with End Stage Renal Disease resulting from Diabetes and Hypertension. The physical and psychological responses of the patient, family, and community to End Stage Renal Disease and Renal Transplantation are identified. Implications for Nursing to enhance a healthy adjustment to a potentially terminal illness are stressed.
Semester Credit Hours: 3.0
Prerequisites: 1st semester Generic NURS 3802; admission to Flexible Process
NURE 3310 - Introduction to Computing in Health Care
This course is an exploration of the role of the professional nurse in design, implementation, and use of computing and high technology medical devices in the health care setting. Theories of the teaching-learning process, change process, and information management are used to critically examine issues related to the use of state-of-the-art information systems in the health care system. The course includes opportunities for the student to expand cognitive and psychomotor skills in applying a variety of computing applications to complex health care issues. (2 Cr Theory/1 Cr Lab)
Semester Credit Hours: 3.0
Prerequisites: permission of the instructor

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NURE 3312 - Theoretical Foundations of Complementary and Alternative Therapies in Nursing
The purpose of this course is to introduce selected complementary and alternative therapies cited in the health care literature. The course will critically evaluate these complementary and alternative therapies for potential benefit in maintaining and improving health. The course will incorporate current evidence and efficacy relating to use and safety of complementary and alternative therapies. (3 Cr Theory)
Semester Credit Hours: 3.0
Prerequisites: Generic students who have completed NURS 3802, and Flex students who have been admitted to the program.

NURE 3316 - Chronic Respiratory Illness in Children and Adults
This course is developed to present specialized nursing care of chronic respiratory illnesses across the lifespan. Included in the classroom experiences are relevant issues of the most prevalent respiratory illnesses in the population today. These will be explored in terms of physiologic rationale, clinical indicators, therapeutic goals, patient teaching, and use of specialized respiratory equipment as supported by research and case studies. Special emphasis on care occurring in the community, homes, and schools will be discussed with observational experiences at the American Lung Asthma Camp for Children. (3 Cr Theory)
Semester Credit Hours: 3.0
Prerequisites: Undergraduate Generic: NURS 3802; Undergraduate Flex: NURS 4512

NURE 3321 - Animal-Assisted Activities and Therapy in Health Care
This course is designed to explore the use of animal-assisted activities (AAA) and animal-assisted therapy (AAT) in various health care environments including selected observational experiences. An overview of the history and current understanding of the human-animal bond will be discussed including identified benefits as supported by observation, research, and case studies. Relevant national, state, and local organizations, laws, and standards will be introduced. Students will select specific environments, populations, and animals for further explorations. Various animals will be included in the classroom experiences. (3 Cr Theory)

NURE 3324 - Speaking Spanish to Patients
This course is designed to assist students in meeting the needs of Spanish-speaking patients through effective communication. Communication skills in Spanish will be used to gather a variety of data from Spanish-speaking patients and to identify patients' needs. Verbal elements of Spanish pronunciation and grammar will be included to assist students in the application of the nursing process. (3 Cr Theory)
Semester Credit Hours: 3.0
Prerequisites: NURS 3209, 3310 and 3802, or Graduate standing

NURE 3356 - Nursing Interventions in Pain
This course is a survey and analysis of current theories about pain and its alleviation and an exploration of nurses' role in pain management.
Semester Credit Hours: 3.0
Prerequisites: NURS 3802 or 3409

NURE 3365 - Understanding Health Disparities and Caring for Racial and Ethnic Minorities
Understanding health disparities involves a critical analysis of historical, political, economic, social, cultural, and environmental conditions that have produced health disparities for racial and ethnic minorities in the United States. In Healthy People 2010 Report, two goals were listed: 1) improve the quality of life for all citizens, and 2) eliminate health disparities. The purpose of this class is to understand basic issues that underlie health disparities. Each student will gain a better understanding of the relationship between a minority patient's socioenvironmental context and how that affects their health and the health of minority communities. This course will include current literature that will foster discussions that will examine health disparities, explore socioenvironmental determinants of those disparities, and determine the health care community's response to these disparities. Students will be asked to critically reflect on their personal and professional roles in eliminating health disparities.
Semester Credit Hours: 3.0
Prerequisites: NURS 3209 or admission into the Flex Program

NURE 3366 - Interdisciplinary Course on Minority Women's Health
The purpose of this interdisciplinary course is to allow nursing students to examine and apply a gender-based analysis to specific and global health issues, particularly as they relate to minority women. Students' work in this course will provide them the opportunity to better understand issues such as gender and the politics of health care; women's reproductive health and health care; special issues in women's health, including cancer, violence, and aging; and women's health and the global environment. The course concentrates on health issues that are unique to minority women's experiences and the medicalization of the treatment of illness considering only interventions designed for men, and of women's health issues and concerns. As an interdisciplinary course (nursing, medical, and dental), enhanced understanding of varied perceptions about women's health among health professions and its rela-
thorship to health outcomes will be offered. This course will include video presentations from local as well as national experts and current literature that will foster interdisciplinary discussions. Students will be asked to critically reflect on their personal and professional advocacy roles in providing health care to minority women.

Semester Credit Hours: 3.0

NURE 3369 - Hispanic Health Concerns: A Nursing Perspective

This course is designed to provide the student with a comprehensive, in-depth view of topics and issues influencing the health of the Hispanic population in order to enhance the cultural sensitivity of the health care provider. An overview of the characteristics of the Hispanic population is given as well as data in relation to lifestyle, major health concerns, and research findings on Hispanic health across the life cycle. The use of folk practices, herbal medicine, and utilization of the health care delivery system and its implications to nursing practice is addressed. The role of the nurse in disease prevention is explored within the framework of the life cycle. Nursing interventions to overcome language barriers are provided, including sources for Spanish-language, culturally relevant publications.

Semester Credit Hours: 3.0
Prerequisites: NURS 3802 or Graduate standing

NURE 3373 - Oncology Nursing

This course focuses on nursing issues related to major physical and psychological health transitions of oncology patients as well as associated social issues. The course emphasizes the customization of health care needed by oncology patients to cope with disease and side effects of treatment unique to this group. Students will explore professionalism as it relates to integrated learning, partnering, and scholarship in providing nursing support for oncology patients.

Semester Credit Hours: 3.0
Prerequisites: NURS 3610; admission to the Flex Program; admission to the Graduate Program

NURE 3383 - Nursing Care of Children with Developmental Disabilities in the Community

This is a multidisciplinary course that will include students in nursing, social work, early childhood, and special education. The course will focus on the needs of children with developmental disabilities and their families in the community. Concepts and content to be covered include: family adaptation, normalization, behavioral and school problems, the impact of the Americans with Disability Act and Public Law 99-457, selected disease entities, and assessment of development for early detection of problems. Examination of many issues that exist in the community for children with developmental disabilities as well as transition to independent living will be explored. The role of the nurse on an interdisciplinary team that works to enable and empower families will be modeled for the student.

Semester Credit Hours: 3.0
Prerequisites: NURS 4435

NURE 3384 - Complementary/Alternative Therapies in Nursing

This purpose of this course is to introduce complementary and alternative therapies cited in health care literature. The course will critically evaluate these complementary and alternative therapies for potential benefit in maintaining and improving health. The course will incorporate current evidence and efficacy relating to use and safety of complementary and alternative therapies.

Semester Credit Hours: 3.0
Prerequisites: Generic students who have completed NURS 3802, and Flex students who have been admitted to the program

NURE 3385 - Speaking in Spanish

This course is designed to assist students in customizing care for Spanish-speaking patients and/or families. The course will focus on the verbal elements of Spanish pronunciation and grammar to assist students in the application of the nursing process with Spanish-speaking patients and/or families. Cultural theory will be analyzed and integrated in providing care for Spanish-speaking patients.

Semester Credit Hours: 3.0
Prerequisites: NURS 3802 and 3811 Generic Process, admission to Flexible Process, or admission to Graduate Program

NURE 3386 - Environmental Health

Environment is an integral part of nursing’s heritage. Florence Nightingale was a pioneer in the field of environmental health and realized that people cannot be healthy unless they have healthy places to live, work, and play. This course will focus on many aspects of environmental health including how to take an exposure history; risk communication; exposure in the workplace, home, and school; children’s environmental health; various chemicals and their effects on humans; environmental justice; and environmental health laws. Field trips to various sites may be included. Also included will be discussion on topics such as acid rain, global warming, desertification, rain forests, etc.

Semester Credit Hours: 3.0
Prerequisites: admission to Undergraduate Program

NURE 3387 - Care of the Client with HIV

This course is intended to provide an intensive introduction into the issues surrounding the HIV client. The course will give a general overview of the history of HIV; issues of the caregiver of the HIV client; pathophysiology, immunology, and epidemiology of HIV; diagnostic testing; counseling techniques; and the transdisciplinary treatments for HIV disease and associated opportunistic infections.

Semester Credit Hours: 3.0
Prerequisites: Generic: NURS 3610 or Flex: admission to Program

NURE 4302 - Flex Bridge in Critical Care

Flex Bridge I in Critical Care at University Hospital is offered as a clinical preceptorship in critical care for highly motivated undergraduate students enrolled in the RN completion program. In order to complete the clinical requirements for this course, students are provided the opportunity to rotate through at least 3 critical care areas of the hospital. These include the Surgical Trauma Intensive Care Unit, Pediatric Intensive Care Unit, Neonatal Intensive Care Unit, and the Emergency Department.
This is an intense “hands-on” course in which each student is provided with an experienced preceptor in each of the critical care areas they “bridge” in. In addition to the clinical experience, the student will explore various concepts unique to the critical-care environment. These include, but are not limited to, complex case studies, pathophysiology, ethical dilemmas, managed care, etc. (1 Cr Theory/2 Cr Clinical)
Semester Credit Hours: 3.0
Prerequisites: The student must be a licensed LVN or RN and have completed the undergraduate Flexible Process courses 3409 and 4212.

NURE 5001 - Mentored Research Practicum: State of the Science
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.
Semester Credit Hours: 1.0–2.0
Prerequisites: receipt of a Research Scholar award; concurrent enrollment in NURE 5115. Submit a completed, signed student/faculty mentor contract for student’s Graduate Nursing Office file.

NURE 5002 - Mentored Research Practicum: Proposal Development
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.
Semester Credit Hours: 1.0–2.0
Prerequisites: receipt of a Research Scholar award; concurrent enrollment in NURE 5115. Submit a completed, signed student/faculty mentor contract for student’s Graduate Nursing Office file.

NURE 5003 - Mentored Research Practicum: Instrumentation
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.
Semester Credit Hours: 1.0–2.0 Variable
Prerequisites: receipt of a Research Scholar award; concurrent enrollment in NURE 5115. Submit a completed, signed student/faculty mentor contract for student’s Graduate Nursing Office file.

NURE 5004 - Mentored Research Practicum: Statistical Methods
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.
Semester Credit Hours: 1.0–2.0
Prerequisites: receipt of a Research Scholar award; concurrent enrollment in NURE 5115. Submit a completed, signed student/faculty mentor contract for student’s Graduate Nursing Office file.

NURE 5005 - Mentored Research Practicum: Proposal Testing
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.
Semester Credit Hours: 1.0–2.0
Prerequisites: receipt of a Research Scholar award; concurrent enrollment in NURE 5115. Submit a completed, signed student/faculty mentor contract for student’s Graduate Nursing Office file.

NURE 5006 - Mentored Research Practicum: Research Results/Policy
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.
Semester Credit Hours: 1.0–2.0
Prerequisites: receipt of a Research Scholar award; concurrent enrollment in NURE 5115. Submit a completed, signed student/faculty mentor contract for student’s Graduate Nursing Office file.

NURE 5007 - Clinical Applications in Advanced Nursing Practice
This course provides an opportunity for qualified students to work closely with a faculty member and/or preceptor who is/are actively engaged in advanced clinical practice.
Semester Credit Hours: 1.0–4.0
Prerequisites: NURS 6307

NURE 5090 - Topics of Special Interest in Nursing
Various topics offered. Topics include, but are not limited to: “Adolescent Pregnancy: Nursing Implications of Biological, Psychological, and Sociological Perspectives”
This course 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 childbirth 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.*

“Anthropological Perspectives on Nursing and Health”
The course will be 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.

Semester Credit Hours: 1.0-4.0
Prerequisites: Graduate standing

NURE 5091 - Independent Study in Nursing
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.*

Semester Credit Hours: 1.0–6.0
Prerequisites: Graduate standing and consent of instructor

NURE 5110 - Interdisciplinary Team Approach to Pain Management
This course provides an overview of current concepts and management of pain from a clinical interdisciplinary health care team perspective. The content includes the classification, characteristics, and assessment of pain and interventions for pain control (pharmacologic, invasive, cognitive, and physical). Emphasis will be placed on respecting the contribution of each member of the health care team through student involvement in case studies. The faculty and student body will be multidisciplinary representing Health Professions (Occupational Therapy and Physical Therapy), Dentistry, Medicine, Nursing, and the Clinical Pharmacy programs.

Semester Credit Hours: 1.0
Prerequisites: open to students enrolled in Nursing, Dental, Medicine, Health Professions occupational and physical therapy schools, and the clinical pharmacy program; OT 4; MPT 1–3; PharmD; DS 3&4; MS 1–4; NS 2, 3, & 4; and Graduate.

NURE 5115 - Application of Research in Nursing
A list is provided each academic semester citing faculty and their research projects with whom graduate students may contract for this elective course.

Semester Credit Hours: 1.0

NURE 5152 - Social and Moral Values in the Health Professions
This interdisciplinary course focuses on current bioethical issues and dilemmas encountered in the delivery of services by health professionals. The sequence of topics, taught by an interdisciplinary team of faculty members and guest speakers, spans the entire academic year. The first classes will have the opportunity to develop a philosophical framework for ethical decision making. Subsequent sessions will offer an opportunity to utilize this framework in the analysis of selected current ethical issues such as euthanasia, ethics of research, abortion, allocation of scarce resources, and reproductive technology. Each class consists of a presentation of an ethical issue followed by class discussion. This course is open to nursing students enrolled in the undergraduate, graduate, or flexible process. This course may be taken in either the fall or spring semester for one or two hours of credit. Students may register for two hours of credit (NURE 3252/5252) only once, but may do so in either the fall or spring semester. *Clock hours: one class hour or two class hours per week.*

Semester Credit Hours: 1.0

NURE 5153 - Social and Moral Values in the Health Professions
This interdisciplinary course focuses on current bioethical issues and dilemmas encountered in the delivery of services by health professionals. The sequence of topics, taught by an interdisciplinary team of faculty members and guest speakers, spans the entire academic year. The first classes will have the opportunity to develop a philosophical framework for ethical decision making. Subsequent sessions will offer an opportunity to utilize this framework in the analysis of selected current ethical issues such as euthanasia, ethics of research, abortion, allocation of scarce resources, and reproductive technology. Each class consists of a presentation of an ethical issue followed by class discussion. This course is open to nursing students enrolled in the undergraduate, graduate, or flexible process. This course may be taken in either the fall or spring semester for one or two hours of credit. Students may register for two hours of credit (NURE 3252/5252) only once, but may do so in either the fall or spring semester. *Clock hours: one class hour or two class hours per week.*

Semester Credit Hours: 1.0

NURE 5195 - Mentored Research Scholars
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.

Semester Credit Hours: 1.0
Prerequisites: concurrent enrollment in a 1- or 2-semester credit hour NURE 5115. Submit a completed, signed student/faculty mentor contract for student’s Graduate Nursing Office file; receive acceptance of the plan for mentored contract.

NURE 5215 - Application of Research in Nursing
A list is provided each academic semester citing faculty and their research projects with whom graduate students may contract for this elective course.

Semester Credit Hours: 2.0

NURE 5242 - Psychotherapy with Groups
This course emphasizes theory and clinical practice in group psychotherapy. Selected models including psychoanalytic, Tavistock, group focal conflict, Gestalt, and expressive therapies are compared and contrasted. The role of the nurse as leader and/or co-leader within psychotherapeutic groups is examined. Research ideas are formulated based on both practice and theory.

Semester Credit Hours: 2.0
Prerequisites: NURS 5306, 5307, and 5339
NURE 5252 - Social and Moral Values in the Health Professions
This interdisciplinary course focuses on current bioethical issues and dilemmas encountered in the delivery of services by health professionals. The sequence of topics, taught by an interdisciplinary team of faculty members and guest speakers, spans the entire academic year. The first classes will have the opportunity to develop a philosophical framework for ethical decision making. Subsequent sessions will offer an opportunity to utilize this framework in the analysis of selected current ethical issues such as euthanasia, ethics of research, abortion, allocation of scarce resources, and reproductive technology. Each class consists of a presentation of an ethical issue followed by class discussion. This course is open to nursing students enrolled in the undergraduate, graduate, or flexible program. This course may be taken in either the fall or spring semester for one or two hours of credit. Students may register for two hours of credit (NURE 3252/5252) only once, but may do so in either the fall or spring semester. Clock hours: one class hour or two class hours per week. Semester Credit Hours: 2.0

NURE 5314 - Nursing Interventions in Pain
This course is a survey and analysis of current theories about pain and its alleviation. The exploration of nurses’ role in pain management is included. Clock hours: three class hours per week. Semester Credit Hours: 3.0

NURE 5315 - Application of Research in Nursing
A list is provided each academic semester citing faculty and their research projects with whom graduate students may contract for this elective course. Semester Credit Hours: 3.0

NURE 5334 - Nursing Care of the Patient in Crisis in the Emergency Department
This course is designed to explore various theories, concepts, and research in the nursing care of the patient in crisis within the Emergency Department. A holistic approach will be taken utilizing nursing process. The focus will be upon individualization of the nursing process in the care of the patient in the Emergency Department. Continuity of care will be emphasized from admissions to stabilization, transfer, discharge and/or clinical follow-up. 15 Clock Hours per semester. Semester Credit Hours: 3.0

NURE 5341 - Psychotherapy with Families
Students examine various paradigms of family therapy, comparing and contrasting psychoanalytic, communication, structural, integrative, and systems models. A supervised practicum provides the opportunity for application of selected frameworks to dysfunctional families. Major aspects of the role of the psychiatric/mental health nurse in family therapy are developed and analyzed. Research ideas are formulated based on both practice and theory. Semester Credit Hours: 3.0
Prerequisites: NURS 5307 recommended

NURE 5344 - Psychiatric Nursing of Children and Adolescents
This course is designed to provide the student with an overview of the field of psychiatric and mental health nursing of children and adolescents. The emphasis of the course is placed on the various psychopathologies, as well as the currently suggested treatment approaches and nursing interventions in working with disturbed children and adolescents. The etiologies and perpetuation of child and adolescent psychopathologies will be explored. The nurse’s role in the prevention of mental disorders in children and adolescents will be identified. A review of current thinking in terms of family assessment and family intervention will be a significant component of the course. Collaborative work is part of the course teaching method. Semester Credit Hours: 3.0
Prerequisites: Generic: NURS 3522; Flexible: NURS 3624; Graduate: none

NURE 5351 - Nursing Management of Dysrhythmias
The emphasis of this course is on the electrophysiologic basis of cardiac dysrhythmias, their management, and the nursing responsibilities associated with each type of dysrhythmia. The course is designed to increase the student’s understanding of electrocardiography (EKG) gradually, with information on the anatomy and physiology of the heart, electrophysiology, normal electrical activation of the heart, and mechanisms of dysrhythmias. Throughout the course, nursing responsibilities regarding EKG interpretation and nursing intervention pertinent to specific dysrhythmias will be stressed, incorporating the nursing process. Clock hours: one and one-half class hours and four and one-half practicum hours per week. Semester Credit Hours: 3.0
Prerequisites: Generic-completion of Semester II; Flex-admission to program; Graduate-admission to program/course open to Continuing Education participants

NURE 5362 - Ethical-Legal Aspects in Nursing and Health Care
This course introduces the student to contemporary bioethical and legal issues confronting nurses who provide care in a variety of settings. The major focus of the course will be on ethical decision making and the contemporary nursing practice. Clock hours: three class hours per week. Semester Credit Hours: 3.0

NURE 5367 - Hispanic Health Concerns: A Nursing Perspective
This course is designed to provide the student with a comprehensive, in-depth view of topics and issues influencing the health of the Hispanic population in order to enhance the cultural sensitivity of the health care provider. An overview of the characteristics of the Hispanic population is given as well as data in relation to lifestyle, major health concerns, and research findings on Hispanic health across the life cycle. The use of folk practices, herbal medicine, and utilization of the health care delivery system and its implications to nursing practice is addressed. The role of the nurse in disease prevention is explored within the framework of the life cycle. Nursing interventions to overcome language barriers are provided including sources for Spanish-language, culturally relevant publications. Clock hours: three class hours per week. Semester Credit Hours: 3.0
Prerequisites: NURS 3811 or Graduate standing

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NURE 5412 - Gross Anatomy for Advanced Practice Nurses
This multidisciplinary elective course is an expansion of basic anatomy with the additional use of cadavers (when available), cadaver prossections, models, atlas drawings, and photographs. This course will concentrate on osteology, arthrology, and major organ systems as they apply to Advanced Practice Nursing. This course focuses on gross anatomy to include normal structures, landmarks, normal variations, and pathology. Clinical applications will be introduced in connection to gross anatomy. This course is Web-enhanced with some lectures and laboratory sessions on campus.
Semester Credit Hours: 4.0
Prerequisites: Graduate standing. Strongly recommended that this elective be taken before NURS 6307, 5338, and 6302.

NURE 5415 - Psychiatric Mental Health Therapy/Individual
This course emphasizes the development of psychiatric mental health nurse specialist skills through individually supervised practice, analysis, and evaluation of interpersonal process with a client experiencing psychological dysfunction. Students examine factors fostering mental health and mental illness, assumptions about human behavior, and the developing practice of psychiatric/mental health nursing. Relevant theories are utilized to guide the nurse-client interpersonal process. Assessment of clients' health status with particular emphasis on psychosocial and mental functioning provide the basis for nursing intervention emphasizing the therapeutic use of self, critical application of research findings, and collaboration with other mental health personnel.
Semester Credit Hours: 4.0

NURE 5445 - Mental Health Liaison/Consultation Nursing
This course is designed to further develop the psychiatric/mental health clinical specialist’s role in liaison/consultation nursing. Current liaison/consultation nursing roles are examined, impediments and opportunities for role development are analyzed, collaborative relationships are explored, and new roles are projected. Selected aspects of the liaison/consultation nurse specialist's role are implemented and evaluated within a designated setting. Students utilize relevant theories to analyze the social, economic, and political forces within a social system related to the delivery of psychosocial care. Special emphasis is given to prioritizing needs and rendering selected mental health services within that social system. Areas of needed research within mental health liaison/consultation practice are explored.
Semester Credit Hours: 4.0
Prerequisites: NURS 5306, NURS 5307, NURS 6308

NURE 7090 - The Dissertation Proposal Process in Nursing
This elective course provides an opportunity for doctoral candidates to work closely with their dissertation committee to develop the dissertation proposal and proceed through the Graduate Faculty Council approval process.
Semester Credit Hours: 1.0–3.0
Prerequisites: successful completion of the written and oral qualifying examinations

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