

TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER
SCHOOL *of* MEDICINE



Publication Policy

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All information in this catalog is the sole responsibility of each respective department, school, program, office, etc. Other than admissions requirements and regulations, the TTUHSC School of Medicine Office of Admissions is not responsible for the content of those respective counterparts. Every effort is made to obtain the most current information at the time of publication from those individual entities.

Equal Opportunity Statement

The School of Medicine is committed to a policy of equal opportunity for all, and will not discriminate on the basis of race, color, religion, age, sex, national origin, disability or veteran status.

Notice of the Annual Security Report

Every year in October, Texas Tech University Health Sciences Center releases the Annual Security Report in compliance with the federal law identified as the "Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act."

The report contains statistics about certain specified crimes and related incidents that have been reported to the Texas Tech Police Department and other campus security authorities for the previous three calendar years. The report also contains policies and practices pertaining to campus security, crime reporting, alcohol and drugs, victims' assistance programs, student discipline policies, campus resources, community safety alerts, crime prevention, access to campus facilities and properties as well as personal safety tips.

[Click here to download the latest annual security report.](#)

To request a paper copy of this report, contact the Texas Tech Police Department by email at police@ttu.edu or by phone at 806-742-3931 during normal business hours, 8 a.m. – 5 p.m., Monday through Friday.

School of Medicine Inquiries

All inquiries regarding admission to the School of Medicine should be addressed to:

Texas Tech University Health Sciences Center
School of Medicine
Office of Admissions
3601 4th Street, STOP 6216
Lubbock, TX 79430

Phone: (806) 743-2297

Fax: (806) 743-2725

Web: <http://www.ttuhsc.edu/medicine/admissions>

Email: somadm@ttuhsc.edu

<https://www.facebook.com/ttuhscmed>

All inquiries regarding immunizations, graduation, student organizations/events, and orientation should be addressed to:

Office of Student Affairs

School of Medicine
Texas Tech University Health Sciences Center
3601 4th Street, STOP 6222
Lubbock, TX 79430

Phone: (806) 743-3005

Fax: (806) 743-4165

Web: <https://www.ttuhschool.edu/medicine/student-affairs/>

All inquiries regarding curriculum, advancements, and grades should be addressed to:

Office of Academic Affairs
School of Medicine
Texas Tech University Health Sciences Center
3601 4th Street, STOP 8326
Lubbock, TX 79430

Phone: (806) 743-5668

Fax: (806) 743-5669

Web: <https://www.ttuhschool.edu/medicine/academic-affairs/>

Table of Contents

- Cover
- General Information
- Administration
- About Our School
- Office of Admissions
- Office of Student Affairs
- Office of Academic Affairs
- Doctor of Medicine Program
- Degrees & Programs
 - **Phase 1**
 - Required Courses
 - Electives
 - **Phase 2**
 - Clerkships
 - Integration Seminar
 - **Phase 3 Required Courses**
 - Transition to Residency
 - Ambulatory Rotations
 - Critical Care Rotations
 - Sub Internships
 - **Phase 3 Electives**
 - Anatomy Electives
 - Anesthesiology Electives
 - Dermatology Electives
 - Emergency Medicine Electives
 - ENT and Otolaryngology Electives
 - Family Medicine Electives
 - Geriatric Medicine Electives
 - Interdisciplinary Electives
 - Internal Medicine Electives
 - Library Electives
 - Neurology Electives
 - Obstetrics and Gynecology Electives
 - Ophthalmology Electives
 - Orthopedics Electives
 - Pathology Electives
 - Pediatrics Electives
 - Physical Medicine and Rehab Electives
 - Psychiatry Electives

- Public Health Electives
- Radiology Electives
- Research Electives
- Surgery Electives
- Urology Electives
- Special Topics Electives
- Away Rotations
- **Family Medicine Accelerated Track**
 - FMAT Courses
- Faculty Directory

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Ginger Kerrick Davis Vice Chairwoman (Webster)	Clay Cash (Lubbock)
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Texas Tech University Health Sciences Center President's Cabinet

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Bryce McGregor, MBA Interim Executive Vice President of Clinical Affairs	Lance McMahon, PhD Senior Vice President for Research and Innovation	Ex-Officio Members Ron Cook, DO, MBA, FAAFP Chief Health Officer
Billy U. Philips, Jr., PhD, MPH Executive Vice President, F. Marie Hall Institute for Rural and Community Health	Ashley Hamm Vice President of External Relations	Justin White, MBA Assistant VP for University Strategy
Non-Member Participant	Bryce Looney, MS Special Assistant to the President	

TTUHSC Presidents

Grover Elmer Murray (1966-1976)	M. Roy Wilson (2003-2006)
Maurice Cecil Mackey (1976-1979)	John C. Baldwin (2007-2009)
Lauro Fred Cavazos (1980-1988)	Tedd L. Mitchell, M.D. (2010-2019)
Robert Lawless (1988-1996)	Lori Rice-Spearman, Ph.D. (2019-Present)
David Smith (1996-2002)	

TTUHSC Mission

The mission of the Texas Tech University Health Sciences Center is to improve the health of people by providing educational opportunities for students and health care professionals, advancing knowledge through scholarship and research, and providing patient care and service.

The Texas Tech University Health Sciences Center fulfills its higher education mission by achieving the following Institutional Goals:

- Train competent health professionals and scientists
- Increase externally funded, peer-reviewed research, especially NIH-funded research, and research focused on aging, cancer, and rural health
- Improve access to quality health care for TTUHSC's target populations
- Prepare health professions students for an increasingly diverse workforce and patient population
- Provide leadership in the development of partnerships and collaborations to improve community health
- Operate TTUHSC as an efficient and effective institution.

TTUHSC Vision

Texas Tech University Health Sciences Center will be recognized nationally as a top-ranked health sciences university.

School of Medicine Mission

The TTUHSC School of Medicine saves lives, improves health, and meets evolving needs for primary and specialty care. Drawing on the expertise and insight forged on our campuses across West Texas, we train future physicians using a continuously adapting curriculum that values excellence and innovation, just as we promote research that expands knowledge and advances patient care.

We foster a culture of achievement that utilizes the unique perspectives and talents of our learners, team members, patients, and community partners. Driven by our values and pursuit of excellence, we bring together interprofessional education, interdisciplinary collaborations, research, team-based patient care, and community engagement to enrich the lives of all people.

School of Medicine Vision

To be known for excellence in teaching, patient care, and scientific contributions that enhance the health care of communities in the region.

School of Medicine Admissions Mission

To enhance the overall health and outcomes for communities in which we serve, we seek to recruit and admit individuals who have ties to West Texas or who come from or have an interest in serving rural areas, including those who are socioeconomically disadvantaged or who are first generation learners. We complete this by making use of a holistic review process for evaluating, interviewing and selecting applicants for admission to the School of Medicine.

The core foundational value of including the different cultures, lifestyles, personal beliefs and ideas of all those we serve - and serve alongside - provides a positive impact on the health of our regional, national and global societies. We achieve this by producing physicians with core values who are competent and capable of making positive impacts on the health of an ever changing demographic and the communities in which they serve.

As we pursue excellence in health care education, research and patient care, we will be ever mindful of the unity that is gained through our collective strengths.

Texas Tech University Health Sciences Center and Lubbock

The Texas Tech University Health Sciences Center School of Medicine was created by the 61st Texas Legislature in May 1969, as a multi-campus regional institution with Lubbock as the administrative center and with other regional campuses at Amarillo, El Paso, and Odessa. The lack of a single focus of population density dictated the regionalization of medical education in West Texas, which comprises 48% of the

landmass of the state and encompasses 12% of its population. The School of Medicine is one of six schools in the Health Sciences Center. The other four being the Schools of Nursing, Health Professions, Pharmacy, Graduate School of Biomedical Sciences and the Julia Jones Matthews School of Population and Public Health. All six schools are committed to regionalized, multi-campus educational experiences.

The School of Medicine formally opened in August of 1972 with a first-year class of 36 and a third-year class of 25 students. The Texas Tech University Health Sciences Center was established in 1979, eventually ushering in the Schools of Allied Health - now known as the School of Health Professions, Nursing, Biomedical Sciences, and Pharmacy. From 1980 to 1994, the school accepted 100 first year students for a total of 400 in the student body. In 1993, class size was increased by the Texas State Legislature to 120 in each first year class beginning with the class entering in the fall of 1994. In 2000, the Legislature approved a class increase to 200; however, a smaller class size of 140 has been maintained through the entering year 2011. In 2012 the entry class size increased to 150 and remained at that size until 2014 when it increased to 180, where it remains today. Primary consideration is given to residents of Texas and the contiguous counties of New Mexico and western Oklahoma. Other out-of-state applicants may be considered on an individual basis if they have outstanding academic credentials.

The school has as its major objectives the provision of quality medical education and the development of programs to meet appropriate health care needs of the 108 counties of West Texas. The school has a full-time faculty of 476 with 22 part-time faculty and 906 volunteer faculty.

The goal of populating West Texas with physicians is currently being achieved with about 20% of the region's doctors having been trained at the Texas Tech University Health Sciences Center. TTUHSC is currently expanding even further, with the October 2003 legislation that approved a four-year medical school in El Paso. The goal of the School of Medicine, however, has yet to be reached. The region is still severely underserved in certain sections of the service area despite the presence of the HSC health care institutions scattered throughout the region. This is why special attention is paid to applicants who are from or may have ties to West Texas.

Lubbock offers clinical experiences at University Medical Center, Covenant Medical Center, Veterans Administration Outpatient Clinic, Garrison Geriatric Care Center, and the Montford Psychiatric Prison Hospital. In January 2004, the Texas Tech University Health Sciences Center Academic Classroom Building was opened in Lubbock. The facility includes two large state-of-the-art auditoriums, along with a new histology laboratory that is also designed for computer-based curriculum. In 2007, a new 150,000 square foot medical pavilion was opened housing the ambulatory clinics for six specialties with plans for continued expansion and development.

Amarillo Campus

The Amarillo campus began in 1972 with the forming of the medical school in Lubbock. Elective rotations for students were performed in space borrowed from the Northwest Texas Hospital and the VA Medical Center. In 1975, the Amarillo HSC established its own permanent location. In 1978, the first medical school class of five students entered the Amarillo campus. That number has steadily risen to 65 third- and fourth-year students in September 2006. In Amarillo, clinical education is provided in area hospitals and health care facilities. These include Northwest Texas Hospital, Baptist St. Anthony Hospital, Don and Sybil Harrington Cancer Center, the Psychiatric Pavilion, and the Veterans Administration Hospital of Amarillo.

Permian Basin Campus

The Permian Basin (Odessa) campus was established in 1979 and serves as a resident training facility for the Permian Basin and surrounding communities in Family and Community Medicine, General Surgery, Internal Medicine, Obstetrics/Gynecology and Geriatrics. In the Midland-Odessa area, clinical sites are Medical Center Hospital (Odessa) and Memorial Hospital (Midland).

Medical Students and the Multi-Campus System

The first two years are offered on the Lubbock campus, contiguous with Texas Tech University. The recreational and cultural resources of the University are available to the medical students. For clinical studies, each class is currently divided with approximately 45-55 students in Amarillo, 90-110 students in Lubbock, and 20-30 students at the Permian Basin Campus. Beginning in 2016 the Lubbock campus began offering third and fourth year educational experiences at both University Medical Center and Covenant Health System.

Assignments to the regional campuses are based to the extent possible on a preference form that each student will complete prior to being assigned to any of the three campuses. At the beginning of the first year, there is an active orientation program that includes time with students with representatives from the respective regional campuses to which each student has been assigned.

At each regional center, clinical students in their third-year rotate through the basic clinical clerkships in Internal Medicine, Surgery, Obstetrics/Gynecology, Psychiatry, Pediatrics, and Family Medicine. The students are provided a diverse experience in community hospitals and in the School of Medicine's ambulatory clinics. In the fourth year, students may take elective experiences at any of the regional campuses and at other institutions.

The educational program at each regional center is comparable as indicated by the number and types of patients seen by students and by student performance on measures such as National Board of Medical Examiners subject exams, oral examinations, departmental examinations, and clinical ratings by faculty.

The goals of these programs are to develop competent, compassionate, professional physicians who provide the highest quality of care for the citizens of West Texas and beyond, who participate in scholarly activity, and who provide academic and community leadership. To assure the best possible education, the School of Medicine holds all programs to high academic and professional standards. These standards include those promulgated by the Accreditation Council for Graduate Medical Education and the American Board of Medical Specialties.

Graduate Medical Education (GME)

In addition to the four-year curriculum leading to the M.D. degree, the Texas Tech University Health Sciences Center School of Medicine provides graduate training on all four campuses (Amarillo, El Paso, Lubbock, and Odessa). The specialty (residency) programs include Anesthesiology, Dermatology, Emergency Medicine, Family Medicine, General Surgery, Internal Medicine, Neurology, Obstetrics & Gynecology, Ophthalmology, Orthopedics, Otolaryngology, Pediatrics, Physical Medicine & Rehabilitation, Psychiatry, Transitional Year, and Urology. The sub-specialty programs (fellowships) include Breast Oncology, Burn & Wound, Cardiovascular Disease, Child & Adolescent Psychiatry, Gastroenterology, Geriatric Medicine, Hematology and Medical Oncology, Hospice and Palliative Care, Infectious Disease, Interventional Cardiology, Mohs, Nephrology, Pain Management, Pediatric Hospitalist, Pulmonary and Critical Care Medicine, Sports Medicine, and Surgical Critical Care.

For the latest detailed information on Texas Tech University Health Sciences Center residency programs, visit: <https://www.ttuhschool.edu/medicine/graduate-medical-education/programs.aspx>

Accreditation

Texas Tech University Health Sciences Center is accredited by the Southern Association of colleges and Schools Commission on Colleges (SACSCOC) to award baccalaureate, masters, doctoral, and professional degrees. Texas Tech University Health Sciences Center also may offer credentials such as certificates and diplomas at approved degree levels. Questions about the accreditation of Texas Tech University Health Sciences Center may be directed in writing to the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, GA 30033-4097, by calling (404) 679-4500, or by using information available on SACSCOC's website (www.sacscoc.org).



John C. DeToledo, M.D.
Interim Dean of the School of Medicine

In almost every state in our country, medicine is being practiced by graduates of the Texas Tech University Health Sciences Center School of Medicine. We have an exciting story to tell... a story retold and reinvented each time a graduate makes a mark on the world.

Since 1969, we have graduated more than 4,000 physicians. Our original charter was to place more physicians in West Texas, an area of the state where many counties had none. Today, we are proud that more than 20 percent of the practicing physicians in West Texas graduated from our medical school and/or residency programs.

Our departments conduct research and foster scientific discovery that translate into better health solutions. From aging, cancer, diabetes, infectious diseases, and women's health – just to name a few – the School of Medicine's strategy to enhance research programs is through supporting the faculty, students, residents, and staff with every available professional resource and expertise. A major initiative for the school is to provide quality lab space, recruit creative, innovative research faculty, and to develop graduate students and postdoctoral fellows for lifelong careers in medical research. Accomplishments in recent years include: the renovation and construction of research space in Amarillo, El Paso, and Lubbock, continued and aggressive faculty recruitment with attractive start-up packages, substantial increases in endowed chairs and external funding and most recently, the addition of the F. Marie Hall SimLife Center, a simulation center with more than 24,000 square feet of space in Lubbock, which allows students from all disciplines to acquire a variety of skills through multi-modality instruction. In addition, simulation centers have been established in Amarillo and Permian Basin.

Texas Tech Physicians is the largest group practice in West Texas with more than 450 full-time clinical faculty from both the TTUHSC School of Medicine and the Paul L. Foster School of Medicine encompassing 108 counties in Texas and New Mexico. The wide range of specialties and sub-specialties comprising the practice allow us to touch the lives of more than 270,000 patients each year. A new state-of-the-art research building is available for students in Amarillo and the Permian Basin continues to increase facilities and programs. The recently established Paul L. Foster School of Medicine was formerly a regional campus and is now the first four-year medical school on the Texas-Mexico border.

I hope you share with me in the excitement of the many changes and positive efforts being made to make the School of Medicine a premier place to work, study, and receive the latest medical care and treatment in West Texas!

Office of Admissions



Felix G. Morales, M.D. Associate Dean of Admissions
Louis Perez, Senior Director of Admissions
Monica Galindo, Associate Director of Admissions
Ileana Hinojosa, Assistant Director of Outreach and Programs
Alexander Dorado, Assistant Director of Recruitment and Advising
Christina Gomez, Assistant Director of Enrollment and Finance
Misty Sisneros, Executive Associate to the Dean
Barrett Gomez, Coordinator

Location: UC 110

Mail Stop: 6216

Phone: 806.743.2297

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Web: <http://www.ttuhsc.edu/medicine/admissions>

Email: somadm@ttuhsc.edu

 <https://www.facebook.com/ttuhscmed>

The Admissions Process

General Philosophy

Texas Tech University Health Sciences Center School of Medicine invites applications from qualified residents of the state of Texas and across the country. Only 10% of the class is comprised from out of state applicants. It is the goal of TTUHSC School of Medicine to accept only those students who are guaranteed to complete the full four years of the curriculum based on citizenship or permanent resident status. Therefore, only applicants who are permanent U.S. residents or U.S. citizens will be considered for interview and admission. One hundred eighty students are selected for each entering class. This total includes all dual degree, early acceptance, early decision, special, or assured admission programs. The Admissions Committee carefully examines each application for the personal qualities and proven academic ability to determine potential as an effective and competent physician. Consideration is given to individuals who meet institutional centric missions. Texas Tech University Health Sciences Center School of Medicine aims to enhance the overall health and outcomes for communities in which we serve, we seek to recruit students, faculty and senior administrative staff and admit individuals who have ties to West Texas or who come from or have an interest in serving rural areas, including those who may come from socioeconomically disadvantaged or first generation backgrounds. While evidence of high intellectual ability and a strong record of scholastic achievement are vital for success in the study of medicine, the Admissions Committee recognizes as essential the qualities of compassion, collaboration, collegiality, personal integrity, and the ability to communicate

effectively as traits of future physicians. Letters of evaluation from pre-professional advisors and/or physicians are also considered, and the ability to balance academic achievement with extracurricular and or work activities is examined. Those applicants who possess both the cognitive and non cognitive traits that indicate likelihood of academic and professional success are invited for personal interview. There is no discrimination on the basis of race, color, religion, age, sex, national origin, disability or veteran status. In 1997, legislation established that evidence of a financially or educationally disadvantaged background of an applicant may be considered in the total evaluation of the application.

At Texas Tech University Health Sciences Center School of Medicine, the Admissions Committee considers all experiences, attributes and metrics in the application process. TTUHSC School of Medicine follows the [AAMC EAM model and Holistic Review Process](#).

In summary, a number of both cognitive and non-cognitive factors are used in the evaluation of applicants to medical school. No single factor is used exclusively to admit or to eliminate admission of an applicant to medical school. The Committee examines each applicant for overall suitability, and it makes an effort to select a class of individuals that contain a combination of varied backgrounds, interests and life experiences, resulting in a diverse, stimulating and broadening learning environment within the medical curriculum.

Undergraduate Course Requirements

At least three years of study (90 semester hours or the equivalent in quarter hours) from an accredited United States or Canadian college or university are required to apply. A baccalaureate degree is required for admission.

Course work from non-U.S. or Canadian schools will be accepted only if it appears, with a grade, on the transcript of a U.S. or Canadian college or university as an individual course. “Lump sum” credit is not acceptable. All prerequisite courses for medical school must have been taken for credit at an accredited U.S. or Canadian college or university.

Specific course requirements have been kept at a minimum to allow and encourage the student to have a broad and well-rounded education. There are no specific requirements for undergraduate majors or minors. The Admissions Committee reviews the academic rigor provided by course selection and reviews each application holistically.

Prerequisite Course Listing

Required Courses	Duration	Semester Hours
General Biology or Zoology	1 year	6
Upper Division Biology Biology Labs	1 year	6 2
General Chemistry General Chemistry Labs	1 year	6 2
Organic Chemistry Organic Chemistry Labs	1 year	6 2
Physics Physics Labs	1 year	6 2
English	1 year	6
Statistics as offered by Math Dept.	1/2 year	3
Biochemistry (may be used toward fulfilling the Biological Sciences or Chemistry	1/2 year	3

Pre-requisite courses must be completed by the time the applicant matriculates into medical school, not necessarily when the application is made. It is in the best interest of the applicant to have completed as many of the prerequisite courses as possible, however. Proficiency in verbal and written communication is essential. A basic knowledge of conversational Spanish is desirable, but is not required.

Medical College Admission Test (MCAT)

Completion of the Medical College Admission Test (MCAT) within 5 years of matriculation is a requirement for admission. The Admissions Committee recommends that the test be taken in the spring of the year in which application will be made. Registration information may be obtained from:

Phone: (202) 828-0600

Email: mcat@aamc.org

Web: <https://students-residents.aamc.org/applying-medical-school/taking-mcat-exam/>

Application to TTUHSC School of Medicine

Applications are considered for evaluation and a potential interview invite once a complete application is received by the office of admissions. This process can take 4-6 weeks after all required documents are submitted to the Texas Medical and Dental School Application Service (TMDSAS). TTUHSC also has a secondary application which must be completed by all applicants. After TTUHSC School of Medicine receives the transmitted application from TMDSAS each applicant will be invited to complete the secondary application, typically within 2-3 business days.

Texas Medical & Dental Schools Application Service (TMDSAS)

Our Mission

The Texas Medical and Dental Schools Application Service (TMDSAS) is the central organization through which participating member institutions unite to foster the success of aspiring dentists, physicians, and veterinarians. TMDSAS achieves this through: leadership, personalized support, education, and communication.

What Does TMDSAS Do??

TMDSAS simplifies the application process for both the applicants and the participating schools. We provide one standardized application for first-year entering classes at all public medical, dental, and veterinary schools in the state of Texas.

The TMDSAS participating schools benefit by receiving uniform information on all applicants and designing the questions on the application. TMDSAS is housed within the Texas Health Education Service in Austin, Texas.

The TMDSAS application and more information on requirements is available at the following URL:

TMDSAS application: <http://www.tmdsas.com/>

TTUHSC School of Medicine Secondary Application

TTUHSC School of Medicine also requires a Secondary Application. All applicants applying to the Texas Tech University Health Sciences Center School of Medicine are required to submit a completed Secondary Application.

For more information, including Secondary Application questions, please visit the address below. Please note that there is a secondary application fee.

Secondary application: <https://www.ttuhschool.edu/medicine/admissions/ttuhschool-som-secondary-application.aspx>

The following elements must be received by the Office of Admissions in order to constitute a complete application:

Required Elements	
Main, TMDSAS Application	Submitted electronically. https://www.tmdsas.com/ TMDSAS Application Handbook: https://www.tmdsas.com/PLAN/references/applicationhandbook.html
TTUHSC School of Medicine Secondary Application	Submitted electronically. Once your primary application has been received, you will receive an invitation to complete the secondary. Please note that this includes processing time by your primary application service provider and the Office of Admissions. For more information please visit: https://www.ttuhschool.edu/medicine/admissions/ttuhschool-somsecondary-application.aspx
Letters of Evaluation	All letters declared by the applicant on the TMDSAS application must be received.
MCAT Scores	No more than 5 years old from the time of the expected date of matriculation.
All other required information in the way of supporting documents.	This can include proof of Texas / U.S. residency (if applicable) Supporting documents does include all transcripts from all schools attended, submitted to TMDSAS. See TMDSAS Application Handbook for official details; linked above.

Application Timeline

Several medical schools in Texas receive applications from TMDSAS. For the most comprehensive list, of participating schools, please visit https://www.tmdsas.com/about/TMDSAS_schools.html. For an official and complete timeline please visit the Deadline and Important Dates page on the TMDSAS website referenced below.

TMDSAS Deadlines and Important Dates (for the most current and official dates, please visit: <https://www.tmdsas.com/PLAN/references/deadlines.html>)

Early May	Applications become available; medical school secondary applications become available
Early to Mid-June	TTUHSC School of Medicine receives first batch of submitted applications; file evaluations begin
Early August	Interviewing season begins at TTUHSC School of Medicine
Late Sept. to late Oct.	Application Deadline

October 15	Rolling Admissions Session begins; open acceptance period to applicants
Late Dec to late Jan	Rolling Admissions Session ends; interviewing season at TTUHSC School of Medicine ends
Jan to Feb	Deadline for applicant preferences and school rank lists; even if accepted by school(s) during the rolling admission period
Feb to Mar	Texas Medical School Match Day; all remaining applicants learn about matching to a medical school
Feb to Mar	Rolling Admissions Session 2 begins; alternate list formulated at TTUHSC School of Medicine (released by mid-March)
April	Deadline for applicants holding multiple seats to declare desired school
Feb/Mar - Early August	Rolling Admissions Session 2 ends as the first year medical student class orientation begins; previous admissions season is officially concluded.



Application Timeline

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TMDSAS Deadlines and Important Dates (for the most current and official dates, please visit: <https://www.tmdsas.com/apply-now/deadlines.html>)

File Evaluation & Interview

(June ~ December)

Each completed application will be reviewed by the Admissions Evaluation Committee and personal interviews will be offered to those students deemed most competitive for admission. All interviews are conducted at the Lubbock campus or virtually as deemed necessary by the office of admissions.

On the day of the interview, there is also an opportunity to tour the medical school and talk with students. Each applicant, who has been sent an interview invitation, and is applying through the regular MD program, is given two (2), 20-minute interviews; by members of the Admissions Interview Committee. Applicants who are invited to interview and are applying to a dual degree program or Family Medicine Accelerated Track (FMAT) are given at least three (3) interviews, two (2) for the medical school, and one (1) to two (2) or more, from the partnering program. Additional interviews may be scheduled for dual degree applicants. Note that virtual interview days may vary in experience due to the nature of a virtual setting.

After the interviews, the Admissions Selection Committee considers the applicant's entire application in a holistic review that includes: scores and comments from the evaluator, interviewers and any other pertinent information. Any applicant who is offered an acceptance to medical school must accept or decline the offer in writing or by email.

Rolling Admissions Session

(October – December or January)

Beginning in the Fall of 2006, the Texas medical schools offered a dual rolling admissions / match system. During the rolling admission period, a medical school can make an offer of acceptance to any Texas Resident applicant who has interviewed. An applicant can potentially receive offers from multiple medical schools during this period. TTUHSC School of Medicine will be very proactive in recruiting desired applicants during this pre-match offer period. At the end of December or January, this process is suspended.

The Texas Match

(January – February or March)

TTUHSC School of Medicine participates in the match with the other Texas schools listed on the application form. The Match system in which TTUHSC School of Medicine has participated since 1999 will continue. All interviewed TMDSAS applicants, who are also Texas residents, whether they have been accepted to a Texas medical school during the rolling admission session or not, will enter into the Match. It is important to understand that an applicant does not give up his/her place in a medical school where he/she received an offer during the rolling admissions session (except for those from which the applicant withdrew prior to the match). Interviewed applicant preference lists and medical school rank lists are due in January or February. Match Day, the day where interviewed applicants find out about their status, will be in February or March. Results of the Match will be released by TMDSAS.

For complete and current information regarding acceptance and match information please visit the TMDSAS website: <https://www.tmdsas.com/PLAN/medical/medical-admissions/>

Development of Alternate Pool (TTUHSC School of Medicine)

(February or March)

After the Match, the Admissions Selection Committee, will formulate an official alternate pool from interviewed applicants that remain available after the rolling admission session, and the Match. Alternate pool notifications will be sent to applicants by email and applicants will have the option to decline the alternate pool. If they wish to remain an alternate, no action is needed. In the event an accepted applicant gives up his/her seat in the class, a replacement will be selected from the alternate pool. The applicants selected for the alternate pool are not placed in a rank order. Applicants may be selected from the alternate pool up until the beginning of orientation at TTUHSC School of Medicine.

Scholarship Information

TTUHSC School of Medicine offers competitive scholarships to qualified medical students. The Scholarship Committee meets semi-annually to award scholarships to deserving students. To receive a scholarship, a student must remain in good academic and non-academic standing for the entire academic year. A student must also complete the scholarship acknowledgement form and the acceptance form as described in the scholarship notification. All scholarships are a one-time scholarship award and are based on the availability of funds.

To renew a scholarship or to be considered for a scholarship, students must submit an [application](#) annually by April 30th and submit a FAFSA application to Financial Aid to be considered. Applications must be submitted to the location where your designated campus assignment is set, for the term you are applying for. Late application deadline is October 1st and late applicants will be considered on a first come, first served basis dependent on any unclaimed scholarships and cannot be guaranteed.

Matriculation Policies

Criminal Background Check

In order to provide a safe environment for patients, visitors, faculty, employees, and students at TTUHSC, the conduct of criminal background checks was instituted as of September 1, 2006. Compliance with this policy will be required of all prospective medical students. Criminal background checks (CBCs) allow the university to evaluate whether TTUHSC students are qualified, eligible, and possess the character and fitness to participate in clinical care and/or clinical rotation sites at TTUHSC or participating institutions.

Therefore, per the TTUHSC Operating Policy and Procedure 10.20, in order to complete matriculation to the TTUHSC School of Medicine, all prospective matriculants will submit a background check, through a prescribed vendor, to the TTUHSC Office of Admissions. Refusal to complete the self-disclosure or criminal background check will preclude

the student from admission and matriculation. All criminal history provided is confidential and shall be protected from disclosure to the greatest extent provided by law. It must be noted by the applicant, that matriculation will be completed only after receipt and review of the release form, self-disclosure information, and receipt of the subsequent background check record indicating no criminal history, unless otherwise indicated. Where a record of criminal history exists, each prospective matriculant will be evaluated individually, and recommendations for enrollment, withdrawal or revocation of acceptance/admission will be made by the School of Medicine.

Admissions Policies for Non-Residents of Texas

Non-resident applicants to the participating TMDSAS Texas schools are not subject to the Texas Match. Acceptance begins October 15th. TTUHSC School of Medicine is a Texas state school and is required by law to have no less than 90% of the entering class made up of qualified Texas residents.

Determining Texas Residency

TMDSAS determines residency at the time of application. Applicants to TTUHSC School of Medicine must be a Texas resident at the time of application to be eligible for admission as a Texas resident. If however, reclassification as a Texas resident occurs after the deadline of the application but before matriculation into medical school, the applicant may be admitted as a Texas resident.

As stated by the Texas Higher Education Coordinating Board Rules & Regulations for Determining Residency Status:

If an applicant is a dependent (of parents, etc.)

- The residency of the parent who has custody at the time of application if parents are divorced;
- The residency of the parent who has claimed the individual as a dependent for Federal Income
- Tax purposes both for the year in which the individual is applying and for the preceding tax year; OR
- The residency of the parent with whom the individual has resided for the 12-month period preceding application to medical/dental school.

To qualify as a Texas resident for application purposes, an independent individual 18 years of age or over who has come from outside Texas must reside in Texas and be gainfully employed for a 12-month period preceding the date of application to medical-dental school. Evidence must also be provided that the 12-month residence was for the purpose of establishing residence in the state and not for the purpose of attending an educational institution.

An individual 18 years of age or over who resides out of the state or who has come from outside Texas and registers in an educational institution before having resided in Texas for a 12-month period shall be classified as a nonresident student and will remain a nonresident as long as the residence of the individual in Texas is primarily for the purpose of attending an educational institution.

(Texas Higher Education Coordinating Board Standing on Foreign Student Residency)

Only those foreign citizens who are living in this country under a visa permitting permanent residence of who are permitted by Congress to adopt the U.S. as their domicile while they are in this country or have filed a declaration of intention to become a U.S. citizen are eligible to be classified a Texas resident if they have otherwise met the requirements for establishing residency.

Military personnel stationed in Texas are considered non-residents unless:

- The member was a Texas resident upon entry into the service and Texas continues to be his/her state of legal residence while in the military.
- The member abandoned his/her prior state of residency and established a domicile in Texas at least 12 months before applying to medical/dental school and the member has otherwise met the requirements for establishing residency.

A residence questionnaire **MUST** be filed if the state of residence has been changed while in the military.

Residency can change during the application period. All schools are notified at the time a change of residency occurs. Tuition is based upon residence status at the time of registration.

If Texas residency is questionable, it is necessary to complete a Residence Questionnaire so that proper residency may be determined. A copy of the Questionnaire may be obtained from the Texas Medical & Dental Schools Application Service (TMDSAS). A formal medical school application must be submitted to TMDSAS before the questionnaire will be processed. A final determination of residency will be sent to the applicant and the schools to which the applicant has applied.

For more information regarding residency please visit the following websites:

TMDSAS: <https://www.tmdsas.com/PLAN/medical/before-you-apply/residency.html>

Texas Higher Education Coordinating Board:

<http://www.collegeforalltexans.com/index.cfm?ObjectID=6D1466D9-AEA5-DE00-C12F3F75E7367718>.

Establishing Texas Residency

Under Texas state law, an applicant or enrolled student is classified as either a resident of Texas, a nonresident, or a foreign student. Residency for admission and tuition purposes at a public college or university in Texas is different from residency for voting or taxing purposes.

To qualify as a Texas resident, an individual who is a U.S. citizen or permanent resident immigrant must live in Texas for at least 12 consecutive months without attending any institution of higher education. Registration in a college or university in Texas during this 12-month period is interpreted under law as demonstrating only an intention to make use of the state's higher education system, and not an intention to establish domicile in Texas. An applicant or student who is claimed as a dependent on a parent's most recent federal income tax return will be classified based on the parent's qualification for residency. International students eligible to establish legal domicile in Texas may also qualify for Texas resident status.

An individual's residency classification is based on information from his or her admission application. If an applicant or student is classified as a nonresident and wishes to be reclassified as a resident, it is necessary to submit the Core Residency Questions form, which provides more detailed background information than is available from the admission application.

Special Considerations

AAMC Early Decision Program (EDP)

The school does have a program whereby exceptionally well-qualified students can receive a decision on their applications by September or October in the year prior to matriculation. Applications from individuals requesting Early Decision must be completed by August 1, and interviews will be set up shortly thereafter. A person who applies for Early Decision commits to apply only to TTUHSC School of Medicine prior to September or October and commits to matriculate at TTUHSC School of Medicine if the position is offered. Applicants will be notified of the Committee's decision on or before the deadline set by TMDSAS in September or October. If an individual is not accepted under the Early Decision Program plan, that applicant will still be considered in the regular applicant pool and may also then apply to any other medical schools. Early Decision applicants to TTUHSC School of Medicine must have taken the MCAT and must be a Texas resident. Applicants may be given preference based on the competitiveness of their MCAT score.

Deferment of Matriculation

Under extenuating circumstances, an applicant who has been accepted for enrollment in the Fall may request, in

writing, deferment until the following Fall. Such a request will be considered on a case-by-case basis by the Associate Dean of Admissions and may be granted for a period not to exceed one year. During the year of deferment, the student may not apply to any other medical school.

Application for Admission in Advanced Standing *(Medical School Transfer)*

Applications for advanced standing are reviewed and considered on an individual basis. Texas residents enrolled in good standing in LCME accredited U.S. or Canadian medical schools are eligible to apply. Such applicants must have written permission from their Dean of Student Affairs for possible transfer; may be interviewed before acceptance, and must have taken and passed Step I of the United States Medical Licensing Examination (USMLE-I) as conditions for acceptance in advanced standing.

The guidelines and criteria for advanced standing admission and the transfer application are available at:

<https://www.ttuhschool.edu/medicine/admissions/advanced-standing-admission.aspx>

All applicants for advanced standing must be Texas residents with at least 90 hours of undergraduate study in an accredited U.S. or Canadian college or university. The TTUHSC School of Medicine does not accept transfer applications from students or graduates of schools not accredited by the Liaison Committee on Medical Education (LCME). The applicant must have completed the second year of medical school. Advanced placement into the fourth year is not considered. Applicants from related fields such as dentistry, or those who have taken medical basic science courses as a graduate student, may be considered on an individual basis, but may be required to apply as a first year student regardless of the degree field. A student, who has been dismissed from, or has withdrawn from another medical school, is not eligible for consideration unless the former school indicates in writing its willingness to reconsider the student for admission. A completed application and filing fee of **\$75.00** must be received by no later than May 1st.

Official transcripts from all undergraduate colleges, graduate schools, and medical schools must be submitted. A letter of recommendation and evaluation must be submitted by the Dean of the school where the applicant is currently enrolled.

The M.B.A. (HOM) program is accredited by AACSB and is unique among accredited programs in that it can be completed in the four years of medical school. This accreditation assures the prestige and enhances the value of M.D./M.B.A.

There is a requirement by the Texas Tech University Graduate School that applicants to its graduate programs in the College of Business take the GMAT. For M.D./M.B.A. applicants this has been waived in lieu of the MCAT. Further information about M.D./M.B.A and other graduate programs offered through the Rawls College of Business Administration may be obtained by contacting:

Office of Admissions TTUHSC School of Medicine 3601 4th Street, STOP 6216 Lubbock, TX 79430 Phone: (806) 743-2297 Fax: (806) 743-2725 Web: https://www.ttuhschool.edu/medicine/admissions/mdmba.aspx	Rawls Graduate Programs Office M.B.A. & M.D./M.B.A. Program Texas Tech University Box 42101 Lubbock, TX 79409-2101 Phone: (806) 742-3184 Fax: (806) 742-2308 Web: https://www.depts.ttu.edu/rawlsbusiness/graduate/du
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The M.D./Ph.D. Dual Degree Program

For those students interested in pursuing a career in academic medicine as a physician-scientist, enrollment in both the School of Medicine and the Graduate School of Biomedical Sciences (GSBS) is available. A program of study has been designed to permit the student to complete the requirements of both the M.D. degree and the Ph.D. degree. Accepted M.D./Ph.D. students will receive scholarships during School of Medicine study and a Research Assistantship during Ph.D. study as well as tuition (medical and graduate program) scholarships throughout the combined degree program. This program is designed to be completed in seven to eight years and will provide the student with rigorous training in both clinical medicine and biomedical research.

MD/PhD

Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		
Phase 1													
	P3	Anatomy, Histology & Embryology 10 Weeks		P3	General Principles 8 Weeks		Organ Systems 1: Immune, Hematopoietic, Cardio 10 Weeks		P3	Organ Systems 2: Renal, Respiratory 8 Weeks	CE		
Introduction to Clinical Medicine (ICM) Patients, Physicians & Populations (P3)													
CE = Comprehensive Exam													
Phase 1 PhD													
		Organ Systems 3: Gastro, Musc, Conn, Skin 7 Weeks	P3	Organ Systems 4: Neuro, Behav, Repro 12 Weeks	CE	Organ Systems 5: Endocrine, Multisystem 7 Weeks	P3	Step 1 Enhancement 7 Weeks	PhD Courses				
Introduction to Clinical Medicine (ICM) Patients, Physicians & Populations (P3)													
*Step 1													
Note: Basic Medical Spanish is integrated into the Introduction to Clinical Medicine course. SRW = Student Research Week													
PhD	Phase 2										PhD Courses 3 Years		Clerkships 8 Weeks
												Integration Seminar	
												*Bootcamp	
Phase 2 Phase 3													
				Clerkships 24 Weeks				Clerkships 16 Weeks				Advanced Clinical Training	
				Integration Seminar				Integration Seminar				TRIAL	
												*Step 2 CK	
Note: Clerkships can be taken in any order. Clerkships: Family Medicine, Internal Medicine, OB/GYN, Pediatrics, Psychiatry and Surgery Rotations can begin 2 weeks after completion of clerkships. Rotations (Sub-Internship, Ambulatory, Critical Care and Electives) and available time can be taken in any order													
Phase 3													
						Advanced Clinical Training							
						TRIAL							
												Advanced Clinical Training	
												TRIAL	
Note: Rotations (Sub-Internship, Ambulatory, Critical Care and Electives) and available time can be taken in any order TRIAL = Transition to Residency: Individual Asynchronous Learning													

Application Procedures

Students apply through Texas Medical & Dental Schools Application Service (TMDSAS) <http://tmdsas.com/> and indicate on the application interest in the M.D. / Ph.D. program. It is highly recommended that the student mention their research interest in their personal statement submitted with the TMDSAS application. This information will assist the GSBS in selecting appropriate faculty to interview the applicant. A secondary application is also required and information can be found at <https://www.ttuhsu.edu/medicine/admissions/ttuhsu-som-secondary-application.aspx>

Admission

Students who have been admitted to the M.D. / Ph.D. program begin graduate studies during the summer session preceding their first year of the medical school curriculum. During the summer session, major emphasis is placed on introduction to research with the goal of selecting an advisor and a research problem to be developed as the student's Ph.D. dissertation research. Students have the option of entering the Ph.D. program fulltime after the second or third year of medical school.

Enrollment Pattern

Semester	Year 1	Year 2	Year 3-5	Year 6-7
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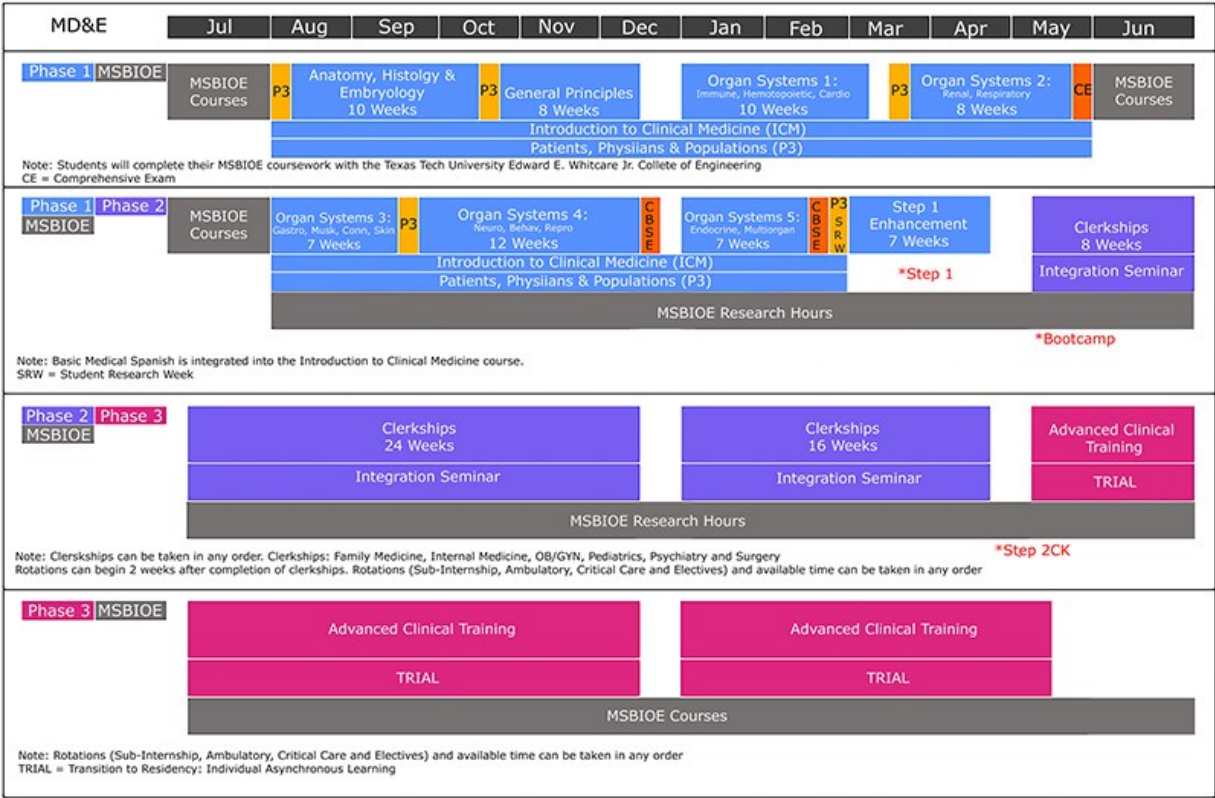
Summer	GSBS	GSBS	GSBS	SOM
Fall	SOM	SOM	GSBS	SOM
Spring	SOM	SOM	GSBS	SOM

Research Honors Program

This program has been established to provide an opportunity for selected medical students to pursue an in depth research program with a faculty member of their choice. This Research Honors elective requires one year in addition to the four basic years of the medical curriculum and normally occurs between the second and third medical school years. While no credit toward graduation is granted during this year of enrollment, successful completion of the program will be acknowledged by the designation of "Research Honors" on the student's diploma. A variety of financial support mechanisms are available for this research experience.

The M.D. / MPH Dual Degree Program

The Medicine and Engineering Program at TTUHSC will prepare health professionals to integrate the analytic reasoning of engineering into patient care to bring forth a holistic differential approach to decision making in clinical settings. The joint program is completed in 4 years.



The M.D. / MPH Dual Degree Program

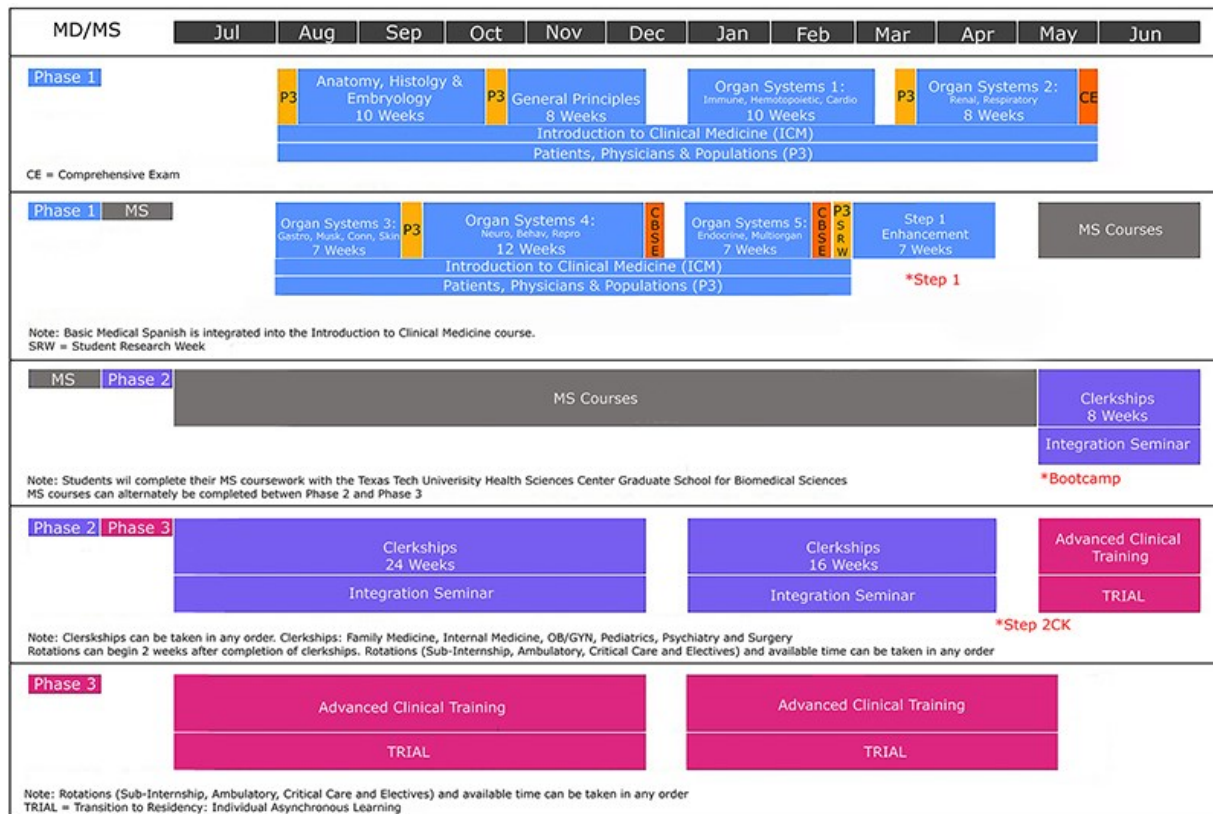
The Master of Public Health Program at TTUHSC will prepare health professionals to practice skillful and evidence-based preventive public health; conduct and communicate research that informs the diverse fields within public health; and provide interdisciplinary expertise in the service of academic, professional and community-based public health organizations. The joint program is completed in four or five years (45 credit hours) and culminates in both the MD and MPH degrees.

MD/MPH	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
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The M.D. / M.S. Dual Degree Program

TTUHSC medical students in good academic standing who are interested in the M.D./ M.S. program should contact the GSBS Office for further information. To formally apply to the M.D./ M.S. program, the applicant should submit a written request to the GSBS Senior Associate Dean, Michael.blanton@ttuhsc.edu, and cc research mentor and graduate.school@ttuhsc.edu. Within the request, the medical student should specify the faculty member (must have graduate faculty status) that has agreed to serve as a mentor for M.S. research. The GSBS will coordinate with the School of Medicine in reviewing this request.

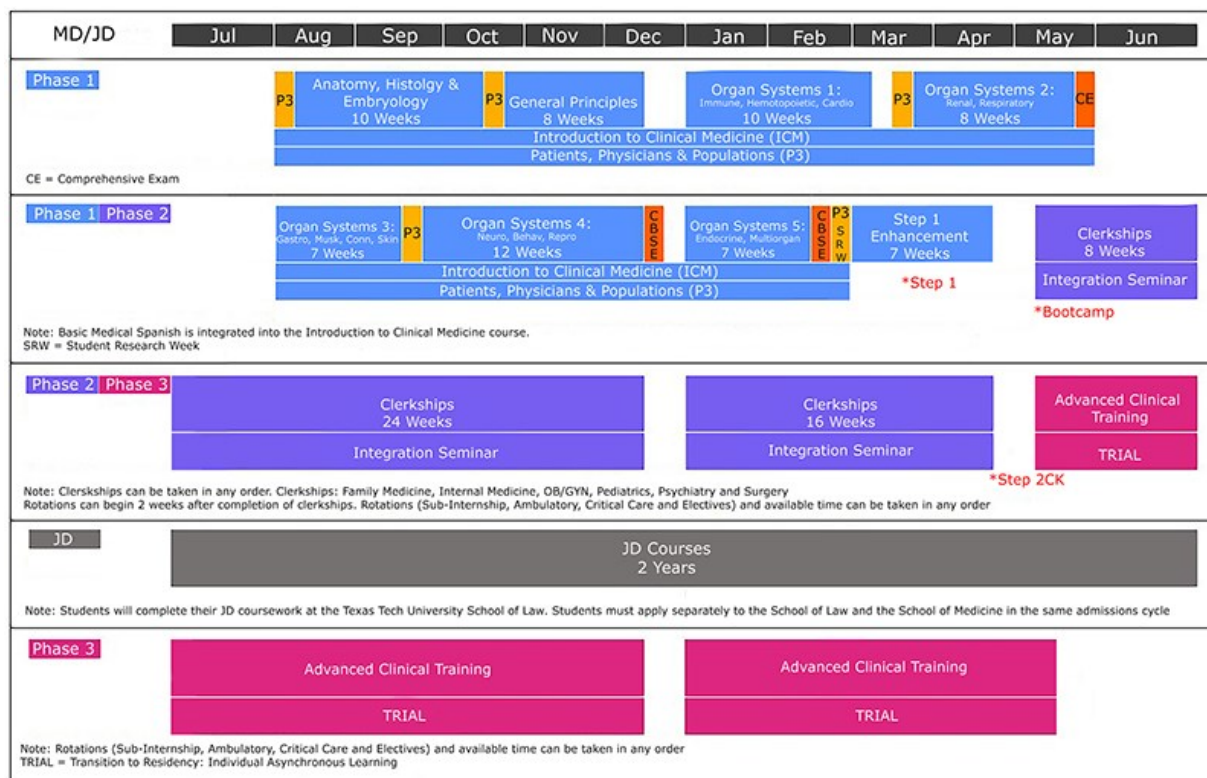


<https://www.ttuhsc.edu/biomedical-sciences/program/md-ms.aspx>

The J.D. / M.D. Dual Degree Program

The Doctor of Jurisprudence / Doctor of Medicine Dual Degree Program is administered by Texas Tech University School of Law and Texas Tech University Health Sciences Center, School of Medicine. The JD/MD program is designed specifically for individuals interested in the areas of health law, healthcare policy, bioterrorism, forensics, or biomedical compliance.

Applicants interested in this program must apply separately to the School of Law and the School of Medicine in the same admissions cycle, satisfying the application requirements of each program. It is important to note that entrance into both programs of study require significant advanced preparation and adherence to strict deadlines. It is imperative that interested applicants familiarize themselves with the process of both programs of study. The successful applicant must meet the admission requirements for both programs of study.



Web: <https://www.ttuhsc.edu/medicine/admissions/mdjd.aspx>



Special Programs (Undergraduate)

Undergraduate to Medical School Initiative (UMSI)

This program is an early acceptance program for academically competitive, Texas high school seniors who will be attending Texas Tech University (TTU) as undergraduate students in the TTU Honors College and desire entrance to the TTUHSC School of Medicine. Students accepted into this program will have the MCAT requirement waived and are guaranteed a position in the medical school class, once the undergraduate program has been completed, provided they have maintained the required GPA and volunteering/medical experiences, and have not violated the code of academic or professional conduct. The undergraduate experience must include a minimum of six long semesters. This program is NOT an accelerated degree program, nor is it a combined degree program, nor is it a joint degree program. The student must first be accepted to Texas Tech University and the Texas Tech University Honors College. If accepted, the prospective student will be notified of his/her qualification for the UMSI program by the undergraduate admissions office. If qualified at that point, the prospective student may be interviewed by TTUHSC School of Medicine in the spring of their senior year in high school. If determined to be qualified, the student may be accepted by the medical school. For more details on the application period, process, and the application itself, please refer to the website: <https://www.ttuhsc.edu/medicine/admissions/undergraduate-to-medical-school-initiative.aspx>

Undergraduate Honors Agreements

TTUHSC School of Medicine has early acceptance agreements with the Honors Colleges or Programs of the following schools: Austin College, Texas Tech University, Angelo State University, University of Texas at El Paso, West Texas A&M and Lubbock Christian University. Students that have been accepted in the Honors Colleges at these respective schools and have met all the prescribed requirements, are eligible to apply for early acceptance to medical school. Prospective, qualified applicants are interviewed in the Fall of their Junior year, typically one full year earlier than the traditional applicant. If accepted, the student is guaranteed a seat in the medical school class at TTUHSC School of Medicine and the MCAT requirement is waived. Please note that specific requirements may vary per participating school. Students interested should contact the respective Honors College or health professions advisor for detailed requirements. More information can also be found at: <https://www.ttuhsc.edu/medicine/admissions/early-acceptanceprograms.aspx>

Joint Admission Medical Program (JAMP)

TTUHSC School of Medicine participates in the Joint Admission Medical Program. The Joint Admission Medical Program (JAMP) is a special program created by the Texas Legislature to support and encourage highly qualified, economically disadvantaged Texas resident students pursuing a medical education. Funded through the Texas Higher Education Coordinating Board, JAMP is a unique partnership between eleven Texas medical schools and seventy public and private four-year undergraduate institutions.

Since 2003, JAMP has been helping Texas students achieve their dreams with guaranteed admission to one of the state's eleven medical schools, financial, and academic support to help them get there, and access to resources that allow them to excel.

JAMP provides:

- Support through undergraduate scholarships and summer stipends
- Placement into [JAMP Summer Internship experiences](#)
- Hands-on experience through clinical enrichment opportunities
- Comprehensive, multi-phase [MCAT preparation program](#)
- Personal and professional development through dedicated mentoring
- Guaranteed [admission to a participating Texas medical school if all criteria are met](#)
- Scholarships to attend medical school

For more information on the JAMP program, please visit: <https://www.texasjamp.org/>



TTUHSC School of Medicine Enrollment

Year	Male	Female	Total Enrolled
1995	323	118	441
1996	350	117	467
1997	354	135	489
1998	343	154	497
1999	325	164	489
2000	302	182	484
2001	302	185	487
2002	310	189	499
2003	308	203	511
2004	218	217	535
2005	306	231	537
2006	308	244	552
2007	325	217	572
2008	322	242	564
2009	327	243	570
2010	331	248	579
2011	319	253	572
2012	322	259	581
2013	323	251	574
2014	349	279	628
2015	381	284	665
2016	379	311	690
2017	383	341	724
2018	365	364	729
2019	355	378	733
2020	335	402	737
2021	343	390	733
2022	348	366	714





Official Admissions Applicant vs. Matriculant Chronology (1972-2022)

Year	Male	Female	Decline to Answer	Total	Male	Female	Total	Avg. GPA	Avg. MCAT
1972 (Freshman)	314	27		341	31	5	36	3.22	534
1972 {Juniors}	---	---		Transfer	22	3	25	3.13	526
1973	965	136		1101	29	10	39	3.00	510
1974	1410	232		1642	29	11	40	3.21	588
1975	1101	229		1330	34	6	40	3.35	588
1976	1146	271		1417	34	6	40	3.47	567
1977	1116	276		1392	31	9	40	3.50	597
1978	878	387		1265	48	12	60	3.44	8.61
1979	848	353		1201	62	18	80	3.44	8.43
1980	908	314		1222	75	25	100	3.42	8.02
1981	922	360		1282	78	22	100	3.35	8.01
1982	883	377		1260	34	66	100	3.34	8.33
1983	635	303		938	72	28	100	3.36	50.18
1984	677	315		992	73	27	100	3.30	52.41
1985	645	306		951	59	42	101	3.36	50.77
1986	573	300		873	64	36	100	3.25	50.60
1987	605	273		891	73	21	100	3.23	52.21
1988	490	255		745	55	29	94	3.28	50.89
1989	527	293		820	68	30	98	3.28	48.31
1990	589	313		902	74	22	96	3.22	51.91

1991	717	387		1104	66	33	99	3.33	51.52
1992	807	441		1248	70	31	101	3.35	28.00
1993	971	541		1512	78	26	104	3.39	28.05
1994	1043	564		1607	83	37	120	3.45	28.00
1995	856	488		1601	94	34	128	3.52	28.70
1996	867	550		1698	94	32	135	3.36	26.31
1997	812	519		1561	81	41	123	3.56	28.82
1998	688	561		1452	65	41	114	3.57	29.10
1999	725	536		1488	78	45	123	3.58	29.14
2000	1002	882		2197	67	52	119	3.61	29.03
2001	987	831		2047	82	47	129	3.66	28.53
2002	1020	906		1926	78	52	130	3.63	28.70
2003	997	1039		2036	78	52	130	3.60	28.80
2004	1175	1130		2305	75	65	140	3.57	28.20
2005	1359	1296		2655	75	65	140	3.56	28.33
2006	1464	1388		2855	79	61	140	3.59	28.90
2007	1576	1462		3038	84	56	140	3.62	29.53
2008	1570	1388		2958	86	55	141	3.67	29.10
2009	1584	1359		2943	72	68	140	3.68	29.54
2010	1590	1368		2958	77	66	143	3.65	29.45
2011	1654	1544		3198	79	67	146	3.64	29.21
2012	1857	1507		3364	89	61	150	3.67	31.10
2013	1962	1542		3504	84	67	151	3.64	31.60
2014	2088	1631		3719	95	86	181	3.64	31.60
2015	2305	1818		4123	100	80	180	3.62	31.60
2016	2378	2057		4435	94	86	180	3.73	32/507
2017	2235	2162		4397	88	92	180	3.74	507
2018	2307	2210		4517	76	104	180	3.73	507
2019	2417	2494		4911	85	95	180	3.76	508
2020	2802	3173	15	5990	93	87	180	3.78	509
2021	2464	2780	8	5252	98	82	180	3.85	509

2022	2321	2636	13	4969	94	87	181	3.85	509
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Lauren Cobbs-Tarantola, M.D., M.Ed., Associate Dean for Student Affairs
Elizabeth Conser, M.D., Assistant Dean for Student Wellness and Advancement
David Trotter, Ph.D., Assistant Dean for Student Affairs
Allison Perrin, Ph.D., M.S, L.P.C., Director for Student Affairs and Student Wellness Programs
Kimberly Johnson, Associate Director for Student Affairs
Jennifer Acevedo, Program Manager for Years 1, 2, and 3
Raquel Smith, Section Supervisor
Ja'Net Shedd, Executive Associate to the Dean for Student Affairs
Emily Gifford, Senior Administrative Assistant

Location: 2B440 – (Main suite)
Mail Stop: 6222
Phone: 806-743-3005/806-743-6784
Fax: 806-743-4165
Web: <http://www.ttuhsc.edu/som/StudentAffairs>

Location: 2B420 – (Advising and Wellness)
Mail Stop: 6222
Phone: 806-743-3005/806-743-6784
Fax: 806-743-4165
Web: <http://www.ttuhsc.edu/som/StudentAffairs>

Medical Student Affairs

Mission Statement

The mission of the Office of Student Affairs on all campuses is to provide academic support and career guidance for medical students, and to do so in a supportive environment that enables students to have a positive experience at TTUHSC School of Medicine. The goal of this office is to assist all medical students with being successful and developing professional skills and personal relationships that will last a lifetime. As student advocates, the Student Affairs staff work to ensure that the rights of students are protected and that all students are treated fairly.

Code of Professional Conduct/Honor System

Upon matriculation into the School of Medicine, each student subscribes to the Medical Student Honor Code and the TTUHSC Code of Professional and Academic Conduct. The purpose of the Code of Professional and Academic Conduct is to emphasize in the medical school environment those qualities of integrity, self-discipline, and

professional behavior that are essential to physicians. The TTUHSC Code protects the rights of the student who may be reported for academic dishonesty or for non-professional conduct. If charges are deemed valid, there is a hearing before a student-faculty committee which recommends to the Dean appropriate action. There is an appeal procedure to ensure due process, and the Dean makes a final decision based on the hearings and committee recommendations. A student handbook, which includes the detailed Codes, as well as other relevant policies and procedures, is made available to each student at matriculation. The handbook can also be found on the School of Medicine, Office of Student Affairs website. (<http://www.ttuhschool.edu/som/studentaffairs>).

Standards for Curricular Completion

The School of Medicine faculty has developed minimum standards for entry into and progression through the medical curriculum. These standards provide guidance to achieve the Doctor of Medicine degree in preparation for licensure as a practicing physician and for postgraduate training. Throughout the medical education process, patient safety is of primary consideration.

Preparation of the Physician

The education of a physician includes the following phases:

1. A preparatory phase with at least 90 hours of credit in an accredited U.S. or Canadian college;
2. A rigorous professional education leading to the M.D. degree;
3. Postgraduate (residency) training; and
4. Lifelong continuing education after completion of residency training.

Unlike most professions, Medicine awards its formal degree midway through the education process, and the awarding of the degree certifies that the student has acquired a broad base of general knowledge and skills requisite for further training in postgraduate work. The process whereby the degree is gained prepares an individual to be a physician rather than a surgeon, psychiatrist, or other specialist. A common body of knowledge, skills, and behaviors thus underlies, and is necessary for, entry into specialized postgraduate training programs.

Medical education requires that the accumulation of scientific knowledge must be accompanied by the simultaneous acquisition of skills and professional attitudes and behaviors. It is through the care of patients that the physician learns the application of scientific knowledge and skills.

It is impossible to consider changes in medical education without considering their impact on patients, who are an integral part of the educational process. Faculties of schools of medicine have immediate responsibility to society to graduate the best possible physician. Admissions standards for medical school must be rigorous and exacting, and admissions must be extended only to those who are qualified to meet the performance standards of the profession.

Development of Medical Curriculum

The medical faculty is charged with devising a curriculum that allows the student to learn the fundamental principles of medicine, to acquire skills of critical judgment based on evidence and experience, and to develop an ability to use principles and skills wisely in solving problems of health and disease. In designing the curriculum, the faculty must introduce current advances in the basic and clinical sciences, including therapy and technology, changes in the understanding of disease, and the effect of social needs and demands on medical care. The faculty should foster in students the ability to learn through self-directed, independent study throughout their professional lives.

Finally, the faculty of each discipline should set the standards of achievement by all students in the study of that discipline. Examination should measure cognitive learning, mastery of basic clinical skills, the ability to use data in realistic problem solving, and respect for the rights and dignity of patients. Institutions must develop a system of assessment which assures that students have acquired and can demonstrate on direct observation the core clinical skills and behaviors needed in subsequent medical training.

Abilities and Skills Requisite for Medical School Completion

In the selection of students and in their progress through the curriculum, medical school faculty is guided by standards set by the Liaison Committee on Medical Education (LCME). The faculty place strong emphasis on the academic achievements of applicants, including performance in the sciences relevant to medicine. This includes evidence of satisfactory scholastic achievement as indicated by grade point averages (GPA) and scores on the Medical College Admissions Test (MCAT). Breadth of education and life experiences are deemed important in the selection process.

The faculty is equally cognizant of its responsibilities to patients who will be a part of the educational process and to future patients who will entrust their welfare and lives to medical school graduates. They therefore consider carefully the personal and emotional characteristics, motivation, industry, maturity, resourcefulness, and personal health appropriate to the effective physician.

Because the M.D. degree signifies that the holder is a physician prepared for entry into the practice of medicine within postgraduate training programs, it follows that graduates must acquire a foundation of knowledge in the basic and in the clinical sciences that will permit the pursuit of any of the several careers that medicine offers.

Candidates for the M.D. degree must have somatic sensation and the functional use of the senses of vision and hearing. Candidates' diagnostic skills will also be lessened without the functional use of the senses of equilibrium, smell, and taste. Additionally, they must have sufficient exteroceptive sense (touch, pain, and temperature), sufficient proprioceptive senses (position, pressure, movement, stereognosis and vibratory) and sufficient motor function to permit them to carry out the activities described in the sections which follow. They must be able to consistently, quickly, and accurately integrate all information received by whatever sense(s) is employed, and they must have the intellectual ability to learn, integrate, analyze and synthesize data.

A candidate for the M.D. degree must have abilities and skills in six essential areas: (1) observation, (2) communication, (3) motor, (4) conceptual, integrative and quantitative, (5) behavioral and social, and (6) ethical. Technological compensation can be made for disabilities in certain of these areas; but a candidate should be able to perform in a reasonably independent manner. The use of a trained intermediary to observe or interpret information or to perform procedures is deemed to compromise the essential function of the physician and may jeopardize the safety of the patient. The six areas of abilities/skills are detailed as follows:

1. **Observation**: The candidate must be able to observe demonstrations and experiments in the basic sciences. A candidate must be able to observe a patient accurately at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation. It is enhanced by the functional use of the sense of smell.
2. **Communication**: A candidate should be able to speak; to hear; and to observe patients in order to elicit information, to describe changes in mood, activity and posture; and to perceive non-verbal communications. A candidate must be able to communicate effectively with patients. Communication includes not only speech but reading and writing. The candidate must be able to communicate effectively and efficiently in oral and written form with patients and with all members of the health care team.
3. **Motor**: Candidates should have sufficient motor functions to elicit information from patients by palpation, auscultation, percussion, and other diagnostic maneuvers. A candidate should be able to execute motor movements reasonably required to provide general care and emergency treatment to patients. Examples of emergency treatment reasonably required of physicians are cardiopulmonary resuscitation, administration of intravenous medication, application of pressure to stop bleeding, opening of obstructed airways, suturing of simple wounds, and performance of simple obstetrical maneuvers. Such actions require coordination of both gross and fine muscular movements, equilibrium and functional use of the senses of touch and vision.

4. **Intellectual-Conceptual, Integrative and Quantitative Abilities:** These abilities include measurement, calculation, reasoning, analysis, and synthesis. Problem solving and the clinical skills demanded of physicians require all of these intellectual abilities. In addition, the candidate should be able to comprehend three-dimensional relationships and to understand the spatial relationships of structures.

5. **Behavioral and Social Attributes:** A candidate must possess the emotional health required for full utilization of his/her intellectual abilities; the exercise of good judgment; the prompt completion of all responsibilities attendant to the diagnosis and care of patients; and the development of mature, sensitive, and effective relationships with patients. Candidates must be able to tolerate physically taxing workloads and to function effectively under stress. They must be able to adapt to changing environments, to display flexibility and to learn to function in the face of uncertainties and ambiguities inherent in the clinical problems of many patients. Compassion, integrity, concern for others, interpersonal skills, interest and motivation are all personal qualities that should be assessed during the admissions and education process.

6. **Ethical Standards:** A candidate must demonstrate professional demeanor and behavior, and must perform in an ethical manner in all dealings with peers, faculty, staff and patients.

Requesting Accommodations

Without compromising the standards required by the School or the fundamental integrity of its curriculum, the School recognizes that persons with disabilities, as that term is defined in the Americans with Disabilities Act, may fulfill the standards with reasonable accommodation. The School of Medicine is committed to developing innovative and creative ways of opening its curriculum to competitive and qualified candidates with disabilities. Requests for accommodation under the Standards for Curricular Completion will be considered on an individual basis and reasonable accommodation will be arranged if appropriate. The use of a trained intermediary to observe or interpret information is considered to compromise the essential function of the physician.

When an applicant comes for an interview at the School of Medicine, a copy of the detailed Standards for Curricular Completion will be included in the Orientation Packet. Questions about the Standards are welcomed and interviewees will be informed that they must be qualified to meet all of the standards, with or without accommodation.

If a student is offered and accepts an admissions offer from the School of Medicine, the student must then sign a form acknowledging that he/she has read and understands that the Standards for Curricular Completion must be met with or without accommodation. A request for accommodation along with supporting documentation about the disability from an appropriate specialist and the proposed accommodation(s) must be presented in writing to the TTUHSC ADA Compliance Officer in the HSC Office of Student Services. Details about the process for requesting accommodation are available through the TTUHSC Office of Student Services website (www.ttuhsc.edu/student services/ada/default.aspx).

Copies of the request and documentation will then be forwarded to the School of Medicine Office of Student Affairs. The TTUHSC ADA Compliance Officer will submit the results of their review, along with specific recommendations if the request for accommodation is granted, to the School of Medicine Office of Student Affairs. The School may also seek independent review from a specialist of its choice. The decision on whether or not an accommodation request will be granted is made by a committee composed of the Associate Dean for Academic Affairs, the Associate Dean for Student Affairs, the Student Affairs Committee, and (as needed) ad hoc faculty who are knowledgeable regarding the area of disability. Such decisions are subject to review and approval by the Dean. If reasonable accommodation is feasible, effort will be made to provide the accommodation as classes begin. If the request for accommodation is denied, the student will be notified in writing.

The Faculty, through the Student Promotion and Professional Conduct Committee, has determined that students will be expected to complete the curriculum within four years from the time of initial matriculation and take all designated courses as appropriate for that stage of the curriculum. Exceptions to the requirement that students take all

designated courses as appropriate for that stage of the curriculum may be sought and processed as other requests for accommodation, as noted above. Such a request will be based on 1) a specific disability certified by a qualified professional and accompanied by a specific recommendation for accommodation (i.e., a decompressed curriculum based on stated disability) and 2) a written request from the matriculant for such an accommodation based on stated disability. As noted above, while students will be expected to complete the curriculum in four years, an accommodation which includes a decompressed curriculum will not invalidate the requirement that a student must complete all curricular requirements in no more than six years from the time of initial matriculation (3 years for completion of the MS 1 and MS 2 years, and 3 years for the MS 3 and MS 4 years).

In the area of learning disabilities (see definitions on the TTUHSC Office of Student Services website), the student should note that he/she will have to petition the National Board of Medical Examiners for any accommodation on the United States Medical Licensing Examinations (Step 1, Step 2 Clinical Knowledge, Step 2 Clinical Skills, and Step 3) and that this process is in addition to and separate from any request for accommodation by the Texas Tech University Health Sciences Center School of Medicine.

Health Insurance & Immunizations

The Association of American Medical Colleges states that all students should be immunized against a number of infectious diseases for their own safety as well as the safety of others. **All matriculating TTUHSC School of Medicine students must be compliant with the school's immunization requirements in order to register for classes.**

Health Insurance Requirements

All students at TTUHSC School of Medicine are required to carry personal health insurance at all times while enrolled in the curriculum. The school's clinical affiliates also require that students carry health insurance in order to participate in clinical experiences.

TTUHSC Student Services has information about health insurance that is available to students. However, many other insurance companies also offer health plans. Students should compare health insurance plans in order to select the plan that is best suited to their personal situation.

Students are required to provide proof of personal health insurance coverage each year during medical school. Clinical affiliates as well as other medical schools (for extramural learning experiences) reserve the right to require proof of coverage on demand and to exclude individuals without current insurance coverage from rotations.

Immunization Requirements

In order to protect the health of our medical students and the health of the patients with whom they come in contact, the School of Medicine requires all entering students to provide documentation of several immunizations as well as the results of serological titers to determine whether or not they are actually immune to certain diseases. Protective immunity provided by some immunizations declines over time, and some individuals do not ever produce protective antibodies after receiving immunizations. Serologic titers are needed to determine immune status and are performed on a blood sample drawn from the arm.

Students are not allowed to participate in any classes involving patient contact until all required immunization documentation has been received by the TTUHSC Office of Institutional Health. All students entering Texas Tech University Health Sciences Center School of Medicine must provide proof of immunity documentation and/or the results of required titers.

- Tetanus/diphtheria booster within 10 years of matriculation
- Tdap (tetanus, diphtheria and pertussis), one time dose as an adult (starting year 2005)
- Measles-Mumps-Rubella (MMR), protective antibody titer
- Hepatitis B surface antibody, protective antibody titer
- 2-step Tuberculin skin test (PPD) minimum of 7 days apart (if you haven't had TB test within the past 12 months)

- OR documented physician diagnosis of disease OR chest X-ray in the past year following prior positive skin test
- Varicella (Chicken Pox), protective antibody titer
- Meningococcal (MCV), within the last 5 years – required for adults 22 years of age and younger
- Influenza vaccine

Academic Support Services

Students receive a variety of support services above and beyond the formal academic program. Most importantly, students have ready access to faculty for assistance and are actively encouraged to utilize this valuable resource. In addition, the School of Medicine Office of Student Affairs offers individual assistance in identifying and improving deficiencies in studying, test taking, and time management skills. Students are referred for outside counseling as appropriate. Personnel in the SOM Office of Student Affairs are trained to provide individual academic counseling. Peer tutoring services are also available to assist students in specific curricular content areas. Sometimes personal problems can have a deleterious effect on academic performance. Students can self-refer to the Health Sciences Center Program of Assistance for Students for free counseling services.

Grading

All blocks in Years 1 and 2 are graded as Pass, or Fail. Clerkships in Year 3 are graded as Honors, High Pass, Pass and Fail. Electives in Year 4 are graded Pass, or Fail.

Final grades in Years 1 and 2 are derived from a variety of assessment tools, including written and practical exams, small group evaluations, and NBME Examinations in selected blocks or courses. Students must also display appropriate professional behavior in order to complete courses in the first 2 years.

Third year clerkship grades are primarily determined by student performance on three major graded components: clinical evaluations by attending faculty and residents, NBME Clinical Subject Exams and an Observed Structured Clinical Examination. Students must also display appropriate professional behavior throughout the clerkships. Fourth year grades are derived from evaluations by attending faculty and residents with departmental exams and presentations on some electives.

Academic Progress

The faculty of the School of Medicine has the responsibility for recommending students for promotion and graduation. This responsibility is administered through the Student Promotions and Professional Conduct Committee (SPPCC) that represents the faculty at large. The members of the SPPCC are appointed by the Executive Committee of the Faculty Council and are charged with the responsibility to review and evaluate the academic and behavioral progress of each medical student enrolled at TTUHSC School of Medicine.

The SPPCC determines the conditions for promotion, reinstatement, or dismissal for each student in accordance with the published policies and procedures. Every attempt will be made to apply principles of fairness and due process when considering actions of the faculty or administration related to student performance. In general, students who receive a final grade of Fail will meet the SPPCC to discuss their academic performance and possible actions by the Committee. Possible actions include remediation, repetition of an academic year, or dismissal.

United States Medical Licensing Examination (USMLE)

Students are required to take the USMLE Step 1 exam prior to beginning Year 3 of the curriculum and must achieve a passing score to continue beyond the first clerkship in the third year. Students who do not achieve a passing score on the first attempt will not continue with clinical clerkships until they do so. Students must also pass the USMLE Step 2 Clinical Knowledge exam and the Longitudinal Clinical Skills exam as requirements for graduation from the medical school curriculum.

Graduation

Students planning to graduate MUST complete the TTUHSC Intent to Graduate form. Students should create a "Diploma" address in WebRaider so their diploma will be mailed to the proper address. The diploma address will only be used if the diploma is not picked up at Commencement.



Office of Academic Affairs

Simon Williams, Ph.D., Senior Associate Dean for Academic Affairs, Professor, Medical Curriculum

Bianca Cervantez, Administrative Assistant

Curriculum Division

Michaela Jansen, Ph.D., Associate Dean for Medical Education and Accreditation, Professor, Cell Physiology and Molecular Biophysics

Ebtesam Islam, MD, PhD, Associate Dean for Clinical Education, Associate Professor, Internal Medicine

Samuel Campbell, MD, Assistant Dean for the Clinical Science Curriculum, Professor, Surgery

Bethany Nunez, MHS, MD, Director for Year 4 Curriculum, Associate Professor, Pediatrics

Jo Ann Armstrong, Associate Managing Director

Lauren Findley, Director of Instructional Design

Candace Brown, Unit Manager for Year 1 and Year 2 Curriculum

Joangel Sanchez, Coordinator for Year 1 and Year 2 Curriculum

Maureen Eregie, Coordinator for Year 1 and Year 2 Elective Curriculum and P3 Curriculum

Amanda Jeter, Coordinator for Introduction to Clinical Medicine (ICM) Curriculum

Meredith Trevino, Section Manager for Year 3 Curriculum

Kelley Moss, Unit Manager for Year 4 Curriculum

Amarillo Campus

Kristin Stutz, MS, Assistant Regional Academic Dean

Dawn Cox, Unit Manager

Covenant Campus

Shaughn Nunez, MD, Assistant Vice Dean of Medical Education, Associate Professor, Pediatrics

Rachel Forbes, Assistant Vice Dean for Student Affairs

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Doctor of Medicine Program

Institutional Educational Vision, Goals, and Objectives

Vision: Graduates of the TTUHSC-SOM will be compassionate, competent, and knowledgeable health professionals who work diligently to improve the health of the public.

Goal: The Texas Tech University Health Sciences Center School of Medicine will graduate physicians who deliver patient-centered care as members of an interdisciplinary team, emphasizing evidence-based practice, quality improvement approaches, and informatics.

Objectives: To accomplish our goal, the Texas Tech University Health Sciences Center School of Medicine has identified key objectives for our program that address the knowledge, skills, behaviors, and attitudes needed for students to acquire the degree of Doctor of Medicine. These objectives are designed to ensure that students acquire the six core competencies described by the Accreditation Council for Graduate Medical Education: patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice. Each block, clerkship and rotation sets forth specific learning objectives and their outcome measurements based on these key educational objectives. The School of Medicine will continue to review these objectives and revise as needed to ensure that the vision and goals are met.

Upon completion of all required courses and clinical educational experiences the student will be able to:

1. Patient Care: Provide patient-centered care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health
 - 1.1 Perform all medical, diagnostic, and surgical procedures in each required educational activity
 - 1.2 Gather essential and accurate information about patients and their conditions through history-taking, physical examination, and the use of laboratory data, imaging, and other tests
 - 1.3 Organize and prioritize responsibilities to provide care that is safe, effective, and efficient
 - 1.4 Interpret laboratory data, imaging studies, and other tests required for the area of practice
 - 1.5 Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
 - 1.6 Develop and carry out patient management plans
 - 1.7 Counsel and educate patients and their families to empower them to participate in their care and enable shared decision making
 - 1.8 Provide appropriate referral of patients including ensuring continuity of care throughout transitions

- between providers or settings, and following up on patient progress and outcomes
- 1.9 Provide health care services to patients, families, and communities aimed at preventing health problems or maintaining health
- 1.10 Provide appropriate role modeling
- 2. Medical Knowledge: Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social behavioral sciences, as well as the application of this knowledge to patient care
 - 2.1 Demonstrate an investigatory and analytic approach to clinical situations
 - 2.2 Apply established and emerging bio-physical scientific principles fundamental to health care for patients and populations
 - 2.3 Apply established and emerging principles of clinical sciences to diagnostic and therapeutic decision-making, clinical problem-solving, and other aspects of evidence-based health care
 - 2.4 Apply principles of epidemiological sciences to the identification of health problems, risk factors, treatment strategies, resources, and disease prevention/health promotion efforts for patients and populations
 - 2.5 Apply principles of social-behavioral sciences to provision of patient care, including assessment of the impact of psychosocial and cultural influences on health, disease, care-seeking, care compliance, and barriers to and attitudes toward care
 - 2.6 Contribute to the creation, dissemination, application, and translation of new health care knowledge and practices
- 3. Practice-Based Learning and Improvement: Demonstrate the ability to investigate and evaluate one's care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning
 - 3.1 Identify strengths, deficiencies, and limits in one's knowledge and expertise
 - 3.2 Set learning and improvement goals
 - 3.3 Identify and perform learning activities that address one's gaps in knowledge, skills, and/or attitudes
 - 3.4 Systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement
 - 3.5 Incorporate feedback into daily practice
 - 3.6 Locate, appraise, and assimilate evidence from scientific studies related to patients' health problems
 - 3.7 Use information technology to optimize learning
 - 3.8 Participate in the education of patients, families, students, trainees, peers and other health professionals
 - 3.9 Obtain and utilize information about individual patients, populations of patients, or communities from which patients are drawn to improve care
 - 3.10 Continually identify, analyze, and implement new knowledge, guidelines, standards, technologies, products, or services that have been demonstrated to improve outcomes
- 4. Interpersonal and Communication Skills: Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals
 - 4.1 Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds
 - 4.2 Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health related agencies (see also 7.3)
 - 4.3 Work effectively with others as a member or leader of a health care team or other professional group (see also 7.4)
 - 4.4 (left blank, since PCRS objective was deleted, to remain consistent with PCRS numbering)
 - 4.5 Maintain comprehensive, timely, and legible medical records
 - 4.6 Demonstrate sensitivity, honesty, and compassion in difficult conversations, including those about death, end of life, adverse events, bad news, disclosure of errors, and other sensitive topics
 - 4.7 Demonstrate insight and understanding about emotions and human responses to emotions that allow one to develop and manage interpersonal interactions
- 5. Professionalism: Demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles
 - 5.1 Demonstrate compassion, integrity, and respect for others

- 5.2 Demonstrate responsiveness to patient needs
- 5.3 Demonstrate respect for patient privacy and autonomy
- 5.4 Demonstrate accountability to patients, society, and the profession
- 5.5 Demonstrate sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation
- 5.6 Demonstrate a commitment to ethical principles pertaining to provision or withholding of care, confidentiality, informed consent, and business practices, including compliance with relevant laws, policies, and regulations
- 6. Systems-Based Practice: Demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care
 - 6.1 Work effectively in various health care delivery settings and systems relevant to one's clinical specialty
 - 6.2 Coordinate patient care within the health care system relevant to one's clinical specialty
 - 6.3 Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care
 - 6.4 Advocate for quality patient care and optimal patient care systems
 - 6.5 Participate in identifying system errors and implementing potential systems solutions
 - 6.6 Perform administrative and practice management responsibilities commensurate with one's role, abilities, and qualifications
- 7. Interprofessional Collaboration: Demonstrate the ability to engage in an interprofessional team in a manner that optimizes safe, effective patient- and population-centered care
 - 7.1 Work with other health professionals to establish and maintain a climate of mutual respect, dignity, diversity, ethical integrity, and trust
 - 7.2 Use the knowledge of one's own role and the roles of other health professionals to appropriately assess and address the health care needs of the patients and populations served
 - 7.3 Communicate with other health professionals in a responsive and responsible manner that supports the maintenance of health and the treatment of disease in individual patients and populations
 - 7.4 Participate in different team roles to establish, develop, and continuously enhance interprofessional teams to provide patient- and population-centered care that is safe, timely, efficient, effective, and equitable
- 8. Personal and Professional Development: Demonstrate the qualities required to sustain lifelong personal and professional growth
 - 8.1 Develop the ability to use self-awareness of knowledge, skills, and emotional limitations to engage in appropriate help-seeking behaviors
 - 8.2 Demonstrate healthy coping mechanisms to respond to stress
 - 8.3 Manage conflict between personal and professional responsibilities
 - 8.4 Practice flexibility and maturity in adjusting to change with the capacity to alter one's Behavior
 - 8.5 Demonstrate trustworthiness that makes colleagues feel secure when one is responsible for the care of patients
 - 8.6 Provide leadership skills that enhance team functioning, the learning environment, and/or the health care delivery system
 - 8.7 Demonstrate self-confidence that puts patients, families, and members of the health care team at ease
 - 8.8 Recognize that ambiguity is part of clinical health care and respond by utilizing appropriate resources in dealing with uncertainty

Undergraduate Medical Education

Texas Tech University Health Sciences Center School of Medicine is committed to excellence in the medical education of generalist physicians in preparation for training in any clinical specialty. In the Fall of 2021, the School will launch a new curriculum beginning with the Class of 2025 that emphasizes:

- Continuous integration of basic science and clinical medicine in all four years, with early introduction of clinical experiences starting with the first month of medical school
- Self-directed student learning with varied teaching formats directed to achieving the important competencies of our Vision, Goals, and Objectives listed above, and
- Active management of curricular content both within and across all four years

The School of Medicine has responded to the Association of American Medical Colleges and medical education innovations nation-wide to realign curricula so graduating students meet the best practice standards of patient-centered scientific care. The new curriculum at the School of Medicine emphasizes competency-based education, focusing on the skills and compassion that distinguish excellence in patient care in our profession. Dedicated teaching faculty have responded fully to this unparalleled opportunity to reshape the curriculum so that students are the best-prepared doctors and the faculty members are the best educators. Our curriculum trains students to manage and use the constantly changing best evidence for practice, and to apply this evidence in humane and sensitive manner.

To ensure distinction in medical education, the administration fully supports the offices charged with the SOM educational mission: the Office of Academic Affairs, the Office of Student Affairs, the Office of Curriculum, and the Office of Faculty Affairs and Faculty Development. These offices work closely on this common mission to ensure continual improvement of learning and teaching. In conjunction with the Curriculum and Educational Policy Committee, the faculty, and student body that oversees adherence of the curriculum to national and school standards, the Offices have made student assessment and feedback the centerpiece of curriculum redesign.

The curriculum is continually reviewed and modified to ensure the personal and professional growth of our future physicians. To promote balance between academics and lifestyle in Phase 1 (previously Years 1 and 2), the SOM has limited contact time to 20 or fewer hours per week. Opportunities for interactive learning through small group tutorials, labs, problem-based learning, team-learning, and web-based instruction have also been expanded.

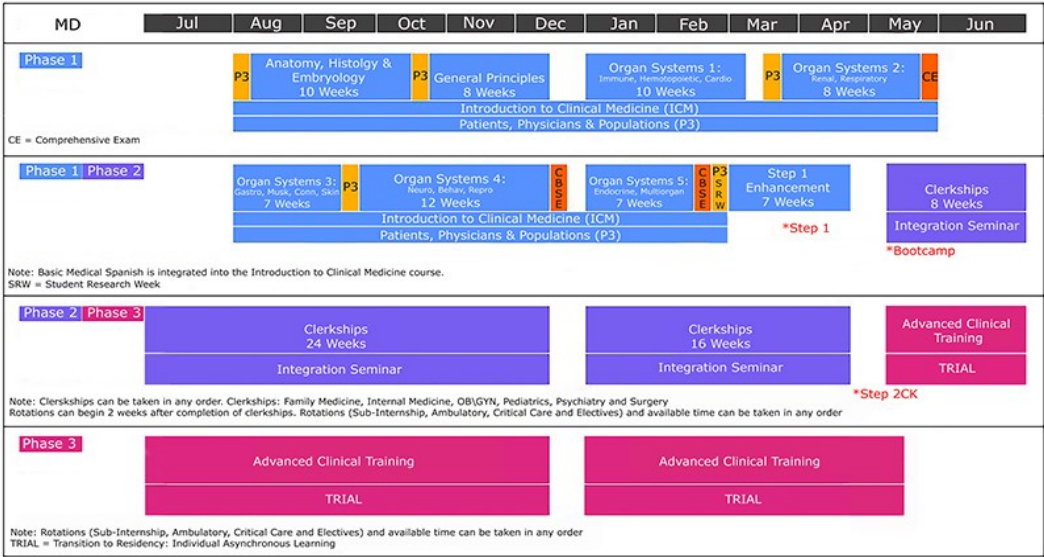
The management of the curriculum has been formally endorsed by the Liaison Committee on Medical Education. The Liaison Committee on Medical Education represents the Association of American Medical Colleges and the American Medical Association as the national accreditation body for medical schools. The Texas Tech University Health Sciences Center School of Medicine received a full accreditation in March 2017.

Educational Tracks and Dual Degrees at the School of Medicine

Beginning with the class that matriculated in Fall 2010, students have been able to choose between two educational tracks within the School of Medicine, a standard four-year program and a three-year accelerated program called the Family Medicine Accelerated Track (FMAT). The School of Medicine also offers several joint degrees in collaboration with other schools at Texas Tech University Health Sciences Center or Texas Tech University and a MD with Research Honors degree.

4 Year Doctor of Medicine Program

Most students will follow a standard four-year program with Phase 1 focused on the acquisition of knowledge of the scientific basis of medicine allied to an introduction to clinical medicine and Phase 2 and 3 provided instruction and experiences in a variety of areas of clinical medicine



Blocks and Clerkships	Credit Hours	Weeks
Phase 1		
Anatomy, Histology, and Embryology (Fall, M1)	10	10
General Principles (Fall, M1)	8	8
Organ Systems 1 (Spring, M1)	10	10
Organ Systems 2 (Spring, M1)	9	9
Patients, Physicians & Populations (Fall & Spring, M1)	4	3
Introduction to Clinical Medicine (Fall & Spring, M1)	3	0
Organ Systems 3 (Fall, M2)	7	7
Organ Systems 4 (Fall, M2)	12	13
Organ Systems 5 (Spring, M2)	8	8
Step 1 Enhancement (Spring, M2)	4	7
Patients, Physicians & Populations (Fall & Spring, M2)	3	2
Introduction to Clinical Medicine (Fall & Spring, M2)	3	0
Phase 2 (Required Clerkships)		

Internal Medicine	8	8
Surgery	8	8
Obstetrics & Gynecology	8	8
Pediatrics	8	8
Psychiatry	8	8
Family Medicine	8	8
Integration Seminar - Student Grand Rounds	0	0
Phase 3		
Transition to Residency Interactive Asynchronous Learning Experience (TRIAL)	4	4
Ambulatory Care Rotation	2	2
Critical Care Rotation	2	2
Subinternship	4	4
Electives (5 minimum)	20	20
Total for MD	161	157

Required Courses

Phase 1 Courses

The first year is divided longitudinally into four consecutive interdisciplinary blocks named Anatomy, Histology, and Embryology, General Principles, Organ Systems 1 and Organ Systems 2. In addition, student complete a clinical skills course (Introduction to Clinical Medicine 1) and an introduction to doctoring course (Patients Physicians and Populations, P3), along with an introductory interprofessional education course. The P3 course also includes small group sessions within each of the four consecutive blocks that apply the concepts introduced in the P3 course to the content of each of the blocks. Students must pass all blocks in order to complete the first phase.

An independent study version of each course from Phase 1 is available under exceptional circumstances for auditing or remediation of course content.

Independent Study

Course Number	Name/General Description
MSCI-5201	IDS-AHE
MSCI-5202	IDS-GPX
MSCI-5203	IDS-OS1
MSCI-5203	IDS-OS2
MSCI-xxxx	IDS-ICM1
MSCI-xxxx	IDS-P3-1
MSCI-6201	IDS-OS3
MSCI-6202	IDS-OS4
MSCI-6203	IDS-OS5
MSCI-xxxx	IDS-ICM2
MSCI-xxxx	IDS-P3-2

Required Courses Course Descriptions

MSCI 5108 (Lubbock HSC) Anatomy, Histology and Embryology This block is intended to provide students with a foundation in anatomy, basic tissue histology, embryology, and medical imaging necessary for success in the remainder of the curriculum and introduce applications of anatomy and histology to the practice of medicine. The course covers concepts of microscopic, gross and developmental anatomy presented in a clinical context. The cadaver-based experience in AHE will involve team-based dissection activities that provides the setting for students for the development of a professional attitude toward patients, colleagues, and the entire health care community.

MSCI 5109 (Lubbock HSC) General Principles This block will integrate the basic principles of biochemistry, cell biology, genetics, pharmacology, pathology, and microbiology to prepare students for subsequent organ-system based blocks. Specifically, this block begins with a description of various pathways involved in human metabolism, organization of the human genome, control of gene expression and major cellular organelles and their functions. Basic principles of pharmacology including pharmacodynamics/kinetics and key pathology concepts, such as inflammation, are then introduced. This is followed by an overview of selected medically important microorganisms, their life cycles, identification, and the mechanisms through which they cause disease. Lastly, mechanisms of action and basic pharmacological properties of antimicrobial drugs are addressed.

MSCI 5110 (Lubbock HSC) Organ Systems 1 This block introduces immune, hematopoietic and cardiovascular systems. The physiology and histology of components of the immune system will provide the basis for disorders of immunity. The hematopoietic section will address various blood disorders including anemias, bleeding and clotting disorders, cancers, and their treatment. The cardiovascular section will cover the autonomic nervous system and excitable tissues and proceed from histology and physiology to the pathology, diagnosis and pharmacotherapy of cardiac and vascular diseases.

MSCI 5111 (Lubbock HSC) Organ Systems 2 This block covers the histology and physiology of the renal and respiratory systems, the respective major pathologies, diagnoses, and treatments related to each system, as well the integrative function of the renal and respiratory systems within context of acid-base balance and related pathologies.

MSCI 5120 (Lubbock HSC) Patients, Physicians and Populations 1 (P3-1) This block extends throughout year 1, and provides a framework for students to gain skills essential to professional identity formation as physicians, including professionalism, cultural competency, teamwork and collaboration, and addressing ethical challenges to medical practice. Students are also introduced to health systems and health policy, and social and cultural issues that impact health. Learning occurs in classroom settings, small group forums, and community-based settings. The students also explore ethical, cultural, psychological and economic dimensions of clinical care in a variety of learning settings.

MSCI 5121 (Lubbock HSC) Introduction to Clinical Medicine 1 (ICM-1) Throughout year 1, students will learn to conduct a thorough medical history and physical examination of the Head/Neck, Eyes, Ears, Nose, Throat (HEENT), Cardiovascular, and Respiratory systems. Beginning with the complete medical history, students will gain knowledge and skills in patient centered communication. Students will also learn to document and present patient encounters in a SOAP format. Content will be delivered in various styles, including large group didactic sessions, workshops with peers and standardized patients, and clinical examinations. Student will show mastery of skills throughout these mandatory sessions and may have the opportunity for showing increased clinical acumen through optional sessions.

MSCI 6106 (Lubbock HSC) Basic Medical Spanish This is a 15-hour web-based course, which includes two interactive sessions to be completed by March 15 of Year 2. The goal of this course is to promote patient rapport and the cultural comfort of the student caring for our Spanish-speaking patients. Grading will be Pass-Fail and will be entered on student transcripts.

MSCI 6113 (Lubbock HSC) Organ Systems 3 The gastrointestinal section will cover the function, pathology, pathophysiology, diagnosis and treatment of the oropharynx, digestive tract, liver and pancreas. Students will also be introduced to common digestive tract pathogens. The second section will cover the physiology and pathophysiological conditions of skin, connective tissue and the musculoskeletal system.

MSCI 6114 (Lubbock HSC) Organ Systems 4 This block begins with comprehensive coverage of the central nervous system, which integrates microscopic cellular structure, neuroanatomy, and neurological systems with both normal function and clinical signs and symptoms. The block subsequently introduces the student to aspects of neuropharmacology, neuropathology, and the etiology (biological and psychosocial factors), signs, and symptoms of various neuropsychiatric disorders. The reproductive section will cover the histology, physiology, pathophysiology, diagnosis and treatment of reproductive organ and cancer biology.

MSCI 6115 (Lubbock HSC) Organ Systems 5 The organ systems 5 block will provide instruction in basic and clinical endocrinology, covering endocrine histology, physiology and pathophysiology. Additionally, topics covered in previous organ systems (OS 1-4) may be briefly revisited. Selected diseases pertaining to multiple organ systems will also be introduced facilitating the integration and interconnections of several organ systems. Collectively, this block will help students to integrate their knowledge to analyze clinical problems and formulate differential diagnoses.

MSCI 6111 (Lubbock HSC) Step 1 Enhancement This is an independent study course designed to aid students in preparing for the taking USMLE Step 1.

MSCI 6120 (Lubbock HSC) Patients, Physicians and Populations 2 (P3-2) This block builds on the skills learned in P3-1 with more advanced clinical reasoning, evidence-based medicine, patient safety and career development skills. They continue to explore professionalism and ethics and develop awareness of cultural and psychosocial issues using a variety of methods: workshops, small group activities, personal reflection and community-based settings.

MSCI 6121 (Lubbock HSC) Introduction to Clinical Medicine 2 (ICM-2) Building on the skills and knowledge from ICM1, students will learn to conduct a thorough medical history and physical examination of the Gastrointestinal, Musculoskeletal, Neurological, Psychiatric, and Reproductive systems. Students will continue with patient centered communication skills, adding in more difficult skills such as end-of-life discussions. Students will continue to develop documentation and patient presentation skills. Content will be delivered in various styles, including large group didactic sessions, workshops with peers and standardized patients, and clinical examinations. Student will show mastery of skills throughout these mandatory sessions and may have the opportunity for showing increased clinical acumen through optional sessions.

Electives

Phase 1 Electives

Elective courses are available for students during Phase 1 to expand their experiences and to permit them to explore areas outside standard curricular courses. There are no specific requirements for taking electives in Phase 1 and students should only enroll in these electives if they are sure that they will not interfere with their ability to successfully complete the medical school curriculum. All electives are zero credit courses and appear on student transcripts if they are successfully completed. It is possible that certain electives will not be offered each year and announcements will be sent to students as these courses become available. Electives generally have caps to student numbers and methods for selection of participants will be distributed at the time of announcement.

Electives Course Descriptions

MIDS 5402 (Lubbock HSC) Advancement of Patient Safety This course will introduce the healthcare student to the concepts in promoting and providing patient safety. Archived videos and live content expert presentations will build a framework of knowledge which the student can then apply to vignettes involving a sentinel event. Completion of this course will prepare the student with the fundamental knowledge required for the interprofessional root cause analysis course (CLARION). The goal of this course is to provide the all students of the Texas Tech University Health Sciences Center Schools with the opportunity to practice the core competencies recommended by the Institute of Medicine (IOM). The IOM recommended in a 2003 publication entitled "Health Education: A Bridge to Quality" that five core competencies be integrated into health professions education: patient-centered care, interdisciplinary teams, evidence-based practice, quality improvement and informatics. In this course students will work in interprofessional teams as they study the following concepts: root cause analysis, budget analysis, professional conduct and policies, team communication, legislative initiatives, information technology.

MIDS 6402 (Lubbock HSC) Advancement of Patient Safety This course will introduce the healthcare student to the concepts in promoting and providing patient safety. Archived videos and live content expert presentations will build a framework of knowledge which the student can then apply to vignettes involving a sentinel event. Completion of this course will prepare the student with the fundamental knowledge required for the interprofessional root cause analysis course (CLARION). The goal of this course is to provide the all students of the Texas Tech University Health Sciences Center Schools with the opportunity to practice the core competencies recommended by the Institute of Medicine (IOM). The IOM recommended in a 2003 publication entitled "Health Education: A Bridge to Quality" that five core competencies be integrated into health professions education: patient-centered care, interdisciplinary teams, evidence-based practice, quality improvement and informatics. In this course students will work in interprofessional teams as they study the following concepts: root cause analysis, budget analysis, professional conduct and policies, team communication, legislative initiatives, information technology.

MIDS 5403 (Lubbock HSC) Pre-Hospital Medicine Elective This elective will educate first and second year medical students about one of the major routes in which patients enter the healthcare field, namely the emergency room. Students will gain knowledge about what the patient encounters, beginning with first responders, through each subsequent step prior to hospital admission, and thus have a better understanding of the comprehensive care that a patient receives before they present to the ED physician. This educational goal is invaluable to those who are interested in a future career as Emergency Medicine physicians.

MIDS 6403 (Lubbock HSC) Pre-Hospital Emergency Elective This elective will educate first and second year medical students about one of the major routes in which patients enter the healthcare field, namely the emergency room. Students will gain knowledge about what the patient encounters, beginning with first responders, through each subsequent step prior to hospital admission, and thus have a better understanding of the comprehensive care that a patient receives before they present to the ED physician. This educational goal is invaluable to those who are interested in a future career as Emergency Medicine physicians.

MIDS 5404 (Lubbock HSC) Global Health 101 There is a growing population of students who are interested in cultivating their understanding about the global health field to facilitate career choice decisions and future humanitarian involvement. The primary goal of this course is to offer exposure to topics in global health, but to also tailor the knowledge to include theory and real-world practice. Students will complete learning modules ranging from cultural competency, relevant health issues, to the process of building a clinic on their own. As part of this real-world practice, health simulations concerning two common global health issues – malaria and cholera, will be incorporated. Accordingly, another major goal is to highlight interprofessional teamwork in diagnosis, prevention, and treatment in a resource-deprived setting. It is recognized that interprofessional interactions vary greatly depending on the nature of the clinic, the location of the clinic, the situation, and resources available. In recognition of the different roles required, there will also be clinical activities that cultivate clinical skills not covered elsewhere in the curriculum.

MIDS 6404 (Lubbock HSC) Global Health 101 There is a growing population of students who are interested in cultivating their understanding about the global health field to facilitate career choice decisions and future humanitarian involvement. The primary goal of this course is to offer exposure to topics in global health, but to also tailor the knowledge to include theory and real-world practice. Students will complete learning modules ranging from cultural competency, relevant health issues, to the process of building a clinic on their own. As part of this real-world practice, health simulations concerning two common global health issues – malaria and cholera, will be incorporated. Accordingly, another major goal is to highlight interprofessional teamwork in diagnosis, prevention, and treatment in a resource-deprived setting. It is recognized that interprofessional interactions vary greatly depending on the nature of the clinic, the location of the clinic, the situation, and resources available. In recognition of the different roles required, there will also be clinical activities that cultivate clinical skills not covered elsewhere in the curriculum.

MIDS 5405 (Lubbock HSC) The Future of Medicine Elective As medical students, most education is geared at learning the human body through what has already been learned with the integration of modern methods and technology. However, what is described as modern knowledge/methods/technology is actually from the ideas and world of yesterday. The advancements happening today are numerous and far reaching. The problem with today's healthcare is that without the active pursuit, collaboration, and implementation of new research and peer-reviewed science into the clinical setting, progress will be slow and treatment of patients will be suboptimal. With this class, MS1s and MS2s will be able to hear from lecturers about what is nascent in the world of science today and how they try and use it for patient care. There will also be discussion sessions that will have students reading and sharing thoughts about recent peer-reviewed articles. Pre-chosen peer-reviewed articles will be available for each group session with the option of finding and reading outside articles that are relevant for the month's theme and are of interest to the student. They will discuss how these advances can help and how they would integrate the information into today's and tomorrow's medicine.

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are relevant for the month's theme and are of interest to the student. They will discuss how these advances can help and how they would integrate the information into today's and tomorrow's medicine.

MIDS 5406 (Lubbock HSC) Preventive Medicine Elective This elective will educate first and second year medical students about the potential to incorporate preventive practices in medicine. This will involve a series of events including brown bag lectures, film screenings, and round-table discussions. A service component will also be required to complete the course. At the end of the elective, students should have a greater awareness about the need for preventive education for their future patients, and about the various ways in which they can utilize preventive practices as future physicians.

MIDS 6406 (Lubbock HSC) Preventive Medicine Elective This elective will educate first and second year medical students about the potential to incorporate preventive practices in medicine. This will involve a series of events including brown bag lectures, film screenings, and round-table discussions. A service component will also be required to complete the course. At the end of the elective, students should have a greater awareness about the need for preventive education for their future patients, and about the various ways in which they can utilize preventive practices as future physicians.

MIDS 5407 (Lubbock HSC) Medical Business Elective This elective will educate first and second year medical students about the fundamentals of business in medicine, be it starting a private practice or working in a hospital. This elective will highlight the fundamentals in accounting, finance, management, and marketing, while providing a list of resources for the students to obtain if they desire to learn more. After completing the fundamental curriculum, basic business applications will be taught. This would include an overview of the current healthcare system, health organization management, electronic health records, billing and coding, reimbursement, advance directives, and wills. Students will be instructed on how to read and understand financial statements, do some simple financial calculations, and utilize common management techniques and concepts. These educational goals are invaluable to anyone interested in a future career in medicine.

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MIDS 5408 (Lubbock HSC) Rural Health Elective This course will present opportunities to heighten understanding of rural health experiences and challenges. The purpose of the Rural Health Elective is to provide students an opportunity to explore and experience the practice of medicine in rural America. It also aims to raise interest in and awareness of the current state of rural healthcare both locally and nationally. Such an elective would aid in furthering TTUHSC SOM's mission to "meet the growing needs of a diverse and largely rural patient population" and "enhance the health care of communities in the (West Texas) region".

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MIDS 6409 (Lubbock HSC) Texas Tech Apprenticeship Program (TTAP) TTAP is a student-centered, longitudinal program that is designed to provide the learner an intense exposure within a clinical field. The program runs from January of the MS 1 year until December of the MS 2 year. Students will develop a curriculum proposal with a faculty mentor and execute the proposal over the course of the year following approval from Assistant Dean of Clinical Sciences or the designee. Participation in TTAP will introduce students to the medical professional work environment and effectively allow students to begin building a professional identity. TTAP will also allow students to put pre-clinical education in context through actual interactions with patients and individual faculty mentors. It is hoped that this early clinical exposure will stimulate learning among students during the pre-clinical years.

MIDS 5410 (Lubbock HSC) Service in Medicine "Service-learning" in medical education is important and often overlooked in curricula. Fostering medical student interests in becoming more service-oriented is vital to delivering compassionate and comprehensive care to patients. Multiple studies have observed the link between serving community needs and being a practitioner that is able to understand the environments which factor in to the holistic review of a patient. By establishing an elective that provides both service opportunities and lectures from service-oriented physicians, medical students will be able to have a clear goal on how to combine medicine with service.

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MIDS 5411 (Lubbock HSC) Healthcare Public Policy This elective will educate interested medical, nursing, and health profession students about healthcare public policy in the US. It will cover a broad range of topics, including medical malpractice, reimbursement and revenue systems, insurance practice, controversial policy topics, and how best to contact your local, state, and national representatives. Along with lectures, students will participate in a hands-on activity where they will learn how to create and present a Leave Behind pamphlet.

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MIDS 5416 (Lubbock HSC) Introduction to Obstetrics and Gynecology This elective will educate first and second year medical students about the field of obstetrics and gynecology. Students will gain knowledge about different sub-specialties such as Reproductive Endocrinology and Infertility, Maternal and Fetal Medicine, Female Pelvic Medicine and Reconstructive Surgery and Gynecologic Oncology.

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MIDS 5417 (Lubbock HSC) Art in Medicine The relationship between artistic engagement and patients' health has also been well documented. Multiple studies strongly suggest that artistic engagement has a positive effect on health. For this reason, many health professionals have begun implementing creative exercises as a form of health-care into their practice. This course will help medical students to learn how the arts can help them develop both critical thinking and empathy to better understand their patients' illness experiences, the medical team-patient relationships, physician self-care, and various other aspects of healthcare.

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thinking and empathy to better understand their patients' illness experiences, the medical team-patient relationships, physician self-care, and various other aspects of healthcare.

MIDS 5418 (Lubbock HSC) Human Trafficking: Awareness and Education This elective course will complement the curriculum for medical students by providing a discussion based seminar series in raising awareness on the topic of human trafficking. This course will incorporate lectures from professionals that have firsthand experience in assisting victims and survivors of human trafficking.

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MIDS 5419 (Lubbock HSC) Resiliency Peer Program Elective The Resiliency Peer Program is in response to the Student Wellness Committee's identification of a significant need for educating our peers about topics in mental health and burnout prevention. The program is aimed at equipping medical students with tools to better manage stress and reduce burnout by forming a support system of medical students and faculty who are informed about techniques to support student wellness. Currently the program exists in the form of a Spring 2021 elective

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MIDS 5420 (Lubbock HSC) Medical Ethics and Humanities Society Elective The Medical Ethics and Humanities Society will sponsor students who do not want to commit to a four year certificate to take classes in Medical Humanities and Bioethics on a class by class basis during MS1 and MS2 years. This course will help medical students learn how Clinical Bioethics and Doctors in Film can help them develop both critical thinking and empathy to better understand their patients' illness experiences, the medical team-patient relationships, physician self-care, and various other aspects of healthcare.

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MIDS 5421 (Lubbock HSC) Introduction to Research We define the perceived barriers TTUSHC SOM students have concerning research as limited knowledge in research foundations, institutional opportunities, and scholastic commitment. The aim of our elective would be to deliver informative research content addressing these barriers. The content we plan to present would cover introduction to research types, IRB process, project development, literature searching, finding a mentor, scientific writing, and overall research importance to medical students. Currently, we have the support of both Dr. Cobbs as a research mentor and Dr. Dufour as a faculty elective advisor. Additionally, we have identified multiple faculty members that are willing to present on these topics, as our elective will consist of a series of knowledgeable guest speakers. We intend for this elective to not only provide an appropriate transition for new medical students wanting to pursue research but to correspond and reinforce the other established TTUHSC events such as the SSRP and SRW.

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MIDS 5422 (Lubbock HSC) Cardiology Elective Enrichment of the medical school curriculum and student experience through remote, educational experiences with a focus in Cardiology. The elective will introduce first- and second-year medical students to the diverse and competitive field of cardiology through online lectures and workshops. Online collaborative events with other student organizations will allow members to stay connected to a larger group of peers. Topics such as congenital heart disease, arrhythmias, ECG and chest auscultation will be presented at appropriate times during the year to supplement school lectures on these topics. An emphasis will be placed on improving HPI writing throughout the course. Student's HPI's will be critiqued after submission based on online modules of patient H&P's. Students will request Cerner access and complete a case study remotely on a patient. Case studies will be presented online amongst members. A pass/fail grade will be assigned at the end of the elective based on meeting attendance requirements and completion of HPI writing assignments and case study.

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MIDS 5423 (Lubbock HSC) Fitness and Nutrition Elective This elective teaches preclinical medical students to incorporate fitness and nutrition education in healthcare through interactive lectures and community outreach events. Preventive medicine is crucial in every medical specialty because it increases patient autonomy, improves healthcare outcomes, and decreases medical costs. This elective will equip future physicians with the knowledge to apply preventive care in their practices.

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MIDS 5424 (Lubbock HSC) Free Clinic Elective First and second year medical students enrolled in this elective will get the opportunity to attend lectures to learn about the background, operations, and how the TTUHSC Free Clinic runs, as well as commit to dedicating their time to volunteer with the clinic on at least six Wednesdays throughout the course of the year. This course will allow students to employ clinical skills with a population in need. A number of hands-on learning experiences will also be offered including ultrasound and EKG workshops to help volunteers improve the clinic workflow.

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MIDS 5425 (Lubbock HSC) Diversity and Inclusivity in Clinical Practice This course is designed by medical students for medical students to help prepare us during our pre-clinical years to anticipate the needs of diverse patient populations including patients of color, patients with mental/physical

disabilities, LGBTQIA+ and ESL patients. Students will attend informative lectures on clinical realities faced by marginalized communities and then have the opportunity to practice clinical skills such as history taking, vitals, and physical exams with intentionally diverse/challenging SP encounters.

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MIDS 5426 (Lubbock HSC) Lesbian, Gay, Bisexual, and Transgender Health Education This elective course is designed to educate students on the basic aspects of providing care to Lesbian, Gay, Bisexual, and Transgender (LGBT) individuals. These aspects include awareness of the social and behavioral determinants of health that are unique to LGBT individuals, how to use inclusive language during patient interactions, and being informed of the health risks/treatment options associated with this marginalized patient population. This course follows the Fenway Guide to LGBT Health and aims to cultivate clinical skills and competencies for LGBT-centered healthcare, as supported by the American Medical Association.

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MIDS 5427 (Lubbock HSC) Sling Health Sling Health is a national organization with a branch here at TTUHSC that helps connect students from different disciplines to engage in healthcare innovation and entrepreneurship. Our student organization offers a somewhat unique opportunity to collaborate with students from other Graduate programs as well as the Colleges of Business and Engineering on a school year-long medical project concluding with the opportunity to present your innovation at National Sling Demo Day.

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MIDS 5428 (Lubbock HSC) Clinical Application of Genetics Through lecture, discussion, workshops, and lab tours learners will expand their knowledge of advances in medical and molecular genetics, and begin to acquire skills in areas related to genetic counseling in clinical settings. The ethical, legal, and social implications of genetic information and research will be explored throughout the course.

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MIDS 6429 Open Door LBK - Free Clinic Second-year medical students enrolled in this elective will learn to be advocates for those experiencing homelessness and strive to uphold the Open Door mission statement: "To cultivate community, opportunity, and restoration with people experiencing poverty, homelessness, and sex trafficking." This course allows students to gain and apply clinical skills and knowledge specifically targeting populations that include individuals experiencing varying levels of homelessness. This course allows students the opportunity to develop a greater understanding of the various disparities affecting individuals experiencing homelessness, and it is expected that these skills can be utilized for the betterment of our practice as physicians serving underserved communities in the future. Additionally, this course will strive to provide students with clinical skills such as history of present illness (HPI) gathering, presenting to attendings, point of care (POC) glucose measuring, and various other skills.

MIDS 5430 Artificial Intelligence in Medicine "AI in Medicine" is a lecture-based course for first- and second-year medical students, designed to equip them with the knowledge and skills required to effectively integrate artificial intelligence into medical practice. Through expert-led lectures, students will gain a comprehensive understanding of AI in medicine, including its current state, potential, and limitations. The course will explore how AI can be leveraged to enhance patient outcomes, reduce healthcare cost, and support clinical decision-making, while also considering the ethical considerations. Students will develop critical thinking skills to evaluate the impact of AI systems on patient care. By the end of the course, students will be well-equipped to navigate the rapidly evolving landscape of AI in medicine and lead the implementation of AI technologies in their future medical practice.

MIDS 6430 Artificial Intelligence in Medicine "AI in Medicine" is a lecture-based course for first- and second-year medical students, designed to equip them with the knowledge and skills required to effectively integrate artificial intelligence into medical practice. Through expert-led lectures, students will gain a comprehensive understanding of AI in medicine, including its current state, potential, and limitations. The course will explore how AI can be leveraged to enhance patient outcomes, reduce healthcare cost, and support clinical decision-making, while also considering the ethical considerations. Students will develop critical thinking skills to evaluate the impact of AI systems on patient care. By the end of the course, students will be well-equipped to navigate the rapidly evolving landscape of AI in medicine and lead the implementation of AI technologies in their future medical practice.

MIDS 5431 Pre-Hospital Orthopedic Medicine This elective is designed to educate first and second year medical students on the field of orthopedic medicine and the different specialties within it such as pediatric orthopedics, sports medicine orthopedics and orthopedic trauma. Through a combination of lectures and discussions, students will have the opportunity to hear from attending physicians, associate professors, and residents on the discipline of orthopedics and what it entails, not only as a successful orthopedist but a successful orthopedic applicant. Students will also practice basic clinical skills that are required in the field such as reading x-rays, MRIs, casting, stabilizing and setting fractures and suturing. The educational opportunities from the elective are a must for anyone who even thinks they might be interested in orthopedic medicine and want to know more about the field.

MIDS 6431 Pre-Hospital Orthopedic Medicine This elective is designed to educate first and second year medical students on the field of orthopedic medicine and the different specialties within it such as pediatric orthopedics, sports medicine orthopedics and orthopedic trauma. Through a combination of lectures and discussions, students will have the opportunity to hear from attending physicians, associate professors, and residents on the discipline of orthopedics and what it entails, not only as a successful orthopedist but a successful orthopedic applicant. Students will also practice basic clinical skills that are required in the field such as reading x-rays, MRIs, casting, stabilizing and setting fractures and suturing. The educational opportunities from the elective are a must for anyone who even thinks they might be interested in orthopedic medicine and want to know more about the field.

MIDS 5432 Mandarin Chinese in Medicine This elective is intended to provide an introduction to Mandarin Chinese to help improve patient-provider relationships by equipping students with basic skills so they may initiate conversations with Mandarin-speaking patients. Students will be introduced to the Mandarin phonetic alphabet, major terms and phrases pertinent to a healthcare/patient encounter setting, and have the opportunity to practice conversation in Mandarin Chinese.

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MIDS 5433 Physical Medicine & Rehabilitation (PM&R) The PM&R elective will serve to introduce students to the various subspecialties within PM&R and their associated clinical skills. Students will be responsible for attending faculty-led lectures, skills labs, and conducting the appropriate clinical exam (musculoskeletal - MSK, neurological, etc.) to apply these skills when shadowing in a clinic in the future, and to apply these skills when in the PM&R clinics,

procedure suites and inpatient rehabilitation unit.

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MSCI 5401 (Lubbock HSC) Surgical Anatomy This course will provide an introduction and overview to surgical approaches to different regions of the human body from a clinical perspective. Students will observe and assist surgeons with surgical dissections of cadavers. The experience in Surgical Anatomy will provide students with a relevant correlation of anatomy as applied to surgical procedures.

MSCI 6401 (Lubbock HSC) Introduction to Clinical Research At the beginning of the elective, each student will be assigned to a nurse coordinator and will be increasingly involved in working with that coordinator on the studies they are running. An opportunity will be given for the students to choose between various ongoing studies, but this must be done early since they must have passed the CITI training program and have IRB approval to participate in individual studies. Each student should be involved both with studies involving human subjects and those involving chart reviews. It would be anticipated that the students would receive authorship on any publication resulting from studies on which they are involved, provided that their participation is meaningful. Early in the elective, there will be an emphasis on didactic material beginning with discussions about the regulations and ethical considerations related to research in humans, the background for these and the role played by the IRB and an Office of Research Integrity. This will be followed by sessions on how to develop the proposal for a research project from conception of the idea through formulation of a hypothesis and specific aims, compiling the background, constructing the appropriate methods and analysis of results and, finally, a discussion of the potential significance. It will be expected that each student will develop a proposal/protocol during the elective with an ongoing active critique process.

MSCI 5402 (Lubbock HSC) The Patient Experience in Film Monthly viewing of a film depicting a unique aspect of the patient experience. A smaller group of students enrolled in the elective will be assigned to preview the film and lead the post-film discussion (on a rotating basis). At the end of the year each student will select a film to watch independently and write a report on the unique aspect of the patient experience it portrays and how it will affect their future practice in medicine.

MSCI 5403 (Lubbock HSC) MSI International Health Elect This elective is site specific with site specific learning objectives. This elective allows students to experience the challenges of health care delivery with a required physician supervisor/evaluator in an international setting for 4 weeks.

MSCI 6403 (Lubbock HSC) Introductory Neurology Elective This rotation exposes the student to basic principles of diagnosis and management of common neurologic conditions. Students learn skills in conducting neurologic exams, identifying signs and symptoms of neurologic disorders, and integrating signs and symptoms into syndromes. Students learn about basic neurologic disorders and neurologic complications of systemic conditions.

MSCI 5404 (Lubbock HSC) Special Topics in Medicine Special topics in medical sciences that are not included in other classes in the medical school curriculum. May not be repeated for credit within an academic year.

MSCI 6404 (Lubbock HSC) Introduction to Anesthesiology Elective This elective will introduce the students to the specialty of anesthesia. The student will attend different types of anesthesia in various patient groups. They will participate in a pre-operative patient assessment for anesthesia, assessment of the airway and will learn basic airway management skills through hands-on sessions in the Sim Life Center. The students will be introduced to pharmacology and physiology concepts applied to anesthesia. The will have the opportunity to follow anesthesia residents on the ICU, in OB, observe pain procedures and observe regional anesthesia procedures including brief orientation of the sono-anatomy of certain nerve blocks.

MSCI 6405 (Lubbock HSC) International Health Elective This elective is site specific with site specific learning objectives. This elective allows students to experience the challenges of health care delivery with a required physician supervisor/ evaluator in an underserved international setting for 4 weeks.

MSCI 5407 (Lubbock HSC) ICAM The Integrative Complementary and Alternative Medicine (ICAM) elective will educate first and second year medical students about the importance of and methodology to incorporating Complementary and Alternative Medicine (CAM) into their medical practice. The will involve (1) a series of lunch lectures with brief, interactive demonstrations of various CAM modalities and (2) a set of workshops which give greater experience and insight on specific CAM practices. At the end of the elective, students should demonstrate the knowledge regarding the need for ICAM education to address the increasing use of CAM by patients and the various benefits and risks of using different CAM modalities.

MSCI 6407 (Lubbock HSC) ICAM The Integrative Complementary and Alternative Medicine (ICAM) elective will educate first and second year medical students about the importance of and methodology to incorporating Complementary and Alternative Medicine (CAM) into their medical practice. The will involve (1) a series of lunch lectures with brief, interactive demonstrations of various CAM modalities and (2) a set of workshops which give greater experience and insight on specific CAM practices. At the end of the elective, students should demonstrate the knowledge regarding the need for ICAM education to address the increasing use of CAM by patients and the various benefits and risks of using different CAM modalities.

MSCI 5408 (Lubbock HSC) Introduction to Ultrasound Elective The purpose of this elective is for students to obtain more hands-on experience in ultrasound skills and to recognize pathologies frequently observed through ultrasound. There will be a series of 10-30 minute lectures followed by hands-on practice of techniques for that session using ultrasound machines and a few lecture-only sessions. Lectures will be based on systems followed by procedures in the last two sessions. Students will be given the opportunity to shadow either a physician or ultrasound tech to experience when and how ultrasounds are used in a clinical setting. At the end of the elective, students will have greater experience and confidence in using ultrasounds in clinical settings.

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MSCI 5409 (Lubbock HSC) Culinary Medicine Elective This elective course will complement the curriculum for medical students by providing a nutritional interactive component so that they will learn how to cook, what wholesome foods to incorporate into a meal, and how to educate patients about healthy habits. The course will incorporate lectures accompanied by evening cooking classes and open discussions regarding case studies. To complete the elective, students will create their own scholarly project to display and share what they have learned.

MSCI 6409 (Lubbock HSC) Culinary Medicine Elective This elective course will complement the curriculum for medical students by providing a nutritional interactive component so that they will learn how to cook, what wholesome foods to incorporate into a meal, and how to educate patients about healthy habits. The course will incorporate lectures accompanied by evening cooking classes and open discussions regarding case studies. To complete the elective, students will create their own scholarly project to display and share what they have learned.

Clerkships

Phase 2 Courses

In Phase 2, students move to the clinical arena on one of our four campuses: Amarillo, Lubbock-HSC, Lubbock-Covenant or Permian Basin. Each student focuses on one clinical discipline at a time, and rotates through six eight-week clerkships in Internal Medicine, Surgery, Family Medicine, Obstetrics/Gynecology, Pediatrics, and Psychiatry. Each student also participates in the Integration Seminar, a student-led Grand Rounds that explores the fundamental scientific basis of selected clinical cases. Our School actively promotes and monitors the quality and comparability of the educational experiences on each of the campuses and maintains equivalent methods of evaluation. Student performance is assessed at the end of each clerkship using three independent and complementary assessment components, an Objective Structured Clinical Examination (OSCE), clinical performance assessments completed by faculty and residents and a subject-specific examination. Thus, student performance can be compared with national norms as well as with each other on the three campuses. The values are well correlated and thus, the second phase is equivalent to a single campus experience. We also closely monitor the number and diversity of patients to ensure the necessary breadth of exposure to clinically challenging patients.

Students who are granted short-term leaves of absence from clerkship(s) will be registered in Independent Study Period course(s) that correspond to the scheduled curriculum component

Independent Study

Course Number	Name/General Description
MIDS-7191	IDS-Period 01
MIDS-7192	IDS-Period 02
MIDS-7193	IDS-Period 03
MIDS-7194	IDS-Period 04
MIDS-7195	IDS-Period 05
MIDS-7196	IDS-Period 06

Clerkships Course Descriptions

- MFAM 7101 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Family Medicine Jr. Clerkship** An eight-week core clerkship introducing students to the care of the undifferentiated ambulatory patient. Emphasis is on clinical problem solving, management of common problems, and prevention and health promotion.
- MINT 7101 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Internal Medicine Clerkship** In this eight-week rotation, the student participates as a member of the ward team, honing skills in performing histories and physicals, and in the collection, integration, and documentation of information for comprehensive diagnosis. Concepts of practical medical therapeutics and management are presented, but emphasis is on understanding pathophysiology and accurate diagnosis. Outpatient experience is provided in a community setting.
- MOBG 7101 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Obstetrics-Gynecology JR Clerkship** A study of the treatment of female patients by the primary care practitioner. Obstetrics-gynecology spans the entire age range of womanhood and is extensively health-oriented with emphasis on prevention of illness and on surgical and obstetrical techniques. The quality of human life is emphasized.
- MPED 7101 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Pediatrics Clerkship** During the clerkship, students rotate through the pediatric inpatient, ambulatory care and newborn nursery services, participating in the evaluation and management of children with a variety of problems. Emphasis is placed on a comprehensive approach to total child, including his/her family and environment. Learning is augmented by a lecture series and various case conferences coupled with close faculty support and supervision.
- MPSY 7101 (Amarillo HSC, Lubbock HSC, Odessa HSC) Psychiatry JR Clerkship** The primary goals of this rotation are to provide educational experiences that facilitate continued learning regarding the diagnosis and management of psychiatric illness and clinical experiences that allow the student to further develop skills in evaluation and treatment of selected patients. The core clinical experiences for students consist of significant exposure to inpatient psychiatry, consultation psychiatry, ambulatory psychiatry, child and adolescent psychiatry, ambulatory neuropsychiatry/behavioral neurology, and on-call emergency room coverage.
- MSUR 7101 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Surgery Clerkship** An introduction to the pathophysiology of surgical diseases and the principles and techniques used in their diagnosis and management. The Clerkship includes participation in pre- and post-operative patient care, operating room and clinic experience as a member of a team of the surgical faculty.

Integration Seminar

Integration Seminar Course Descriptions

MSCI 7102 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Integration Seminar-Student Grand Rounds The Integration Seminar is a Student Grand Rounds presented by MSIII students on each campus. The overarching objective of the seminar is to provide students with the opportunity to explore in depth a clinical case and to reapply the knowledge gained over the first two years of medical school to this case. The students work as a team to present a cogent, integrated and interactive seminar to their peers, students from other years and faculty while developing their presentation skills and their ability to interpret and evaluate data from multiple sources. The directors of the Integration Seminar choose the cases and the students are divided into six groups, each of which is assigned one case. The Integration Seminar occurs once per clerkship period. The Directors advise the students on interpretation and presentations skills and coordinate the seminar to ensure participation of the greatest number of students and faculty in the audience. Grading will be Pass/Fail as determined by the Campus Seminar Director.

Transition to Residency

Phase 3 Courses

Each regional campus offers both required and elective rotations. Students complete one required course, a longitudinal course designed to assist students in preparing for residency (TRIAL). Students also complete three selective experiences, each of which can be performed in one of several clinical departments based on specific student interests. The selectives consist of a one-month Sub-Internship chosen from Family Medicine, Internal Medicine, Obstetrics & Gynecology, Pediatrics or Surgery; a two-week Critical Care selective chosen from Internal Medicine, Surgery, or Pediatrics; and a 2-week selective in an ambulatory setting chosen from Family Medicine, Internal Medicine, Obstetrics and Gynecology, Pediatrics and Psychiatry. The remainder of the Phase 3 curriculum consists of five months of broadly-based elective experiences. Electives may be completed on any TTUHSC campus or at LCME-accredited institutions in the US. A faculty committee reviews each student's fourth year program to ensure they receive a complete and appropriate educational experience. It should be noted that some electives may not be available in every period on each campus and students should check with the department of the Office of Student Affairs on their campus to ensure that their chosen elective is available at a time that suits their schedule.

Independent Study

Course Number	Name/General Descriptions
MIDS-8495	Independent Study I
MIDS-8496	Independent Study II

Transition to Residency Course Descriptions

MIDS 8419 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Transition to Residency: Individualized Asynchronous Learning
This course will extend throughout the fourth year providing four weeks of credit with grading consistent with the current year 4 grading policies. Provide opportunities for independent learning for students. The course will provide individualized learning opportunities. Develop skills in reflective learning to help prepare students for ongoing reflective practice throughout their careers.

Ambulatory Rotations

Ambulatory Rotations Course Descriptions

MDER 8101 (Lubbock HSC, Odessa HSC) Dermatology Ambulatory Rotation This elective is designed to expose the student to a wide variety of dermatologic conditions with the expectation that at the conclusion of the experience common conditions and disorders will be recognizable. The student should be able to better appreciate patterns and morphology of mucocutaneous conditions so they can generate a working differential diagnosis on how to manage the patient. This includes management and may include further testing, treatment, and/or referral to a specialist. The student will participate in clinics (few inpatient consults) observing a variety of dermatologic disorders and dermatologic procedures in both the adult and pediatric patient population.

MFAM 8104 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Family Medicine Ambulatory Rotation This selective is set in an ambulatory clinic and emphasizes the breadth of family medicine. The student will have an opportunity to care for a wide variety of simple and complicated problems, practice patient counseling and education skills, and be able to see some patients through a brief illness with follow-up care. Family-oriented health care, family dynamics, preventive care and the team approach to health care are emphasized.

MFAM 8105 (Odessa HSC) Geriatrics Ambulatory Rotation This rotation will allow students to learn about the principles of aging and become proficient in the management of certain Geriatrics syndromes.

MINT 8102 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Internal Medicine Ambulatory Rotation This rotation in internal medicine's multispecialty clinic prepares the students in ambulatory medicine where they are exposed to outpatients in various disciplines of medicine. The aim is to make students more comfortable and confident in doing focused and time-limited interaction in an outpatient setting, which is where most will practice in the future. Highly recommended for students pursuing career in internal or family medicine.

MNEU 8101 (Lubbock HSC, Odessa HSC) Neurology Ambulatory Rotation This rotation exposes the student to basic principles of diagnosis and management of common neurologic conditions. Students learn skills in conducting neurologic exams, identifying signs and symptoms of neurologic disorders, and integrating signs and symptoms into syndromes. Students learn about basic neurologic disorders and neurologic complications of systemic conditions.

MOBG 8102 (Amarillo HSC, Lubbock HSC, Odessa HSC) OB/GYN Ambulatory Rotation This two week selective is a compilation of the spectrum of patients seen in the ambulatory ob/gyn clinic (gynecology, antenatal care, high risk obstetrics, urogynecologic, and infertility). Hands on opportunities may include preparing for and performing the following office gynecologic procedures: cervical cytology and cultures, colposcopy, endocervical curettage, cervical, and endometrial biopsy. The student will be expected to present ob/gyn patients to the supervising physician, counsel patients concerning various contraceptive options, complications, and contraindications, and review the evaluation and management of the abnormal cervical cytology screen. The student will also be expected to formulate treatment plans and work on proper communication within interprofessional teams in order to efficiently and effectively coordinate ambulatory patient care.

MOPH 8101 (Lubbock HSC, Odessa HSC) Ophthalmology Ambulatory Rotation This rotation provides exposure to diagnosis and treatment of medical and surgical eye diseases. The student rotates through a complete range of subspecialty clinics and also will be provided with the opportunity to observe and participate in ophthalmic procedures and surgery. This will allow them to become familiar with state of the art ophthalmic medical, laser and microscopic surgery treatments. Departmental seminars and lectures are open to interested students. Opportunity to observe community ophthalmologists is also possible. Emphasis will be directed toward developing competency in the basic eye examination.

MPED 8102 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Pediatrics Ambulatory Rotation The purpose of this ambulatory rotation is to familiarize the student with preventive pediatrics and parent education, acute intervention in common childhood diseases and follow-up visits, and evaluation of patients in an outpatient consultation service.

MPSY 8103 (Amarillo HSC, Lubbock HSC, Odessa HSC) Adult Psychiatry Ambulatory Rotation This rotation is designed to give students experience in evaluation, diagnosis, and management of patients with psychiatric illnesses. Students will engage in diagnostic assessment, formulation of treatment plan and provision of psychotherapy and/or psychopharmacologic treatment. The student is expected to interact with patients and participate in discussions of treatment options.

MPSY 8104 (Lubbock HSC) Child/Adolescent Psychiatry Ambulatory Rotation This rotation will familiarize students with common psychiatric diagnoses and therapies for children and adolescents. Student will observe and participate in the evaluation and treatment of children/adolescents in outpatient and consults services. Particular emphasis is given to improve student skills in the areas of clinical judgment and decision-making. Students are encouraged to take increasing amounts of patient care responsibility while under close supervision. The student will attend family meetings and other relevant meetings. The student is expected to lead at least 4 comprehensive child/adolescent psychiatric interviews, assess at least 2 child/adolescent inpatient consults and present at least 1 case to the attending using a biopsychosocial formulation model for treatment plan. Depending on length of rotation the above will be modified.

Critical Care Rotations

Critical Care Rotations Course Descriptions

MINT 8201 (Amarillo HSC, Covenant Branch HSC, Odessa HSC) MICU/CCU Elective This selective/elective utilizes patients admitted to the intensive care units within various teaching hospitals. The student will gain experiences in managing common medical emergencies, including cardiopulmonary arrest, drug overdose, hypertension, acute myocardial infarction, cardiogenic shock, congestive heart failure, renal failure, and diabetic ketoacidosis. The student is also expected to become proficient in the evaluation and management of common chest problems, including asthma, chronic obstructive pulmonary disease, pleural effusions, peri-operative complications, pneumonia, atelectasis, respiratory failure, pulmonary function tests, and chest x-rays, and to become familiar with the various types of mechanical ventilators, oxygen delivery systems, and methods of delivering inhaled medication.

MINT 8202 (Lubbock HSC) Cardiac Intensive Care Unit Rotation The student will gain experience in managing common medical emergencies, including cardiopulmonary arrest, hypertension, acute myocardial infarction, cardiogenic shock, and congestive heart failure. The student will also become familiar with the various types of mechanical ventilators, aortic balloon pumps, cardiac valve replacement surgeries, extracorporeal membrane oxygenation, oxygen delivery systems, and methods of delivering inhaled medication.

MINT 8203 (Lubbock HSC) Medical Intensive Care Unit Rotation The student will gain experience in managing common medical emergencies, including cardiopulmonary arrest, drug overdose, hypertension, acute myocardial infarction, cardiogenic shock, congestive heart failure, renal failure, and diabetic ketoacidosis. The student is also expected to become proficient in the evaluation and management of common chest problems. These include asthma, chronic obstructive pulmonary disease, pleural effusions, peri-operative complications, pneumonia, atelectasis, respiratory failure, pulmonary function tests, and chest x-rays. The student will also become familiar with the various types of mechanical ventilators, oxygen delivery systems, and methods of delivering inhaled medication.

MPED 8202 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC) Pediatric Intensive Care Elective The student will be exposed to all pediatric critical care: Sepsis, Trauma, ARDs, and all potentially or life-threatening illnesses. The student will act as an acting intern with direct patient care responsibilities. There will be no outpatient, ward, or clinic responsibilities except Continuity Clinic. The student will make daily rounds with the attending physicians. The student will have an opportunity to perform procedures such as spinal taps, A-line, central lines, chest tubes, intubation, and catheter placement. Emphasis will be placed on physiology, recognition of common acute life-threatening injuries-illnesses, and ventilator management.

MPED 8203 (Lubbock HSC) Neonatal Intensive Care This selective/elective is designed to familiarize the student with perinatal-neonatal physiology, high-risk factors associated with neonatal disease pathophysiology diagnosis and management of common neonatal problems, dealing with acute neonatal emergencies, and communicating with parents of high-risk neonates. The students' primary responsibility will be the total management and supervision of assigned patients. Students will also be expected to participate in daily rounds, night call, weekly discussion group on neonatal-perinatal disease and presentation of a review on a selected aspect of neonatal-perinatal medicine towards the end of the rotation.

MSUR 8205 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Surgical Intensive Care Unit This elective exposes the fourth year medical student to the most critically ill and injured surgery patients. The student will be an integral part of a team of residents from surgery, anesthesia and other departments, led by an attending specialized in intensive care medicine. Medical student will be assigned patients appropriate for their level of training and under direct supervision of the attending, will learn to thoroughly evaluate their overall condition, develop a management plan, and get experience to round twice a day with the attending and the team, attend daily multidisciplinary conference and take in house call once a week including one weekend day. The student is expected to participate in educational activities including ICU lectures, M&M and Ground Rounds within the Department of Surgery.

MSUR 8207 (Lubbock HSC) Burn Intensive Care Rotation During this rotation, the fourth year medical student will become intimately involved with the management and care of burn patients ranging from the most severe injury with life threatening burns to the less severe, both adult and pediatric patients.

MSUR 8208 (Lubbock HSC) Neurological Intensive Care Unit Rotation This rotation exposes the fourth-year medical student to the most critically ill patients with neurological pathology. The student will be an integral part of a team from neurosurgery, anesthesia, and other departments, led by an attending physician. Medical students will be assigned patients appropriate for their level of training. The students will learn to thoroughly evaluate the overall condition of the patient and develop and implement a management plan. The students will become familiar with common neurological conditions including vascular pathology and hemorrhage, closed and open head trauma, and increased intracranial pressure, as well as neuro-oncology and management of intracranial pressure monitors and external ventricular drains. Additionally, the student will become familiar with common ICU management practices including central lines, arterial lines, and ventilator management. The student will be expected to round daily with the attending and the team. The student may participate in additional educational activities within the Departments of Surgery including ICU lectures, Morbidity and Mortality conferences and Grand Rounds.

Sub Internships

Sub Internships Course Descriptions

MFAM 8301 (Amarillo HSC, Lubbock HSC, Odessa HSC) Family Medicine Sub-Internship Patients of all ages, of both sexes, and with diverse medical problems will be managed in this sub-internship. Emphasis will be given to the total management of the patient, beginning with the ambulatory presentation, continuing through hospitalization and following dismissal from the hospital-coordinated, comprehensive, continuing medical care. The student will be responsible for complete evaluation of the patient, including initial history and physical examination, cost effective utilization of laboratory, x-ray and other procedures and the formulation and pursuit of the management plan, including cogent utilization of consultation/referral services. Emphasis will also be given to participation in community resources, which provide ongoing care of the patient, including Hospice and community health centers. Experience is afforded in the Family Practice Center, the inpatient service of family medicine, certain area nursing homes, and on occasion, in the home of the patient. The student will function with Family Practice residents under the direction of the Family Medicine faculty member assigned to the inpatient service and other Family Medicine faculty members.

MFAM 8302 Sub Internship in Hospital Medicine This rotation will replicate the role of an Intern on a very busy hospital medicine service where the reporting physician is not another resident, but an attending for one on one mentoring. A very broad exposure to the entire swath of inpatient within the Academic Teaching hospital will be experienced.

MINT 8301 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Internal Medicine Sub-Internship This ward-based, primary care sub-internship provides the student an individualized, case-oriented experience as a sub-intern on a general medicine ward service, designed to be the natural extension of the thirdyear clerkship. Each student will work closely with a senior resident, have primary patient responsibility, take night call with his/her team, have patient care responsibilities like an intern with close supervision by the senior resident, be assigned readings and give mini-lectures on selected subjects, and attend the regularly scheduled teaching conferences of the Department of Internal Medicine. This sub-internship is strongly recommended for students planning to pursue a career in Internal Medicine.

MOBG 8302 (Amarillo HSC, Lubbock HSC, Odessa HSC) Maternal Fetal Med Sub-I This four week Sub-Internship will provide the student the opportunity to function as a first year resident on the MFM service. The student will gain ample exposure on the rotation in order develop the skills to recognize the clinical and laboratory diagnosis of medical, surgical, and obstetric complications of the high-risk pregnancy. The student will review the literature on and develop the skills to manage the fetal/neonatal complications of post term pregnancy, including the indications for induction of labor, and review the evaluation and management of the following conditions which complicate pregnancy: preterm labor, hypertension, and diabetes. During ultrasound sessions the student will be expected to discuss the essential components of a genetic counseling session with the following indications: advanced maternal age and abnormal maternal serum screening. While managing patients in labor and delivery the student will learn to interpret fetal heart rate tracings in laboring and non-laboring patients, gain the skills necessary to succinctly communicate patient sign out and hand offs on the high risk patients that she/he is following, and effectively communicate with nursing ancillary staff in order to coordinate patient care. The student will also have the opportunity to perform/assist in vaginal and abdominal deliveries, including laceration recognition and repair and forcep assisted vaginal delivery. The student will also be given the opportunity to improve their basic knot tying skills with a self-directed suture curriculum. The student will prepare for and participate in Friday afternoon didactics.

MOBG 8303 (Amarillo HSC, Lubbock HSC) Gynecology Sub-Internship This four week Sub Internship will provide the student the opportunity to function as a first year resident on the Gynecologic service. The student will evaluate, present, and manage patients that present to clinic and the EC with gynecologic complaints and participate in and care for patients that undergo gynecologic surgery. On days assigned to the operating room the students will be expected to: prepare for and perform as a surgical assistant for assigned gynecologic cases, communicate with operating room nursing and ancillary staff, and become proficient in preoperative 'time out', and illustrate proper aseptic technique, and patient positioning in the operating room. Prior to surgical cases the student will review the surgical steps for and complications of commonly performed gynecologic surgeries as well as recent literature in regard to surgical outcomes. The student will gain experience in eye-hand coordinated movements relevant to basic laparoscopy in the simulation lab and with knot tying using a self-directed suture curriculum. The student will demonstrate effective communication skills regarding patient sign out and hand off, recognize and participate in systems improvements, and communicate with nursing and ancillary staff to promote teamwork, and patient care. The student will prepare for and attend Friday afternoon didactics including the participation in preoperative surgical conference.

MORS 8301 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Orthopaedic Surgery Sub-Internship The Orthopaedic Surgery Sub-I offers fourth year medical students with a strong interest in the Orthopaedic Surgery subspecialty, an opportunity to acquire and assimilate advanced clinical responsibilities at an intern level, by exposure to orthopaedic patients in various clinical settings: inpatient, outpatient, and operating room. This four-week elective rotation will provide an educational curriculum that emphasizes teaching of fundamental concepts of total patient musculoskeletal care. The sub-intern will be assigned to a different faculty mentor each week in order to learn and apply information for a variety of musculoskeletal/medical disorders, based on the patient group for which he/she is responsible. This will assist in maximizing academic preparation for postgraduate clinical performance as an intern. The sub-intern will function as the primary point of contact, assisted by an Orthopaedic resident, and supervised by the attending for all care issues concerning specific patients on different services. The sub-intern will attend all Orthopaedic Department conferences, present lecture(s) specific for their team along with hospital rounds, morning trauma report, Journal Club, and all other didactic events. The sub-intern will take in-house calls at least once per week with the call day established by the orthopaedic staff, and discuss ER cases to further enhance the sub-intern's educational experience. The sub-intern will strictly follow duty hours' guidelines as mandated by the Accreditation Council of Graduate Medical Education's Common Program Requirements.

MPED 8301 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Pediatric Subinternship The student will work as a member of a team caring for patients admitted to the pediatric inpatient service. During this elective, the student will have an opportunity to learn to formulate problem lists, management, and follow-up plans for hospitalized pediatric patients. The student assumes the role of extern and takes call with the residents.

MSUR 8301 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) General Surgery Subinternship The student will serve as an extern on the surgical service and participate in the care of surgical patients in the emergency room, surgical wards, operating room, and clinic. Pre- and post-operative care and the management of patients in the Surgical Intensive Care units will be stressed. Assignments to selected clinical faculty preceptors are also available. Students will take in-house call.

MSUR 8303 (Covenant Branch HSC) Neurological Surgery Sub-Internship The Neurological Surgery Sub-I offers fourth year medical students with a strong interest in the Neurological Surgery subspecialty, an opportunity to acquire and assimilate advanced clinical responsibilities at an intern level, by exposure to neurological patients in various clinical settings: inpatient, outpatient, and operating room. This four-week elective rotation will provide an educational curriculum that emphasizes teaching of fundamental concepts of total patient care. The sub-intern will be assigned to a faculty mentor each week in order to learn and apply information for a variety of neurological disorders, based on the patient group for which he/she is responsible. This will assist in maximizing academic preparation for postgraduate clinical performance as an intern. The sub-intern will present lecture(s) specific for their team along with hospital rounds and take call at least once per week with the call day established by the neurosurgical staff and discuss ER cases to further enhance the sub-interns educational experience.

MURO 8301 Urology Sub I This Sub-I is an advanced experience in the management of disorders of the urinary tract and is designed to provide the student with an understanding of the principles of urological diagnosis and treatment. Students will participate in a series of lectures, ward rounds, operating room and clinical experiences. The course is of value to a student interested in a career in urology, gynecology, or surgery.

Anatomy Electives

Anatomy Electives Course Descriptions

MCBA 8401 (Lubbock HSC) Advanced Gross Anatomy I This elective is a two-week or four-week, in-depth, self-directed review of a selected area of gross anatomy including: head and neck, thorax and abdomen, pelvis and perineum, extremities and back, or anatomical imaging depending on the needs of the student.

Anesthesiology Electives

Anesthesiology Electives Course Descriptions

MANE 8401 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Anesthesiology This elective is for students interested in anesthesiology and the insights this discipline gives into the application of physiological and pharmacological principles to the care of patients in acute life-threatening situations. Daily lectures, laboratory demonstration, and the pre-operative and post-operative care of patients undergoing anesthesia will enable the student to acquire the basic skills necessary to care for the unconscious and critically ill patient during anesthesia and other similar situations. These skills include airway management, ventilatory support, cardiovascular support, fluid replacement, and intravenous techniques. The student will also have an opportunity to learn the fundamentals of respiratory therapy and its application to patient care.

MANE 8402 (Covenant Branch HSC, Lubbock HSC) Anesthesiology and Pain Center Elective The student will evaluate patients using common pain assessment tools and a focused physical examination under the supervision of the Pain Attendings and Pain Management Fellows in the clinic. They will develop algorithms for treatment including pharmacologic, non-interventional and interventional therapies. The remaining time will be spent observing pain procedures in the operating room and the procedure clinic.

Dermatology Electives

Dermatology Electives Course Descriptions

MDER 8401 (Lubbock HSC, Odessa HSC) Dermatology Clinics Elective This elective is designed to expose the student to a wide variety of dermatologic conditions with the expectation that at the conclusion of the experience common disorders will be recognizable. The student will participate in clinics (few inpatient consults) observing a variety of dermatologic disorders and dermatologic procedures in both the adult and pediatric patient population. Also offered is exposure to dermatopathology and dermatologic surgery, thus allowing clinicopathologic correlation.

MDER 8402 (Lubbock HSC) Dermatopathology Elective This elective is designed to give 4th year medical students exposure to and experience in dermatopathology.

Emergency Medicine Electives

Emergency Medicine Electives Course Descriptions

MSUR 8423 (Amarillo HSC, Lubbock HSC, Odessa HSC) Emergency Medicine Elective The student will be exposed to the wide variety of surgical and medical emergencies seen on a regular basis in the emergency center. Under the supervision of the emergency center attending physicians, students will participate in the management of various emergent conditions including trauma, medicine, pediatrics and obstetrics and gynecology. The student will have ample opportunity to participate and learn the interpretation of EKG, radiologic studies and other diagnostic tests. The student will learn to perform several minor procedures including suturing small lacerations, casting and splinting and placement of central lines and chest tubes.

ENT and Otolaryngology Electives

ENT and Otolaryngology Electives Course Descriptions

MSUR 8401 (Amarillo HSC, Covenant HSC, Lubbock HSC, Odessa HSC) Otolaryngology/Head/Neck Surgery This is an advanced experience in the management of patients with diseases of the ear, nose, and throat. This includes diseases of the airway, esophagus as well as head and neck cancer. Included are a series of lectures, rounds, and clinical experiences with a review of pathology. The course is of value to both a primary care physician as well as a student interested in a career as a surgeon.

Family Medicine Electives

Family Medicine Electives Course Descriptions

MFAM 8401 (Odessa HSC) Family Medicine Preceptorship Students are assigned to a variety of practices within the urban or rural area for a supervised exposure to day-to-day practice problems. Emphasis is on the application of clinical skills within the demands and limits of actual practice. Program is sponsored by the Texas Academy of Family Practitioners. Applications must be completed several months in advance.

MFAM 8402 (Covenant Branch HSC, Lubbock HSC) Palliative Care/Hospice Experience Elective This elective allows students to gain additional skills and experience with end-of-life care in a variety of hospice and palliative care settings. Students have the opportunity to work with multidisciplinary care teams that provide holistic medical management of persons near death, with a special emphasis on symptoms and decision management at the end of life.

MFAM 8404 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Family Medicine Outpatient Elective This elective is set in an ambulatory clinic and emphasizes the breadth of family medicine. The student will have an opportunity to care for a wide variety of simple and complicated problems, practice patient counseling and education skills, and to be able to see some patients through a brief illness with follow-up care. Family-oriented health care, family dynamics, preventive care and the team approach to health care are emphasized.

MFAM 8405 (Amarillo HSC, Lubbock HSC, Odessa HSC) Family Med Subinternship Elective Patients of all ages, of both sexes, and with diverse medical problems will be managed in this sub-internship. Emphasis will be given to the total management of the patient, beginning with the ambulatory presentation, continuing through hospitalization and following dismissal from the hospital-coordinated, comprehensive, continuing medical care. The student will be responsible for complete evaluation of the patient, including initial history and physical examination, cost effective utilization of laboratory, x-ray and other procedures and the formulation and pursuit of the management plan, including cogent utilization of consultation/referral services. Emphasis will also be given to participation in community resources, which provide ongoing care of the patient, including Hospice and community health centers. Experience is afforded in the Family Practice Center, the inpatient service of family medicine, certain area nursing homes, and on occasion, in the home of the patient. The student will function with Family Practice residents under the direction of the Family Medicine faculty member assigned to the inpatient service and other Family Medicine faculty members.

MFAM 8407 (Lubbock HSC) Sub Internship in Hospital Medicine Elective This rotation will replicate the role of an Intern on a very busy hospital medicine service where the reporting physician is not another resident, but an attending for one on one mentoring. A very broad exposure to the entire swath of inpatient within the Academic Teaching hospital will be experienced.

MFAM 8408 (Amarillo HSC) Heal the City Free Clinic Elective Students will be required to create and teach educational classes for patients and staff at Heal the City. They may also assist with patient data analysis and clinical encounters. They will also become familiar with the operations, challenges and benefits of non-profit healthcare programs, grant acquisition and free patient care. The course will have required tasks but is also flexible to achieve the goals set forth by the student, Heal the City staff and course director.

Geriatric Medicine Electives

Geriatric Medicine Electives Course Descriptions

MFAM 8406 (Lubbock HSC, Odessa HSC) Geriatric Medicine Elective This elective rotation is an introduction to geriatric assessment and evaluation. Topics covered include: physiology of aging, demographics of the aged, long-term care policies and commonly used geriatric evaluation scales, evaluation of function in the aged long-term care.

Interdisciplinary Electives

Interdisciplinary Electives Course Descriptions

MIDS 8402 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) International Health Elective This elective is site specific with site specific learning objectives. This elective allows students to experience the challenges of health care delivery with a required physician supervisor/ evaluator in an underserved international setting for 2-4 weeks.

MIDS 8409 (Lubbock HSC) Academic Medicine 1 The elective's goal is to provide an introduction into academic medicine to those students interested in teaching and/or research primarily in the area of simulation. Students will be exposed to the potential and operational use of simulation or other media for education, clinical training and research. Over the course of the elective, students will be required to develop an education plan, compose a simulation scenario that meets the educational goals created, execute the educational activity including any materials necessary including assessment tools as well as facilitate debriefing. For those students primarily interested in educational research, the course director and coordinator will assist in providing guidance and support in the students' area of interest as well as guide the student to present their findings in an appropriate venue whether it is a conference presentation and/or peer reviewed journal.

MIDS 8410 (Lubbock HSC) Academic Medicine 2 (Medical Writing) The elective's goal is to provide instruction/training for students in scientific/medical writing. Students will be expected to formulate a manuscript proposal, usually based on a care report format and to complete research/literature reviews in a chosen topic area. Students will work with relevant faculty in developing their plan and will receive instruction on manuscript preparation, formatting, referencing, copyediting, etc. Students will also receive instruction on manuscript submission processes, manuscript review and other aspects of the publication process.

MIDS 8411 (Lubbock HSC) Health Law The Health Law elective rotation is designed to provide the MD/JD candidate an overview into the interface between law and medicine. Legal implications in the field of medicine occur almost daily, and having the background in law will vastly enhance a medical student's, and practitioner's, grasp of the expansive responsibilities in one's medical career.

MIDS 8412 (Lubbock HSC) MD/JD Prep for Bar The one month Independent Study MD/JD Elective would allow the TTUHSC student enrolled in the MD/D Program an opportunity to prepare and take the Texas State Bar Exam.

MIDS 8413 (Amarillo HSC, Lubbock HSC) Point-of-Care Appl Ultrasound Ultrasound (US) has become an indispensable diagnostic imaging modality because of its real-time capability, noninvasiveness, portability, and relatively low cost. This resulted from the fact that imaging with US does not carry the risk associated with the administration of intravenous contrast material or the potential hazards of ionizing radiation. Therefore, many medical and surgical subspecialties have embraced the use of US as an adjunct to or extension of the physical examination. Some have referred to it as the "sonoscope." Others have described US as "the visual stethoscope of the 21st century" The use of US beyond its traditional role with the department of radiology has been termed "point of care" US.

MIDS 8415 (Lubbock HSC) Health Care Policy This course will provide the students an introduction to health care policy. They will learn to follow bills through the legislative process to statutes and then follow the statute to rulemaking at the agency level. The student will learn advocacy from different perspectives and be able to discuss the governance of public health agencies. They will be introduced to the process of writing a white paper for government use.

MIDS 8417 (Lubbock HSC) Medical Humanities Capstone This fourth year elective course will provide medical students with an intensive study of the Medical Humanities and their relation to the practice of medicine through an immersion experience in the medical humanities. The goal of this course is to provide students with a broad exposure to medical humanities including history, literature, art history, media studies, philosophy, law, ethics, religion, theology, anthropology, psychology, sociology, and other arts and sciences to study (a) the context of medicine, (b) the experience of medicine, (c) the goals of medicine, and (d) concepts in and of medicine. It is expected that students will spend 15-20 hours a week on reading assignments and 15 hours per week in seminar discussion.

MIDS 8420 (Lubbock HSC) Thinking in 3D: An introduction to 3D Printing and Medical Imaging This two week, 2-credit elective is designed to provide the fourth-year medical student with the basic competencies in 3D modeling and printing using medical imaging data. The student will assess medical scan data to determine the appropriate method for the 3D conversion. Collaboratively, the student explores applications of relational thinking as it applies to the 3D modeling process and everyday medical practice. At the end of the rotation, the student is given a case-study to examine, diagnose and develop a 3D application for the prognosis.

MIDS 8421 (Lubbock HSC) Introduction to Correctional Healthcare Correctional Healthcare involves more than just seeing a freedom impaired patient. Providing care of the Texas Department of Criminal Justice (TDCJ) prisoners involves health care policy at a state level, medical needs that must be met in conjunction with security, transportation and safety both the patient and the health care provider and a strict quality program that meets statute. During this two week rotation, the student will spend one week with administration who administer a \$125M per year contract. This will involve policy meetings along with meetings with security, medical, pharmacy and psychiatry providers. The student will also have formal training in the techniques of providing telemedicine. The second week will involve 2 ½ days seeing and understanding the growing psychiatric needs of these patients and 2 ½ days understanding how a hospital is managed inside a state prison. The student will have the opportunity to review a new text book on Health Systems Science.

MIDS 8422 (Lubbock HSC) Admissions Evaluation Committee Elective During this course, learners will gain insight into the admissions process as it relates to the evaluation of applications. This elective will demonstrate how evaluators review medical school applications. You will learn about the mission, vision, and values that encompass our holistic review process, as well as what competitive applicants look like. In this course, you will be aiding the Office of Admissions in evaluating applications and rendering decisions for an interview for the upcoming entry-year class.

MIDS 8423 (Amarillo HSC) Search Strategies for Medical Professionals Search Strategies for Medical Professionals is a course designed to promote savvy information seeking strategies and skill-sets among health care professionals. The class is built to support strategic on-line information seeking behaviors and overall on-line information literacy. In lieu of the vast quantities of information available on the Internet coupled with the growing number of predatory publishers, these two complimentary goals are necessary to equip medical professionals in obtaining quality on-line information. Goals will be achieved through a lecture and/or videos or a combination of these two mediums as well as through a homework assignment and a final exam.

MSCI 8001 (Lubbock HSC) P4- Patients, Physicians, Populations, and Pandemics The current pandemic caused by SARS-Cov-2 is an unprecedented public health emergency that has touched all aspects of our society. This course will invite medical students to explore aspects of the pandemic and the virus that has caused it, to apply public health, epidemiology, and evidence-based medicine tools to the current situation and to discuss impacts on health policy, the economy, and wellness.

Internal Medicine Electives

Internal Medicine Electives Course Descriptions

MINT 8402 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Cardiology Elective This ward-based consult service elective consists of daily review of electrocardiograms and echocardiograms, cardiology consultation rounds, Cardiac Care Unit teaching rounds, weekly cardiology teaching conferences, and cardiac catheterization conferences. The student will prepare a review of an assigned topic for the weekly cardiology conferences. Bedside cardiovascular examination and management will be stressed.

MINT 8403 (Amarillo HSC, Lubbock HSC, Odessa HSC) Endocrinology Elective This elective includes inpatient and outpatient care, weekly conferences in clinical and basic endocrinology, and research activity if desired. The student will have an opportunity to work-up and manage patients with a wide variety of both chronic and acute endocrinological and metabolic disorders. Patients with hypertension, especially those known or suspected to be caused by an endocrine disease, will also be seen.

MINT 8404 (Amarillo HSC, Covenant Branch HSC, Odessa HSC) Gastroenterology Elective This elective provides opportunities for learning office practice of gastroenterology including evaluation of patients with peptic ulcer disease, malabsorption, liver disease, etc. Extensive outside reading will be required. The student may be involved in direct patient care in a hospital setting.

MINT 8405 (Amarillo HSC, Lubbock HSC, Odessa HSC) Infectious Diseases Elective This ward-based elective offers the student an opportunity to evaluate and care for patients with infectious diseases and to gain an understanding of the clinical microbiology procedures important in the care of these patients. HIV and AIDS will be discussed. Each student will be encouraged to prepare and present one seminar or write a paper on a subject of his/her choice. Time for independent study will be allowed.

MINT 8407 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Nephrology Elective This elective offers clinical experience in the diagnosis and management of patients with acute and chronic renal failure, hypertension, fluid and electrolyte imbalances, acid base disturbance, parenchymal renal diseases, etc.

MINT 8408 (Amarillo HSC, Lubbock HSC) Pulmonary Medicine Elective This elective is offered to the student for clinical experience in pulmonary disorders, emphasizing acute and chronic respiratory failure, intensive respiratory care, and interpretation of pulmonary function tests and chest x-rays.

MINT 8409 (Odessa HSC) Rheumatology Elective This elective offers an in-depth look at the clinical array of rheumatologic disorders. Students will be exposed to inpatients and outpatients with emphasis on diagnosis and long-term management of common rheumatic diseases. Depending on the student's level of proficiency and interest, the student may be allowed to participate in procedures such as joint aspiration and injection, and will interpret synovial fluid studies. Students will learn the correct indications and monitoring of common rheumatic drugs and the fundamentals of rheumatic rehabilitation.

MINT 8410 (Lubbock HSC) Allergy/Immunology Elective This ambulatory consult service elective offers the student an opportunity to evaluate and manage patients with allergic disorders, such as allergic rhinitis, bronchial asthma, urticaria/angioedema, food and drug allergy, stinging insects allergy, immunodeficiency disorders, etc. Different topics in allergy and clinical immunology will be discussed two to three times per week. Students may also take a combined Ambulatory Allergy, Rheumatology, and Clinical Immunology rotation.

MINT 8411 (Lubbock HSC) Radiation Oncology The field of radiation oncology is an intellectually challenging field, providing curative therapy and close longitudinal doctor-patient relationship. This elective may be taken by itself or combined with the hematology-oncology elective.

MINT 8413 (Amarillo HSC) Hospice Elective The student will observe hospice patients in both inpatient and outpatient settings, making daily inpatient rounds, accompanying hospice team members on some home visits, and meeting with the hospice team to discuss management problems. Reading will focus on common management problems, with an emphasis on competent pain management.

MINT 8417 (Amarillo HSC) Women's Health Student Selective Women's Health is a division of the Department of OB/GYN with fulltime faculty of board-certified internists Marjorie Jenkins, M.D. and Joanna Wilson, D.O. Departments with faculty participating in student instruction during the rotation include Internal Medicine, General Surgery, and Radiology. The rotation objectives incorporate Texas Tech's vision, goals, and objectives as stated in the Institutional Educational Vision, Goals, and Objectives publication.

MINT 8418 (Lubbock HSC) Heart Station This rotation is a non-patient contact rotation. It will consist of reading and interpreting ECGs.

MINT 8421 (Lubbock HSC) Introduction to Tropical Medicine & Clinical Parasitology This course will provide the students an introduction to clinical tropical medicine. They will survey the most common medical problems in the tropics and resource-limited settings with the goal of laying a clinical foundation for work and service. Students will become familiar with a basic public health and resource evaluation and tropical disease management using case-based learning and other modalities. An overview of parasitology will complement the case-based and didactic formats. For those who have had past experience in these settings, or plan to participate in "overseas" electives, a paper or presentation to peers will be expected. Passing an examination at completion of the course will also be required.

MINT 8422 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Hematology/Oncology Outpatient Rotation This rotation in Hem/Onc clinic prepares the student in an outpatient setting where they get exposed to patients with hematological and medical oncology conditions. The aim is to make students more comfortable and confident in doing focused and time limited interaction in an outpatient setting and expose them to supportive management of chronic blood dyscrasias and the cancer patient. Highly recommended for students pursuing careers in Internal or Family Medicine.

MINT 8423 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Internal Medicine Outpatient Elective This elective rotation in internal medicine's multispecialty clinic prepares the students in ambulatory medicine where they are exposed to outpatients in various disciplines of medicine. The aim is to make students more comfortable and confident in doing focused and time-limited interaction in an outpatient setting, which is where most will practice in the future. Highly recommended for students pursuing career in internal or family medicine.

MINT 8425 (Lubbock HSC, Odessa HSC) Hematology Elective This 2-4 week elective enhances students' knowledge and skills in the field of hematology. It is an inpatient primary and consult service where the student manages 2-4 patients every day and participates in procedures like bone marrow aspiration/biopsy. This rotation is recommended for students pursuing career in Internal or Family Medicine.

MINT 8426 (Amarillo HSC, Lubbock HSC, Odessa HSC) Internal Med Subinternship Elective This ward-based, primary care sub-internship provides the student an individualized, case-oriented experience as a sub-intern on a general medicine ward service, designed to be the natural extension of the third year clerkship. Each student will work closely with a senior resident, have primary patient responsibility, take night call with his/her team, have patient care responsibilities like an intern with close supervision by the senior resident, be assigned readings and give mini-lectures on selected subjects, and attend the regularly scheduled teaching conferences of the Department of Internal Medicine. This sub-internship is strongly recommended for students planning to pursue a career in internal medicine.

MINT 8427 (Lubbock HSC) Cardiac Intensive Care Unit Elective The student will gain experience in managing common medical emergencies, including cardiopulmonary arrest, hypertension, acute myocardial infarction, cardiogenic shock, and congestive heart failure. The student will also become familiar with the various procedures for surgical intervention, ventilation and medication delivery in the CICU.

MINT 8428 (Lubbock HSC) Medical Intensive Care Unit Elective The student will gain experience in managing common medical emergencies, including cardiopulmonary arrest, drug overdose, hypertension, acute myocardial infarction, cardiogenic shock, congestive heart failure, renal failure, and diabetic ketoacidosis. The student is also expected to become proficient in the evaluation and management of common chest problems. These include asthma, chronic obstructive pulmonary disease, pleural effusions, peri-operative complications, pneumonia, atelectasis, respiratory failure, pulmonary function tests, and chest x-rays. The student will also become familiar with the various types of mechanical ventilators, oxygen delivery systems, and methods of delivering inhaled medication.

MINT 8429 (Amarillo HSC, Covenant Branch HSC, Odessa HSC) Medical/Cardiac Intensive Care Unit (MICU/CICU Elective) The student will gain experience in managing common medical emergencies, including cardiopulmonary arrest, drug overdose, hypertension, acute myocardial infarction, cardiogenic shock, congestive heart failure, renal failure, and diabetic ketoacidosis. The student is also expected to become proficient in the evaluation and management of common chest problems. These include asthma, chronic obstructive pulmonary disease, pleural effusions, peri-operative complications, pneumonia, atelectasis, respiratory failure, pulmonary function tests, and chest x-rays. The student will also become familiar with the various types of mechanical ventilators, oxygen delivery systems, and methods of delivering inhaled medication.

Library Electives

Library Electives Course Descriptions

MIDS 8401 (Amarillo HSC, Lubbock HSC, Odessa HSC) Biomedical Information Management Elective This elective is designed to provide the student with basic competencies in biomedical information management. The student is primarily taught the basics of searching the biomedical literature via PubMed. Searching EBM Reviews, MICROMEDEX, PDQ, TOXNET, and other biomedical literature databases are addressed as needed. The student is assigned take-home practice exercises to strengthen their literature searching skills. At the end of the rotation, the student is given a brief practical examination of his/her abilities to search these tools.

Neurology Electives

Neurology Electives Course Descriptions

MNEU 8401 (Amarillo HSC, Lubbock HSC, Odessa HSC) Neurology Elective This rotation exposes the student to basic principles of diagnosis and management of common neurologic conditions. Students learn skills in conducting neurologic exams, identifying signs and symptoms of neurologic disorders, and integrating signs and symptoms into syndromes. Students learn about basic neurologic disorders and neurologic complications of systemic conditions.

Obstetrics and Gynecology Electives

Obstetrics and Gynecology Electives Course Descriptions

MOBG 8404 (Amarillo HSC, Odessa HSC) Obstetrics and Gynecology Elective This elective includes experience in office and hospital obstetrics and gynecology, family planning, gynecological surgery, and formal and informal conferences. The schedule is flexible to accommodate special interest of the student.

MOBG 8405 (Amarillo HSC, Odessa HSC) Perinatal Medicine Elective The student will gain experience in high-risk obstetrics clinic, antepartum unit, labor and delivery, and formal and informal conferences. The student will become knowledgeable in the antepartum and intrapartum diagnosis and treatment of medical and obstetrical complications of pregnancy, i.e., diabetes mellitus, hypertension, and pre-eclampsia. The student will also obtain experience with ultrasound. The schedule includes ward and clinic experience.

MOBG 8409 (Amarillo HSC, Lubbock HSC, Odessa HSC) OB/GYN Outpatient Elective This four week Gynecology elective will provide the student with the opportunity to manage patients that present to clinic and the EC with gynecologic complaints and participate in and care for patients that undergo gynecologic surgery. On days assigned to the operating room the student will be expected to: prepare for and perform as a surgical assistant for assigned gynecologic cases, communicate with operating room nursing and ancillary staff, and become proficient in preoperative 'time out', and illustrate proper aseptic technique, and patient positioning in the operating room. Prior to surgical cases the student will review the surgical steps for and complications of commonly performed gynecologic surgeries. The student will have the opportunity to gain experience in eye-hand coordinated movements relevant to basic laparoscopy in the simulation lab and with knot tying using a self-directed suture curriculum. The student will demonstrate effective communication skills regarding patient sign out and hand off, recognize and participate in systems improvements, and communicate with nursing and ancillary staff to promote teamwork, and patient care. The student will prepare for and attend Friday afternoon didactics including preoperative surgical conference.

MOBG 8411 (Amarillo HSC, Lubbock HSC, Odessa HSC) Gynecology Subinternship Elective This four week Sub Internship will provide the student the opportunity to function as a first year resident on the Gynecologic service. The student will evaluate, present, and manage patients that present to clinic and the EC with gynecologic complaints and participate in and care for patients that undergo gynecologic surgery. On days assigned to the operating room the students will be expected to: prepare for and perform as a surgical assistant for assigned gynecologic cases, communicate with operating room nursing and ancillary staff, and become proficient in preoperative 'time out', and illustrate proper aseptic technique, and patient positioning in the operating room. Prior to surgical cases the student will review the surgical steps for and complications of commonly performed gynecologic surgeries as well as recent literature in regard to surgical outcomes. The student will gain experience in eye-hand coordinated movements relevant to basic laparoscopy in the simulation lab and with knot tying using a self-directed suture curriculum. The student will demonstrate effective communication skills regarding patient sign out and hand off, recognize and participate in systems improvements, and communicate with nursing and ancillary staff to promote teamwork, and patient care. The student will prepare for and attend Friday afternoon didactics including the participation in preoperative surgical conference.

MOBG 8412 (Amarillo HSC, Lubbock HSC, Odessa HSC) Maternal Fetal Medicine Sub-Internship Elective This four week Sub Internship will provide the student the opportunity to function as a first year resident on the MFM service. The student will gain ample exposure on the rotation in order to develop the skills to recognize the clinical and laboratory diagnosis of medical, surgical, and obstetric complications of the high-risk pregnancy. The student will formulate a history, perform a focused exam and create a management plan for a high risk obstetric patient. The student will also correctly perform the basic components of a level 1 ultrasound including assessment of: presentation, placentation, biometry, and amniotic fluid volume.

Ophthalmology Electives

Ophthalmology Electives Course Descriptions

MOPH 8401 (Amarillo HSC, Lubbock HSC, Odessa HSC) Clinical Ophthalmology Elective This elective will consist of an extensive exposure to clinical ophthalmology in a private practice setting. The student will be exposed to acute and chronic eye disease in addition to ophthalmic surgery. The main objective of this elective will be to teach the student how to conduct a thorough examination of the eyes and to orient the student to the common eye conditions that every physician should be able to diagnose and treat.

Orthopedics Electives

Orthopedics Electives Course Descriptions

MORS 8401 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Orthopaedic Surgery Elective Students will be assigned to an orthopaedic Faculty member and participate as a member of the orthopaedic team in inpatient and outpatient care, emergency room, and operating room activities. Students should perform history and physical examinations upon all patients admitted by the attending surgeon and present these work-ups for evaluation. Each student will prepare a presentation for the teaching conference on a subject assigned by a Faculty member. The student will attend all orthopaedic conferences. This elective is for those students interested in surgical specialties or an in-depth experience in orthopaedic surgery.

Pathology Electives

Pathology Electives Course Descriptions

MPAT 8403 (Lubbock HSC, Odessa HSC) Surgical Pathology This elective will introduce the student to the role of tissue examination in modern medicine. The student may be involved in a variety of experiences, including Gross examination of surgical pathology specimens, Processing and staining tissue, Frozen-section examination, Light microscopic diagnosis, Cytopathology, Autopsy pathology, and Electron microscopy. Clinical correlation of gross and microscopic findings is emphasized, and there will be a close affiliation with the surgical services and subspecialties. The proportion of time spent in these areas will be tailored to the student's interests. One formal presentation on a laboratory topic of the student's interest will be required in the four-week experience. Attendance and participation in a variety of surgical pathology and inter-service conferences are encouraged. Call is not generally required, but it may enhance the autopsy and surgical pathology experiences.

Pediatrics Electives

Pediatrics Electives Course Descriptions

MPED 8202 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC) Pediatric Intensive Care Elective The student will be exposed to all pediatric critical care: Sepsis, Trauma, ARDs, and all potentially or life-threatening illnesses. The student will act as an acting intern with direct patient care responsibilities. There will be no outpatient, ward, or clinic responsibilities except Continuity Clinic. The student will make daily rounds with the attending physicians. The student will have an opportunity to perform procedures such as spinal taps, A-line, central lines, chest tubes, intubation, and catheter placement. Emphasis will be placed on physiology, recognition of common acute life-threatening injuries-illnesses, and ventilator management.

MPED 8401 (Lubbock HSC) Adolescent Medicine Elective This elective is designed to help students acquire good interviewing skills, a basic knowledge of adolescent physical and psychosocial development, an understanding of adolescent gynecology, basic skills in evaluation and management of sexually transmitted diseases, knowledge of nutrition and eating disorders in teenagers, management of common skin disorders, ability to identify common orthopaedic problems, knowledge of psychosocial disorders common in adolescents, and insight into the common medical complaints and problems in this age group as well as chronic illnesses seen in adolescents. Students will also gain insight into the legal issues and become familiar with the interface between the adolescent health facility, community agencies and institutions.

MPED 8403 (Amarillo HSC, Lubbock HSC, Odessa HSC) Pediatric Endocrinology/Metabolism Elective This elective provides exposure to outpatient management of common pediatric endocrine problems. Included will be growth assessment, Type 1 diabetes, congenital hypothyroidism, acquired hypothyroidism, hyperthyroidism, precocious puberty, delayed puberty, congenital adrenal hyperplasia, diabetes insipidus, and disorders of calcium regulation. Limited exposure to inpatient consultations is anticipated. Indications for common endocrine laboratory tests and their interpretation will be reviewed. Endocrine aspects of common pediatric clinical situations will be discussed.

MPED 8405 (Lubbock HSC) Pediatric Infectious Diseases Elective The objective of this elective is to familiarize the student with the clinical and microbiologic approach to common pediatric infectious disease problems. The student will become familiar with the different classes of antimicrobial agents and learn when and how to select appropriate empirical antibiotic therapy. The student will participate in the differential diagnosis of pediatric patients presenting with signs and symptoms of an infectious disorder. The student will learn the appropriate laboratory tests and culture techniques for isolation and identification of bacterial, viral, fungal, and parasitic pathogens. Epidemiology and infection control of specific infectious pathogens will be discussed. This elective is primarily an inpatient consultation rotation involving the teaching hospital and two private hospital services with one weekly outpatient clinic for follow-up and consultation. Opportunities for research projects may be available if desired.

MPED 8408 (Amarillo HSC, Odessa HSC) Pediatric Cardiology Elective Students will be provided many opportunities to learn a variety of cardiac problems in pediatric patients. The student will observe or participate in any activities that the pediatric cardiologist will perform in the diagnosis and management of children with cardiac diseases. The student will become familiar with the interpretation of normal and abnormal cardiac manifestations and physical findings of cardiac defects in children. The student will observe non-invasive and invasive diagnostic procedures and will be encouraged to interpret electrocardiograms, echocardiograms, and cardiac catheterization data. The student will also have an opportunity to observe cardiac surgery and follow the patient post-operatively with the cardiologist. Sufficient physiopathological background will be provided to make the cardiac problems more comprehensible through lectures, case discussions, and review of pathologic specimens.

MPED 8410 (Amarillo HSC, Lubbock HSC) Pediatric Hematology/Oncology The purpose of this elective is to provide clinical experience to common problems in hematology and oncology by direct contact with patients. At the end of the rotation, students will be able to learn the essential knowledge in evaluating, diagnosis and managing patients with hematologic and oncologic problems, including those related to anemia, coagulation, lymphomas, leukemias and certain solid tumors, and hematologic and oncologic emergencies. The emphasis will be place on establishing the rapport with patients, logical approach for differential diagnosis, planning the management according to evidence-based medicine for each clinical situation and condition. Students may also participate in diagnosis procedures including lumbar puncture and bone marrow examination.

MPED 8411 (Amarillo HSC) Pediatric Nephrology The purpose of this elective is to familiarize the student with common problems in pediatric nephrology seen in a general pediatric clinic. The student will have the opportunity to interact directly with patients and their caregivers, obtain history and physicals, and discuss common presentations of renal problems in children. It will also allow the student to obtain first hand insight in the medical and psychological problems associated with children who have chronic diseases. The clinics are held every Tuesday. The student will be allowed to have first contact with patients in either the clinic or the hospital. The student will formulate evaluation and treatment plans in conjunction with the pediatric nephrologist. The student will be given many opportunities to participate in all aspects of care of the child with renal problems.

MPED 8412 (Amarillo HSC) Pharmacology & Therapeutics This elective is designed to help students understand drug therapy in the management of adult as well as pediatric patients. During this rotation, the student will present several cases from among inpatients either in the Departments of Internal Medicine or Pediatrics. This will be followed by a discussion of the different medication used. By the end of this rotation, the student should be familiar with pharmacokinetics, mechanism of action, indications, contraindications, side effects, dosage, and drug interactions of the most commonly used medications.

MPED 8417 (Lubbock HSC) Genetics This 4-week rotation offers students the opportunity to participate in all aspects of a comprehensive clinical genetics program including clinical consultations and laboratory testing. The student will participate in genetic evaluation/counseling sessions and observe the cytogenetic/molecular testing that ensues from patient interactions. Students are encouraged to select one patient/family of interest and compile a short case presentation or report by the end of their rotation.

MPED 8418 (Lubbock HSC) Child Abuse and Neglect Elective This elective is designed to prepare future clinicians to successfully identify and refer cases of suspected child abuse and neglect. Learning sessions will be provided on the following topics: Physical abuse and neglect, Sexual abuse, Multidisciplinary work, and Expert medical testimony. Students will have the opportunity to work with professional mentors within the community from the District Attorney's Office, the Police Department, and Children's Protective Services. The student will observe evaluations of children who are suspected victims of abuse and/or neglect with a pediatrician and the sexual assault nurse examiners.

MPED 8419 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Pediatrics Outpatient Elective The purpose of this elective is to familiarize the student with the breadth and depth of Pediatric practice. During this rotation the student will be involved in the evaluation and management of patients being seen for a wide variety of problems to include well-child visits, acute minor illnesses commonly seen in a pediatric practice, longitudinal care for chronic conditions, and subspecialty practice in the ambulatory setting. During this elective, the student will be expected to demonstrate initiative in evaluating and managing the patients they see. They will be challenged to formulate and justify a diagnosis and management plan that is consistent with the age of the patient as well as their chief complaint.

MPED 8420 (Odessa HSC) Pediatrics Allergy and Immunology This one month training experience provides the opportunity for a senior medical student to gain in depth experience with the diagnosis and management of asthma, allergy and immunodeficiency. Outpatient clinical encounters are complemented by reading, presentations and projects depending on student's interest. Clinical experience occurs in the outpatient setting at the office of west Texas allergy Midland. Students are expected to understand the role of the primary care practitioner in prevention related to allergy and immunology.

MPED 8421 (Covenant Branch HSC) Preparation for Residency in Pediatrics (PREP) This course will allow students to have an in depth experience

focusing on preparation for internship in pediatrics. Students will engage in simulation as well as small group discussions and activities. Students will also complete a standardized hand off curriculum and practice multiple patient management skills (fielding phone calls from nursing staff, addressing acute clinical changes in patients, writing orders and medication prescriptions, working with consultants and other health care team members, etc.). There will also be a focus on wellness and resiliency strategies for residency.

MPED 8422 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Pediatric Subinternship Elective The student will work as a member of a team caring for patients admitted to the pediatric inpatient service. During this elective, the student will have an opportunity to learn to formulate problem lists, management, and follow-up plans for hospitalized pediatric patients. The student assumes the role of extern and takes call with the residents.

MPED 8423 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Neonatal Intensive Care Elective This selective/elective is designed to familiarize the student with perinatal-neonatal physiology, high-risk factors associated with neonatal disease pathophysiology diagnosis and management of common neonatal problems, dealing with acute neonatal emergencies, and communicating with parents of high-risk neonates. The students' primary responsibility will be the total management and supervision of assigned patients. Students will also be expected to participate in daily rounds, night call, weekly discussion group on neonatal-perinatal diseases and presentation of a review on a selected aspect of neonatal-perinatal medicine towards the end of the rotation.

MPED 8424 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC) Pediatric Intensive Care Unit Elective The student will be exposed to many pediatric critical care conditions including sepsis, trauma, ARDS, DKA, asthma, and other potentially life threatening conditions. The student will serve as an acting intern with direct patient care responsibilities. The student will make daily rounds with the attending physician. The student will have an opportunity to learn about and perform procedures such as spinal taps, airway management procedures (including intubations and BVM), A-line, central lines, chest tubes, and catheter placement. Emphasis will be placed on physiology and pathophysiology, recognition of common acute life-threatening illnesses/injuries, and stabilization of the critically-ill pediatric patient.

MPED 8426 (Covenant Branch HSC) Pediatric Emergency Medicine

This course is for fourth year medical students interested in increasing their exposure to pediatric emergency medicine. This course is an elective and does not fulfill requirement for ED/ICU rotation.

Physical Medicine and Rehab Electives

Physical Medicine and Rehab Electives Course Descriptions

MORS 8402 (Covenant Branch HSC, Lubbock HSC) Physical Medicine/Rehabilitation This rotation will introduce the basic concepts of physical medicine and rehabilitation. The student will learn techniques of obtaining a complete medical history for patients experiencing musculoskeletal pain. The rotation will also stress the development of an efficient and complete neurological and musculoskeletal examination that will assist the student in developing a differential diagnosis for future patients they may see. The student will be exposed to the total spectrum of the specialty.

Psychiatry Electives

Psychiatry Electives Course Descriptions

MPSY 8401 (Lubbock HSC) Adult Inpatient Psychiatry Elective This elective is designed to give the student an opportunity to work with hospitalized inpatients suffering from major psychiatric disorders (affective disorders, schizophrenia, and organic mental disorders). Special emphasis is placed on diagnosis and formulation of treatment plan. In addition, the student will be exposed to those treatment modalities not provided as an outpatient. This would include electroconvulsive therapy (ECT). The student also will have an opportunity to be a part of a multidisciplinary approach to the diagnosis and treatment of inpatient population.

MPSY 8409 (Lubbock HSC) Substance Use Disorder Treatment Substance use disorder detection and treatment is a vital part of medical practice. Given the prevalence of alcohol and drug addiction and the severity of its potential medical and psychological consequence for patients and their families, it is important that medical students have a solid foundation in this area. A new two-week rotation will be available starting in late August of each year that will be available to 10 interested students on a competitive selection basis. One week of this experience will involve training at the Betty Ford Center in Rancho Mirage, California. The week long program is experiential in nature, allowing participants to spend the majority of their time immersed in the same activities as the patients or family members. In addition, there are supplemental presentations provided to augment understanding of the disease of addiction. Participants will either participate in the Inpatient Program, the Residential Day Treatment Program, or the Family Program. This experience will involve participating in treatment activities as well as multidisciplinary treatment planning meetings. Participants will also meet as a group daily during that week to discuss their experiences in each of these programs. Two faculty members will also participate and will be involved in the same activities as the student participants. Costs of travel, lodging, and food will be provided for this training at the Betty Ford Center. The second week of the rotation will involve further discussion of the experience as well as preparation of a Medical Student Grand Rounds presentation to share with your fellow students your experiences and to discuss what you learn regarding the importance of substance use disorder detection and treatment. This is a unique training experience that is being made available to TTUHSC medical students through a generous donation. The donor's interest is in preparing future physicians to optimally deal with evaluating and guiding patients to appropriate treatment when substance use is an issue. The Betty Ford Center is one of the premier treatment facilities in the country and its program serves as a template for most of the substance use disorder treatment programs existing today. Interested students will be asked to complete a brief essay regarding their interest and goals for participating in the program and participant selection will be based on the essays and academic performance.

MPSY 8411 (Amarillo HSC, Lubbock HSC, Odessa HSC) Psychiatry Outpatient Elective This rotation is designed to give students experience in evaluation, diagnosis, and management of patients with psychiatric illnesses. Students will engage in diagnostic assessment, formulation of a treatment plan and provision of psychotherapy and/or psychopharmacologic treatment. The student is expected to interact with patients and participate in discussions of treatment options.

MPSY 8413 (Lubbock HSC) Child/Adolescent Psychiatry Ambulatory Rotation This rotation will familiarize students with common psychiatric diagnoses and therapies for children and adolescents. Student will observe and participate in the evaluation and treatment of children/adolescents in outpatient and consults services. Particular emphasis is given to improve student skills in the areas of clinical judgment and decision-making. Students are encouraged to take increasing amounts of patient care responsibility while under close supervision. The student will attend family meetings and other relevant meetings. The student is expected to lead at least 4 comprehensive child/adolescent psychiatric interviews, assess at least 2 child/adolescent inpatient consults and present at least 1 case to the attending using a biopsychosocial formulation model for treatment plan. Depending on length of rotation the above will be modified.

MPSY 8414 (Lubbock HSC) Adult Psychiatry Consultation and Liaison Elective Students will be instructed by first demonstrating to them a psychiatric interview and evaluation including a mental status exam. The students will be given opportunities to participate during consultations and be given feedback afterward. During the second week of this elective the student will formally be evaluated through observation of a psychiatric interview including a mental status exam. The student will be given written materials regarding the procedure of a psychiatric consultation and liaison in the medical hospital setting. The student will have opportunities to discuss this during the first week of this elective. The student will observe faculty and staff responding to consultative questions in a medical hospital setting. During the second week of this elective the student will be asked to discuss the procedure of a psychiatric consultation in a medical hospital setting. The student will be present during rounds by the consultation and liaison team. Through observation and discussion with the team the student will familiarize themselves with the most common presentations of delirium. The student will also gain knowledge through observation, participation and discussion regarding the most common psychiatric consultation and liaison questions in a general medical hospital setting during this elective. The student will be evaluated on participation in discussions with team.

MPSY 8415 (Amarillo HSC) Humanities in Medicine Book Club Elective Exploring the medical humanities in literature provides us with a fresh perspective of the careers we have chosen, how our narratives intersect with those of our patients and what it means to balance being a healer and a human. The AAMC has stated "by integrating arts and humanities throughout medical education, trainees and physicians can learn to be better observers and interpreters; and build empathy, communication and teamwork skills, and more." By participating in this longitudinal elective, students will have the opportunity to explore themes of life and death, disease and recovery, and the role of the physician in society through reading and discussion. Each two week course will take place during either the Fall or Spring semester and students will be responsible for reading two books – one chosen by the course director and one chosen by vote of the participating students (and approved by the course director). Students will be expected to submit short essay pre-reading assignments and participate in small group discussions following completion of the book. Group discussions will take place via Zoom conferencing, so participation will not be limited to only one campus.

Public Health Electives

Public Health Electives Course Descriptions

MPRM 8401 (Amarillo HSC, Lubbock HSC, Odessa HSC) Public Health Elective This rotation is designed to teach fourth-year medical students principles and methods of population health practice and research. Students will spend approximately three half-days per week with clinical and public health practice activities at the City of Amarillo Department of Public Health, City of Amarillo Department of Environment Health, City of Amarillo Department of Emergency Management, and Region I Texas Department of State Health Services. These activities will include participation in tuberculosis treatment clinics, refugee screening clinics, communicable disease control activities, zoonosis control, restaurant inspection, disaster preparedness, planning, and population health policy development. The remainder of the time the student will do required reading in population and occupational medicine, and plan and participate in population health research activities. During this clerkship student will be expected to write a paper of quality acceptable for publication in peer-reviewed literature. Students will meet regularly with the Course Director but should be sufficiently self-motivated to complete a short research project with limited faculty input. Institutional Review Board (IRB) training (which can be one on-line) must be completed prior to beginning the clerkship.

Radiology Electives

Radiology Electives Course Descriptions

MRAD 8401 (Amarillo HSC, Covenant Branch HSC, Odessa HSC) Radiology Elective The student will observe and participate in all phases of radiological diagnosis to include fluoroscopy, plain film interpretation, special procedures, nuclear imaging, diagnostic ultrasound, and computed tomography where available. A radiological teaching file is provided for study purposes, and the student is expected to spend a portion of the time reviewing this file. Attendance at intra-departmental conferences is expected.

Research Electives

Research Electives Course Descriptions

MIDS 8403 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Clinical Research Elective At the beginning of the elective, each student will be assigned to a nurse coordinator and will be increasingly involved in working with that coordinator on the studies they are running. An opportunity will be given for the students to choose between various ongoing studies, but this must be done early since they must have passed the CITI training program and have IRB approval to participate in individual studies. Each student should be involved both with studies involving human subjects and those involving chart reviews. It would be anticipated that the students would receive authorship on any publication resulting from studies on which they are involved, provided that their participation is meaningful. Early in the elective, there will be an emphasis on didactic material beginning with discussions about the regulations and ethical considerations related to research in humans, the background for these and the role played by the IRB and an Office of Research Integrity. This will be followed by sessions on how to develop the proposal for a research project from conception of the idea through formulation of a hypothesis and specific aims, compiling the background, constructing the appropriate methods and analysis of results and, finally, a discussion of the potential significance. It will be expected that each student will develop a proposal/protocol during the elective with an ongoing active critique process.

Surgery Electives

Surgery Electives Course Descriptions

MSUR 8402 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC) Pediatric Surgery Elective The student will be permitted to review and participate in the care of surgical diseases of infants and children, including the operative management of premature infants with congenital defects, pre-/postoperative care in the neonatal unit, Pediatric Intensive Care Unit, and diagnostic radiology in acute pediatric surgical disease. The student will be introduced to the delicate techniques and manipulative skills necessary in the care of these patients.

MSUR 8403 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Plastic Surgery Elective The elective is designed to acquaint the student with the basic principles of plastic and reconstructive surgery including burns, cosmetic surgery, and trauma to extremities. Also included is an introduction to the principles of microsurgery. The student observes as well as participates in the pre-, post-operative and follow-up for such patients.

MSUR 8406 (Lubbock HSC, Odessa HSC) Vascular Surgery Elective This elective exposes the medical student to patients with diseases of the vascular system including peripheral arterial occlusive disease, carotid stenosis, diseases of the venous and lymphatic system. The student will gain advanced knowledge of the pathophysiology of these diseases and the workup and management. The student will learn to evaluate these patients clinically, using non-invasive tests such as Duplex and invasive evaluation including angiography. The student will see and take care of vascular patients and this includes initial evaluation, management plan and participating in the treatment endovascular or operative. The student will follow these patients postoperatively in the intensive care until discharged.

MSUR 8407 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Neurosurgery Elective This elective is designed to expose the students to the specialty of neurosurgery. The student will be exposed to both outpatient and inpatient care. During this rotation the student will have the opportunity to participate in the management of patients with various neurosurgical diseases including brain tumors, aneurysms, and disorders of the spine. The student will also have strong exposure to neurosurgical trauma including operative management of intracranial bleedings and management of increased intracranial pressure. The student will actively participate in the patient's care pre-, intra- and postoperatively and make daily rounds with the neurosurgery service both on the floor and in the intensive care.

MSUR 8408 (Amarillo HSC, Lubbock HSC) Surgical Oncology Elective By direct involvement in the clinical practice, the 4th year student will be exposed to cancer patients at all stages of presentation, during treatment and surveillance, and at relapse and or with advanced disease. A series of didactic lectures regarding basic principles in oncology, screening recommendations, and clinical and pathologic staging supplements the office and bedside evaluation of cancer patients so that the objectives of understanding adult cancer issues as listed above can be met. Patients are referred to the surgical oncology division and will be evaluated by the 4th year student in the presence of the surgical oncology division Faculty. Thorough history evaluation, review of previously obtained imaging studies and laboratory results, and review of previously obtained pathology slides will be incorporated into a general discussion for that particular patient's cancer or tumor. The 4th year student will be directly involved in patient discussions regarding evaluation and treatment. There will be a continuity of care inasmuch as pathology slides are reviewed, ordered imaging studies are reviewed and applied to ongoing or definitive decision making, and the 4th year student will have the opportunity to evaluate patients on the hospital wards and during return visits to the clinical office practice. The close shadowing relationship with division of surgical oncology Faculty allows for a comprehensive experience and continuity. The 4th year student will be present during office practice hours on specific days including Monday afternoon at the VA Medical Center, Tuesday morning at the Texas Tech Office Practice, and Thursday afternoon at the Texas Tech Office.

MSUR 8409 (Amarillo HSC, Lubbock HSC, Odessa HSC) Female Breast Disease and Treatment This elective is designed to expose the 4th year medical student to and educate him/her in all aspects of female breast disease. The student will participate in the outpatient clinics evaluating patients and participate in the diagnosis and treatment of benign and malignant disease. The student will assist on breast biopsies in the outpatient clinic and will assist at hospital operative procedures. The student will spend time with the medical oncologist in the outpatient setting and at the Infusion Center. The student will also spend time at the Breast Imaging Center assisting with mammography and ultrasound.

MSUR 8413 (Lubbock HSC) Surgical Residency Preparatory Elective This course is designed to provide MS4 students who intend to match to a surgical residency position to prepare for their Internship year. The course is based on the ACS/APDS/ASE Entering Surgery Resident Prep Curriculum and includes numerous sessions scheduled in the simulation center. The curriculum has been developed as a "finishing curriculum" to provide students with practical information and experience in tasks that they will be expected to perform as a beginning intern. Some examples of skills covered include order writing, performing patient hand-offs, handling emergency patient scenarios, performing surgical procedures and managing surgical patients. The course will also address issues related to professionalism, communication skills, evidence based medicine and systems processes.

MSUR 8415 (Lubbock HSC, Odessa HSC) Acute Care Surgery Enter the exciting world of Acute Care Surgery and Trauma! This elective exposes the fourth year medical student to the most critically ill and injured surgery patients. The student will be an integral part of the acute care surgical team, anesthesia, and other departments, led by residents and an attending physician. This team uses a multidisciplinary approach to take care of patients from the time they are admitted until their discharge from the acute care unit. The medical students will be assigned patients appropriate for their level of training and under the direct supervision of the attending physician. They will learn to thoroughly evaluate the overall condition of the patient, develop a management plan, and get experience in executing the plan, including performing several bedside procedures. The student may be expected to round twice a day with the attending and the team, attend daily multidisciplinary conferences and take in-house call twice a week including one weekend day. The student may participate in additional educational activities including ICU lectures, morning report, Morbidity and Mortality conferences and Ground Rounds within the Departments of Surgery. The medical students will be evaluated by faculty or resident members of the acute care surgery department twice throughout the duration of the course which will include one midpoint evaluation to track progress and a final assessment. The grade will focus on medical knowledge, patient care, interpersonal and communication skills, professionalism, practice-based learning and improvement, and systems-based practice.

MSUR 8416 (Amarillo HSC, Covenant Branch HSC, Odessa HSC) Cardiothoracic Surgery Through the direct pairing with a practicing Clinical Faculty Thoracic Surgeon the student will participate as a member of this team in the provision of inpatient and outpatient care, and emergency department and operating room activities. This elective will provide the student an exposure to the gamut of basic principles of surgical evaluation, diagnosis and management as well as those principles specific to the clinical techniques of diagnosis and surgical management of congenital and acquired cardiothoracic disease.

MSUR 8418 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC) Surgical Intensive Care Unit Elective This elective exposes the fourth year medical student to the most critically ill and injured surgery patients. The student will be an integral part of a team of residents from surgery, anesthesia and other departments, led by an attending specialized in intensive care medicine. Medical student will be assigned patients appropriate for their level of training and under direct supervision of the attending, will learn to thoroughly evaluate their overall condition, develop a management plan, and get experience in executing the plan including performing several bedside procedures. The student is expected to round twice a day with the attending and the team, attend daily multidisciplinary conference and take in house call once a week including one weekend day. The student is expected to participate in educational activities including ICU lectures, M&M and Ground Rounds within the Department of Surgery.

MSUR 8420 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) General Surgery Subinternship Elective The student will serve as an extern on the surgical service and participate in the care of surgical patients in the emergency room, surgical wards, operating room, and clinic. Pre- and post-operative care and the management of patients in the Surgical Intensive Care units will be stressed. Assignments to selected clinical faculty preceptors

are also available. Students will take in-house call.

MSUR 8421 (Lubbock HSC) Burn Intensive Care Unit Elective During this rotation, the fourth year medical student will become intimately involved with the management and care of burn patients ranging from the most severe injury with life threatening burns to the less severe, both adult and pediatric patients.

MSUR 8424 (Covenant Branch HSC) Neurological Surgery Sub I Elective The Neurological Surgery Sub-I elective offers fourth year medical students with a strong interest in the Neurological Surgery subspecialty, an opportunity to acquire and assimilate advanced clinical responsibilities at an intern level, by exposure to neurological patients in various settings: inpatient, outpatient, and operating room. This four-week elective rotation will provide an educational curriculum that emphasizes teaching of fundamental concepts of total patient care. The sub-intern will be assigned to a faculty mentor.

MSUR 8425 (Lubbock HSC) Colorectal Surgery Elective This course will expose 4th year medical students to the field of colon and rectal surgery. They will have the opportunity to participate in the outpatient clinic as well as procedures. Procedures will include colonoscopies, benign anorectal cases, advanced laparoscopy, as well as large open abdominal surgeries.

MSUR 8426 (Odessa HSC) Cardiovascular Surgery Elective The student will observe and participate in all phases of radiological diagnosis to include fluoroscopy, plain film interpretation, special procedures, nuclear imaging, diagnostic ultrasound, and computed tomography where available. A large number and variety of patients are available at the affiliated teaching hospitals.

MSUR 8427 (Lubbock HSC) Neurological Intensive Care Unit Elective This rotation exposes the fourth-year medical student to the most critically ill patients with neurological pathology. The student will be an integral part of a team from neurosurgery, anesthesia, and other departments, led by an attending physician. Medical students will be assigned patients appropriate for their level of training. The students will learn to thoroughly evaluate the overall condition of the patient and develop and implement a management plan. The students will become familiar with common neurological conditions including vascular pathology and hemorrhage, closed and open head trauma, and increased intracranial pressure, as well as neuro-oncology and management of intracranial pressure monitors and external ventricular drains. Additionally, the student will become familiar with common ICU management practices including central lines, arterial lines, and ventilator management. The student will be expected to round daily with the attending and the team. The student may participate in additional educational activities within the Departments of Surgery including ICU lectures, Morbidity and Mortality conferences and Grand Rounds.

Urology Electives

Urology Electives Course Descriptions

MSUR 8405 (Amarillo HSC, Lubbock HSC, Odessa HSC) Urology Elective This elective is an advanced experience in the management of disorders of the urinary tract and is designed to provide the student with an understanding of the principles of urological diagnosis and treatment. Included with this elective are a series of lectures, ward rounds, operating room and clinical experiences with a review of pathology. The course is of value to both a primary care physician as well as a student interested in a career as an urologist.

Special Topics Electives

Special Topics Electives may be completed on any TTUHSC campus or at LCME-accredited institutions in the US.

Special Topics Electives Course Descriptions

MSCI 8601 Special Topics in Medicine Special topics in medical sciences that are not included in other classes in the medical school curriculum. May not be repeated for credit within an academic year.

MEME 8601 Special Topics in Emergency Medicine Special topics in medical sciences that are not included in other classes in the medical school curriculum.

MFAM 8601 Special Topics in Family Medicine Special topics in medical sciences that are not included in other classes in the medical school curriculum.

MINT 8601 Special Topics in Internal Medicine Special topics in medical sciences that are not included in other classes in the medical school curriculum.

MOBG 8601 Special Topics in Obstetrics & Gynecology Special topics in medical sciences that are not included in other classes in the medical school curriculum.

MORS 8601 Special Topics in Orthopedics Surgery Special topics in medical sciences that are not included in other classes in the medical school curriculum.

MPED 8601 Special Topics in Pediatrics Special topics in medical sciences that are not included in other classes in the medical school curriculum.

MPSY 8601 Special Topics in Psychiatry Special topics in medical sciences that are not included in other classes in the medical school curriculum.

MRAD 8601 Special Topics in Radiology Special topics in medical sciences that are not included in other classes in the medical school curriculum.

MSUR 8601 Special Topics in Surgery Special topics in medical sciences that are not included in other classes in the medical school curriculum.

MURO 8601 Special Topics in Urology Special topics in medical sciences that are not included in other classes in the medical school curriculum.

Away Rotations

Electives may be completed on any TTUHSC campus or at LCME-accredited institutions in the US.

Away Rotations Course Descriptions

MANE 8451 AW-Anesthesiology This elective is for students interested in anesthesiology and the insights this discipline gives into the application of physiological and pharmacological principles to the care of patients in acute life-threatening situations. Daily lectures, laboratory demonstration, and the pre-operative and post-operative care of patients undergoing anesthesia will enable the student to acquire the basic skills necessary to care for the unconscious and critically ill patient during anesthesia and other similar situations. These skills include airway management, ventilatory support, cardiovascular support, fluid replacement, and intravenous techniques. The student will also have an opportunity to learn the fundamentals of respiratory therapy and its application to patient care.

MDER 8451 AW-Dermatology Clinics This elective is designed to expose the student to a wide variety of dermatologic conditions with the expectation that at the conclusion of the experience common disorders will be recognizable. The student will participate in clinics (few inpatient consults) observing a variety of dermatologic disorders and dermatologic procedures in both the adult and pediatric patient population. Also offered is exposure to dermatopathology and dermatologic surgery, thus allowing clinicopathologic correlation.

MDER 8452 AW-Dermatopathology This elective is designed to give 4th year medical students exposure to and experience in dermatopathology.

MEME 8251 AW-Emergency Medicine This elective is an introduction to emergency medicine and the evaluation of common emergencies. Instead of focusing on a single age group, a defined severity of illness or a discrete body of medical knowledge, the student will be expected to look at the big picture. The student will be asked to make decisions regarding management based upon available clinical information and limited laboratory or radiological tests in a limited time environment. Given these restrictions, emphasis will be on the approach to the problem, its management and disposition, rather than a precise diagnosis.

MFAM 8151 AW-Family Medicine Sr. Rotation This rotation prepares students for the transition into a residency program by increasing exposure to the care of patients in the outpatient clinic setting. Students will provide care to a broad range of patients of all ages while refining their examination, diagnostic and communication skills. The clinical experience is combined with seminars focusing on various patient care topics, including a diabetes workshop and self-study, to enhance the learning experience.

MFAM 8351 AW-Family Medicine Sub-Internship Patients of all ages, of both sexes, and with diverse medical problems will be managed in this sub-internship. Emphasis will be given to the total management of the patient, beginning with the ambulatory presentation, continuing through hospitalization and following dismissal from the hospital-coordinated, comprehensive, continuing medical care. The student will be responsible for complete evaluation of the patient, including initial history and physical examination, cost effective utilization of laboratory, x-ray and other procedures and the formulation and pursuit of the management plan, including cogent utilization of consultation/referral services. Emphasis will also be given to participation in community resources, which provide ongoing care of the patient, including Hospice and community health centers. Experience is afforded in the Family Practice Center, the inpatient service of family medicine, certain area nursing homes, and on occasion, in the home of the patient. The student will function with Family Practice residents under the direction of the Family Medicine faculty member assigned to the inpatient service and other Family Medicine faculty members.

MFAM 8451 AW-Family Medicine Preceptorship Students are assigned to a variety of practices within the urban or rural area for a supervised exposure to day-to-day practice problems. Emphasis is on the application of clinical skills within the demands and limits of actual practice. Program is sponsored by the Texas Academy of Family Practitioners. Applications must be completed several months in advance.

MIDS 8453 AW-Clinical Research At the beginning of the elective, each student will be assigned to a nurse coordinator and will be increasingly involved in working with that coordinator on the studies they are running. An opportunity will be given for the students to choose between various ongoing studies, but this must be done early since they must have passed the CITI training program and have IRB approval to participate in individual studies. Each student should be involved both with studies involving human subjects and those involving chart reviews. It would be anticipated that the students would receive authorship on any publication resulting from studies on which they are involved, provided that their participation is meaningful. Early in the elective, there will be an emphasis on didactic material beginning with discussions about the regulations and ethical considerations related to research in humans, the background for these and the role played by the IRB and an Office of Research Integrity. This will be followed by sessions on how to develop the proposal for a research project from conception of the idea through formulation of a hypothesis and specific aims, compiling the background, constructing the appropriate methods and analysis of results and, finally, a discussion of the potential significance. It will be expected that each student will develop a proposal/protocol during the elective with an ongoing active critique process.

MINT 8251 AW-MICU/CCU This selective/elective utilizes patients admitted to the intensive care units within various teaching hospitals. The student will gain experiences in managing common medical emergencies, including cardiopulmonary arrest, drug overdose, hypertension, acute myocardial infarction, cardiogenic shock, congestive heart failure, renal failure, and diabetic ketoacidosis. The student is also expected to become proficient in the evaluation and management of common chest problems, including asthma, chronic obstructive pulmonary disease, pleural effusions, peri-operative complications, pneumonia, atelectasis, respiratory failure, pulmonary function tests, and chest x-rays, and to become familiar with the various types of mechanical ventilators, oxygen delivery systems, and methods of delivering inhaled medication.

MINT 8351 AW-Internal Medicine Sub-Internship This ward-based, primary care sub-internship provides the student an individualized, case-oriented experience as a sub-intern on a general medicine ward service, designed to be the natural extension of the third-year clerkship. Each student will work closely with a senior resident, have primary patient responsibility, take night call with his/her team, have patient care responsibilities like an intern with close supervision by the senior resident, be assigned readings and give mini-lectures on selected subjects, and attend the regularly scheduled teaching conferences of the Department of Internal Medicine. This sub-internship is strongly recommended for students planning to pursue a career in Internal Medicine.

MINT 8451 AW-Internal Medicine This elective is designed for both the student interested in internal medicine and the student interested in other specialties who would like to strengthen his/her background in medicine. The primary emphasis of this elective is on diagnostics, preventive medicine, and successful outpatient management of chronic, progressive diseases such as diabetes mellitus and hypertension. Selected areas such as geriatrics, home care, office ENT, ophthalmology, gynecology, and orthopaedics may be added as suits the needs of the student.

MINT 8452 AW-Cardiology This ward-based consult service elective consists of daily review of electrocardiograms and echocardiograms, cardiology consultation rounds, Cardiac Care Unit teaching rounds, weekly cardiology teaching conferences, and cardiac catheterization conferences. The student will prepare a review of an assigned topic for the weekly cardiology conferences. Bedside cardiovascular examination and management will be stressed.

MINT 8454 AW-Gastroenterology This elective provides opportunities for learning office practice of gastroenterology including evaluation of patients with peptic ulcer disease, malabsorption, liver disease, etc. Extensive outside reading will be required. The student may be involved in direct patient care in a hospital setting.

MINT 8455 AW-Infectious Diseases This ward-based elective offers the student an opportunity to evaluate and care for patients with infectious diseases

and to gain an understanding of the clinical microbiology procedures important in the care of these patients. HIV and AIDS will be discussed. Each student will be encouraged to prepare and present one seminar or write a paper on a subject of his/her choice. Time for independent study will be allowed.

MINT 8456 AW-Oncology/Hematology This elective provides exposure to clinical and laboratory diagnosis as well as management of neoplastic and hematologic disorders. Representative case reviews are used to supplement current clinical material where appropriate. Peripheral blood, bone marrow, and tumor morphology are emphasized as well as clinical staging and chemotherapy. There will be exposure as to how new investigational drugs are tried and protocol treatments are given to cancer patients. Students can also obtain concept in bone marrow transplantation including both clinical and laboratory processing of bone marrow cells. Options are available for major focus in ambulatory or ward setting, or both.

MINT 8457 AW-Nephrology This elective offers clinical experience in the diagnosis and management of patients with acute and chronic renal failure, hypertension, fluid and electrolyte imbalances, acid base disturbance, parenchymal renal diseases, etc.

MINT 8458 AW-Pulmonary Medicine This elective is offered to the student for clinical experience in pulmonary disorders, emphasizing acute and chronic respiratory failure, intensive respiratory care, and interpretation of pulmonary function tests and chest x-rays.

MINT 8459 AW-Rheumatology This elective offers an in-depth look at the clinical array of rheumatologic disorders. Students will be exposed to inpatients and outpatients with emphasis on diagnosis and long-term management of common rheumatic diseases. Depending on the student's level of proficiency and interest, the student may be allowed to participate in procedures such as joint aspiration and injection, and will interpret synovial fluid studies. Students will learn the correct indications and monitoring of common rheumatic drugs and the fundamentals of rheumatic rehabilitation.

MINT 8461 AW-Radiation Oncology The field of radiation oncology is an intellectually challenging field, providing curative therapy and close longitudinal doctor-patient relationship. This elective may be taken by itself or combined with the hematology-oncology elective.

MINT 8468 Away-Cardiac Intensive Care Unit Rotation The student will gain experience in managing common medical emergencies, including cardiopulmonary arrest, hypertension, acute myocardial infarction, cardiogenic shock, and congestive heart failure. The student will also become familiar with the various types of mechanical ventilators, aortic balloon pumps, cardiac valve replacement surgeries, extracorporeal membrane oxygenation, oxygen delivery systems, and methods of delivering inhaled medication.

MNEU 8051 Neurology Senior Rotation This rotation exposes the student to basic principles of diagnosis and management of common neurologic conditions. Students learn skills in conducting neurologic exams, identifying signs and symptoms of neurologic disorders, and integrating signs and symptoms into syndromes. Students learn about basic neurologic disorders and neurologic complications of systemic conditions.

MOBG 8151 AW-Obstetrics/Gynecology Senior Rotation This two or four week elective is a compilation of the spectrum of patients seen in the ambulatory ob/gyn clinic (gynecology, antenatal care, high risk obstetrics, urogynecologic, and infertility) and will be tailored to fit the individual requests of the fourth year student. Hands on opportunities include preparing for and performing the following office gynecologic procedures: cervical cytology and cultures, colposcopy, endocervical curettage, cervical, and endometrial biopsy. The student will be expected to present in organized succinct fashion ob/gyn patients seen in clinic to the supervising physician, counsel patients concerning various contraceptive options, complications, and contraindications, and review the evaluation and management of the abnormal cervical cytology screen. The student will also be expected to formulate a treatment plan for peri- and postmenopausal bleeding, complicated obstetrical patients and work on proper communication with nursing and ancillary staff in order to efficiently and effectively coordinate ambulatory patient care.

MOBG 8352 AW-Maternal Fetal Med Sub-I This four week Sub Internship will provide the student the opportunity to function as a first year resident on the MFM service. The student will gain ample exposure on the rotation in order to develop the skills to recognize the clinical and laboratory diagnosis of medical, surgical, and obstetric complications of the high-risk pregnancy. The student will review the literature on and develop the skills to manage the fetal/neonatal complications of post term pregnancy. including the indications for induction of labor, and review the evaluation and management of the following conditions which complicate pregnancy: preterm labor, hypertension, and diabetes.

MOBG 8353 AW-Gynecology Sub-Internship This four week Sub Internship will provide the student the opportunity to function as a first year resident on the Gynecologic service. The student will evaluate, present, and manage patients that present to clinic and the EC with gynecologic complaints and participate in and care for patients that undergo gynecologic surgery. On days assigned to the operating room the student will be expected to: prepare for and perform as a surgical assistant for assigned gynecologic cases, communicate with operating room nursing and ancillary staff, and become proficient in preoperative 'time out', and illustrate proper aseptic technique, and patient positioning in the operating room. Prior to surgical cases the student will review the surgical steps for and complications of commonly performed gynecologic surgeries as well as recent literature in regard to surgical outcomes. The student will gain experience in eye-hand coordinated movements relevant to basic laparoscopy in the simulation lab and with knot tying using a self-directed suture curriculum. The student will demonstrate effective communication skills regarding patient sign out and hand off, recognize and participate in systems improvements, and communicate with nursing and ancillary staff to promote teamwork, and patient care. The student will prepare for and attend Friday afternoon didactics including the participation in preoperative surgical conference.

MOBG 8451 AW-Maternal-Fetal Medicine This elective will introduce the student to high-risk obstetrics with specific exposure to the clinical and laboratory diagnosis of medical, surgical, and obstetric complications of the "high-risk" pregnancy. The course is not intended to generate surgical manual skills, but rather cerebral and interpretive knowledge. Emphasis will be placed on ultrasonographic interpretation, invasive fetal testing, and antepartum care of this patient group, both in the clinic and hospital setting. Specific readings will be assigned in the areas of obstetrical anesthesiology, premature labor, and suppression of said labor, induction of labor, metabolic diseases of pregnancy, hypertension and cardiac diseases in pregnancy, etc. Lectures and resident education conferences will be attended as well as discussion with the attending physician and resident physician of the OB team on assigned reading topics.

MOBG 8452 AW-Gynecologic Oncology/GYN Surgery This elective is for students interested in becoming more familiar with gynecologic operations and the multidisciplinary care of women with gynecologic malignancies. Specifically, experience will be obtained in the complex peri-operative and operative management of women with pelvic neoplasms. In addition, radiation treatment and planning the administration of chemotherapy will be practiced. Emphasis will also be placed on histopathologic diagnosis and correlation. The student will participate in the pre-operative and post-operative management of patients (both clinic and inpatient settings), in evaluating and treating patients (both in an emergency room and clinic setting), and gynecologic surgery. Postoperative care will provide an opportunity to learn wound care, respiratory support, rehabilitation, and resolution of post-operative ileus. The outpatient clinic training will include clinical medicine, as well as the "business of medicine". Periodic pathology conferences will be attended. Colposcopy procedures for cervical lesions will be covered. The student will be expected to make rounds with the GYN oncology team daily. Lectures and resident education conferences will be attended as well as discussion with the attending physician and resident physicians of the GYN oncology team on assigned reading topics.

MOBG 8453 AW-Endocrinology/Infertility Students will be given opportunities to participate in the clinical care of patients with reproductive endocrine and infertility disorders and will improve the clinical knowledge base necessary for recognizing the problems of these patients as individuals. Students will be provided both clinical exposure to patients and the laboratory aspects of reproductive endocrine and infertility care and will be exposed to the emotional and psychological problems of the reproductive endocrine/infertility patient. Students will participate in all scheduled surgeries, see private patients with attending physician, consult in resident reproductive endocrinology clinic, learn to do inseminations, ovulation monitoring and induction protocols, participate in hysterosalpingogram, and observe management of in vitro fertilization. Lectures and resident education conferences will be attended as well as discussions with attending physicians and resident physicians of the REI team on assigned reading topics.

MOBG 8454 AW-Obstetrics and Gynecology This elective includes experience in office and hospital obstetrics and gynecology, family planning, gynecological surgery, and formal and informal conferences. The schedule is flexible to accommodate special interest of the student.

MOPH 8451 AW-Clinical Ophthalmology This elective will consist of an extensive exposure to clinical ophthalmology in a private practice setting. The student will be exposed to acute and chronic eye disease in addition to ophthalmic surgery. The main objective of this elective will be to teach the student how to conduct a thorough examination of the eyes and to orient the student to the common eye conditions that every physician should be able to diagnose and treat.

MOPH 8452 AW-Ophthalmology This elective introduces the student to the wide range of research possibilities in the area of visual sciences. A number of projects are available. Ongoing projects include Visual psychophysics and electrophysiology, Machine vision, Artificial intelligence applications, Digital imaging, Cell growth acceleration, including work with defensins and Substance P, Cell growth inhibition, including work with cell growth factor receptor blockers, Glaucoma, Glaucoma drug design, Cornea surgery, Vitreoretinal surgery, Instrument development and design, and Retrospective clinical studies.

MORS 8451 AW-Orthopedic Surgery Students will be assigned to an orthopaedic Faculty member and participate as a member of the orthopaedic team in inpatient and outpatient care, emergency room, and operating room activities. Students should perform history and physical examinations upon all patients admitted by the attending surgeon and present these work-ups for evaluation. Each student will prepare a presentation for the teaching conference on a subject assigned by a Faculty member. The student will attend all orthopaedic conferences. This elective is for those students interested in surgical specialties or an in-depth experience in orthopaedic surgery.

MORS 8452 AW-Physical Medicine/Rehabilitation This rotation will introduce the basic concepts of physical medicine and rehabilitation. The student will learn techniques of obtaining a complete medical history for patients experiencing musculoskeletal pain. The rotation will also stress the development of an efficient and complete neurological and musculoskeletal examination that will assist the student in developing a differential diagnosis for future patients they may see. The student will be exposed to the total spectrum of the specialty.

MPAT 8453 AW-Surgical Pathology This elective will introduce the student to the role of tissue examination in modern medicine. The student may be involved in a variety of experiences, including Gross examination of surgical pathology specimens, Processing and staining tissue, Frozen-section examination, Light microscopic diagnosis, Cytopathology, Autopsy pathology, and Electron microscopy. Clinical correlation of gross and microscopic findings is emphasized, and there will be a close affiliation with the surgical services and subspecialties. The proportion of time spent in these areas will be tailored to the student's interests. One formal presentation on a laboratory topic of the student's interest will be required in the four-week experience. Attendance and participation in a variety of surgical pathology and inter-service conferences are encouraged. Call is not generally required, but it may enhance the autopsy and surgical pathology experiences.

MPAT 8454 AW-Anatomic & Clinical Pathology The student will rotate through the sections of the clinical laboratory as follows: (a) Hematology - learn how to evaluate electronic differential counts and how to evaluate peripheral smears; (b) Microbiology- learn proper specimen collection/preservation techniques and how to interpret Gram stains; (c) Chemistry/Special Chemistry- learn how to interpret chemistry tests in the clinical context; (d) Serology- learn about interpretation/indications for serologic tests; and (e) Blood Bank- learn about pre-transfusion testing, indications for T/S vs. T/X match, and proper blood product handling and storage. Procedures and skills include: (a) Learn about handling of cytology/histology specimens and how to perform simple gross tissue examinations; (b) Learn basics of histology and routing cytology and (c) Observe FNA procedures and understand the indications for this procedure.

MPED 8151 AW-Pediatrics Senior Rotation The purpose of this rotation is to familiarize the student with preventive pediatrics and parent education, acute intervention in common childhood diseases and follow-up visits, and evaluation of patients in an outpatient consultation service.

MPED 8251 AW-Neonatal Intensive Care This selective/elective is designed to familiarize the student with perinatal-neonatal physiology, high-risk factors associated with neonatal disease pathophysiology diagnosis and management of common neonatal problems, dealing with acute neonatal emergencies, and communicating with parents of high-risk neonates. The student's primary responsibility will be the total management and supervision of assigned patients. Students will also be expected to participate in daily rounds, night call, weekly discussion group on neonatal-perinatal diseases and presentation of a review on a selected aspect of neonatal-perinatal medicine towards the end of the rotation.

MPED 8351 AW-Pediatric Sub-Internship The student will work as a member of a team caring for patients admitted to the pediatric inpatient service. During this elective, the student will have an opportunity to learn to formulate problem lists, management, and follow-up plans for hospitalized pediatric patients. The student assumes the role of extern and takes call with the residents.

MPED 8451 AW-Adolescent Medicine This elective is designed to help students acquire good interviewing skills, a basic knowledge of adolescent physical and psychosocial development, an understanding of adolescent gynecology, basic skills in evaluation and management of sexually transmitted diseases, knowledge of nutrition and eating disorders in teenagers, management of common skin disorders, ability to identify common orthopaedic problems, knowledge of psychosocial disorders common in adolescents, and insight into the common medical complaints and problems in this age group as well as chronic illnesses seen in adolescents. Students will also gain insight into the legal issues and become familiar with the interface between the adolescent health facility, community agencies and institutions.

MPED 8452 AW-Ambulatory Pediatrics The purpose of this elective is to familiarize the student with preventive pediatrics and parent education, acute intervention in common childhood diseases and follow-up visits, evaluation of patients in an outpatient consulting service, and interactions with Faculty and residents about the many facets of ambulatory pediatrics. Students will participate in ambulatory clinics and various conferences and rounds associated with pediatrics. At the end of the rotation, the student will present a topic in ambulatory pediatrics to residents and Faculty.

MPED 8453 AW-Pediatric Endocrinology/Metabolism This elective provides exposure to outpatient management of common pediatric endocrine problems. Included will be growth assessment, Type 1 diabetes, congenital hypothyroidism, acquired hypothyroidism, hyperthyroidism, precocious puberty, delayed puberty, congenital adrenal hyperplasia, diabetes insipidus, and disorders of calcium regulation. Limited exposure to inpatient consultations is anticipated. Indications for common endocrine laboratory tests and their interpretation will be reviewed. Endocrine aspects of common pediatric clinical situations will be discussed.

MPED 8455 AW-Pediatrics Infectious Diseases The objective of this elective is to familiarize the student with the clinical and microbiologic approach to common pediatric infectious disease problems. The student will become familiar with the different classes of antimicrobial agents and learn when and how to select appropriate empirical antibiotic therapy. The student will participate in the differential diagnosis of pediatric patients presenting with signs and symptoms of an infectious disorder. The student will learn the appropriate laboratory tests and culture techniques for isolation and identification of bacterial, viral, fungal, and parasitic pathogens. Epidemiology and infection control of specific infectious pathogens will be discussed. This elective is primarily an inpatient consultation rotation involving the teaching hospital and two private hospital services with one weekly outpatient clinic for follow-up and consultation. Opportunities for research projects may be available if desired.

MPED 8458 AW-Pediatrics Cardiology Students will be provided many opportunities to learn a variety of cardiac problems in pediatric patients. The student will observe or participate in any activities that the pediatric cardiologist will perform in the diagnosis and management of children with cardiac diseases. The student will become familiar with the interpretation of normal and abnormal cardiac manifestations and physical findings of cardiac defects in children. The student will observe non-invasive and invasive diagnostic procedures and will be encouraged to interpret electrocardiograms, echocardiograms, and cardiac catheterization data. The student will also have an opportunity to observe cardiac surgery and follow the patient post-operatively with the cardiologist. Sufficient physiopathological background will be provided to make the cardiac problems more comprehensible through lectures, case discussions, and review of pathologic specimens.

MPED 8459 AW-Pediatrics Gastroenterology This elective provides an opportunity for the student to participate in the diagnostic evaluation and management of pediatric patients with gastrointestinal and liver disease. The elective is in a private practice setting and will expose the student to a wide variety of diseases through both clinic and hospital consultations. The student will become familiar with the appropriate use of laboratory, radiology, and endoscopy (including review of histology) in the evaluation and management of pediatric patients. There will also be an opportunity for the student to

become familiar with the use of diagnosis and management coding as well as general office procedures in the private practice setting.

MPED 8460 AW-Pediatric Hematology/Oncology The purpose of this elective is to provide clinical experience to common problems in hematology and oncology by direct contact with patients. At the end of the rotation, students will be able to learn the essential knowledge in evaluating, diagnosis and managing patients with hematologic and oncologic problems, including those related to anemia, coagulation, lymphomas, leukemias and certain solid tumors, and hematologic and oncologic emergencies. The emphasis will be place on establishing the rapport with patients, logical approach for differential diagnosis, planning the management according to evidence-based medicine for each clinical situation and condition. Students may also participate in diagnosis procedures including lumbar puncture and bone marrow examination.

MPED 8462 AW-Pharmacology & Therapeutics This elective is designed to help students understand drug therapy in the management of adult as well as pediatric patients. During this rotation, the student will present several cases from among inpatients either in the Departments of Internal Medicine or Pediatrics. This will be followed by a discussion of the different medication used. By the end of this rotation, the student should be familiar with pharmacokinetics, mechanism of action, indications, contraindications, side effects, dosage, and drug interactions of the most commonly used medications.

MPED 8463 AW-Pediatric Pulmonology The purpose of this elective is to develop basic methodology in the evaluation of pediatric lung disease by the rational use of appropriate clinical skills, by interpreting blood gases and pulmonary function tests, and by reading chest radiographs in order to be able to develop a reasonable differential diagnosis, disease evaluation, and therapy (including familiarizing with ventilator). This elective will provide the types of pediatric pulmonary problems encountered at the general pediatric inpatient facility, as well as those referred to a subspecialty, outpatient chest and/or cystic fibrosis clinic complemented by occasional consultation on critically ill children.

MPED 8465 AW-Pediatric Neurology This elective provides exposure to outpatient management of common pediatric neurology problems. Included will be delays in developmental milestones, ataxia, change in sensorium, diplopia, headache, head trauma, hearing concerns, gait disturbance, hypotonia, lethargy, seizure, tremor, vertigo, visual disturbances, and weakness. Limited exposure to inpatient consultations is anticipated. Indications for common neurologic laboratory tests and their interpretation will be reviewed. Neurological aspects of common pediatric clinical situations will be discussed. At the end of the rotation, the student should be able to recognize common neurologic disorders and their presentations.

MPED 8467 AW Genetics This 4-week rotation offers students the opportunity to participate in all aspects of a comprehensive clinical genetics program including clinical consultations and laboratory testing. The student will participate in genetic evaluation/counseling sessions and observe the cytogenetic/molecular testing that ensues from patient interactions. Students are encouraged to select one patient/family of interest and compile a short case presentation or report by the end of their rotation.

MPSY 8151 AW-Psychiatry Senior Rotation This rotation is designed to give students experience in evaluation, diagnosis, and management of psychiatric illnesses in a variety of settings. Students may select Adolescent Psychiatry, Inpatient Psychiatry, or Outpatient Psychiatry.

MPSY 8152 AW-Child/Adolescent Psychiatry Elective This selective/elective is designed to give the student clinical experience with outpatient evaluation of child and adolescent patients seen at the TTUHSC Department of Neuropsychiatry and Behavioral Sciences.

MPSY 8451 AW-Adult Inpatient Psychiatry This elective is designed to give the student an opportunity to work with hospitalized inpatients suffering from major psychiatric disorders (affective disorders, schizophrenia, and organic mental disorders). Special emphasis is placed on diagnosis and formulation of treatment plan. In addition, the student will be exposed to those treatment modalities not provided as an outpatient. This would include electroconvulsive therapy (ECT). The student also will have an opportunity to be a part of a multidisciplinary approach to the diagnosis and treatment of inpatient population.

MPSY 8456 AW-Geriatric Psychiatry Student will work closely with a Board Certified Geriatric Psychiatrist to learn psychiatric diagnosis and treatment of geriatric patients in both an outpatient and inpatient setting.

MRAD 8451 AW-Radiology The student will observe and participate in all phases of radiological diagnosis to include fluoroscopy, plain film interpretation, special procedures, nuclear imaging, diagnostic ultrasound, and computed tomography where available. A radiological teaching file is provided for study purposes, and the student is expected to spend a portion of the time reviewing this file. Attendance at intra-departmental conferences is expected.

MSUR 8253 AW-Surgical Intensive Care This elective exposes the fourth year medical student to the most critically ill and injured surgery patients. The student will be an integral part of a team of residents from surgery, anesthesia and other departments, led by an attending specialized in intensive care medicine. Medical student will be assigned patients appropriate for their level of training and under direct supervision of the attending, will learn to thoroughly evaluate their overall condition, develop a management plan, and get experience in executing the plan including performing several bedside procedures. The student is expected to round twice a day with the attending and the team, attend daily multidisciplinary conference and take in house call once a week including one weekend day. The student is expected to participate in educational activities including ICU lectures, M&M and Ground Rounds within the Department of Surgery.

MSUR 8254 AW-Surgical Would Care This selective/elective is designed to provide basic and advanced clinical experience in the management of burn and wound patients to include critical care, burn and wound evaluations, and management. It will include the diagnosis and management of complex acute and chronic wounds as well as nutrition support for critically ill or injured patients. The student will learn basic and advanced techniques in wound healing. They will have the opportunity to become experienced with writing total parenteral nutrition orders as well as decisions using enteral nutrition for nutritional support. The course experience is structured to be of value to students interested in both primary care as well as surgical specialties.

MSUR 8351 AW-General Surgery Sub-Internship The student will serve as an extern on the surgical service and participate in the care of surgical patients in the emergency room, surgical wards, operating room, and clinic. Pre- and post-operative care and the management of patients in the Surgical Intensive Care units will be stressed. Assignments to selected clinical faculty preceptors are also available. Students will take in-house call.

MSUR 8353 AW-Neurological Surgery Sub-I The Neurological Surgery Sub-I offers fourth year medical students with a strong interest in the Neurological Surgery subspecialty, an opportunity to acquire and assimilate advanced clinical responsibilities at an intern level, by exposure to neurological patients in various clinical settings: inpatient, outpatient, and operating room. This four-week elective rotation will. Provide an educational curriculum that emphasizes teaching of fundamental concepts of total patient care. The sub-intern will be assigned to a faculty mentor each week in order to learn and apply information for a variety of neurological disorders, based on the patient group for which he/she is responsible. This will assist in maximizing academic preparation for postgraduate clinical performance as an intern. The sub-intern will present lecture(s) specific for their team along with hospital rounds and take call at least once per week with the call day established by the neurosurgical staff and discuss ER cases to further enhance the sub-interns educational experience.

MSUR 8451 AW-Otolaryngology/Head/Neck Surgery This is an advanced experience in the management of patients with diseases of the ear, nose, and throat. This includes diseases of the airway, esophagus as well as head and neck cancer. Included are a series of lectures, rounds, and clinical experiences with a review of pathology. The course is of value to both a primary care physician as well as a student interested in a career as a surgeon.

MSUR 8452 AW-Pediatric Surgery The student will be permitted to review and participate in the care of surgical diseases of infants and children, including the operative management of premature infants with congenital defects, pre-/postoperative care in the neonatal unit, Pediatric Intensive Care Unit, and diagnostic radiology in acute pediatric surgical disease. The student will be introduced to the delicate techniques and manipulative skills necessary in the care of these patients.

MSUR 8453 AW-Plastic Surgery The elective is designed to acquaint the student with the basic principles of plastic and reconstructive surgery including burns, cosmetic surgery, and trauma to extremities. Also included is an introduction to the principles of microsurgery. The student observes as well as participates in the pre-, post-operative and follow-up or such patients.

MSUR 8455 AW-Urology This elective is an advanced experience in the management of disorders of the urinary tract and is designed to provide the student with an understanding of the principles of urological diagnosis and treatment. Included with this elective are a series of lectures, ward rounds, operating room and clinical experiences with a review of pathology. The course is of value to both a primary care physician as well as a student interested in a career as an urologist.

MSUR 8456 AW-Vascular Surgery This elective exposes the medical student to patients with diseases of the vascular system including peripheral arterial occlusive disease, carotid stenosis, diseases of the venous and lymphatic system. The student will gain advanced knowledge of the pathophysiology of these diseases and the workup and management. The student will learn to evaluate these patients clinically, using non-invasive tests such as Duplex and invasive evaluation including angiography. The student will see and take care of vascular patients and this includes initial evaluation, management plan and participating in the treatment endovascular or operative. The student will follow these patients postoperatively in the intensive care until discharged.

MSUR 8457 AW-Neurosurgery This elective is designed to expose the students to the specialty of neurosurgery. The student will be exposed to both outpatient and inpatient care. During this rotation the student will have the opportunity to participate in the management of patients with various neurosurgical diseases including brain tumors, aneurysms, and disorders of the spine. The student will also have strong exposure to neurosurgical trauma including operative management of intracranial bleedings and management of increased intracranial pressure. The student will actively participate in the patient's care pre-, intra- and postoperatively and make daily rounds with the neurosurgery service both on the floor and in the intensive care.

MSUR 8458 AW-Surgical Oncology By direct involvement in the clinical practice, the 4th year student will be exposed to cancer patients at all stages of presentation, during treatment and surveillance, and at relapse and or with advanced disease. A series of didactic lectures regarding basic principles in oncology, screening recommendations, and clinical and pathologic staging supplements the office and bedside evaluation of cancer patients so that the objectives of understanding adult cancer issues as listed above can be met. Patients are referred to the surgical oncology division and will be evaluated by the 4th year student in the presence of the surgical oncology division Faculty. Thorough history evaluation, review of previously obtained imaging studies and laboratory results, and review of previously obtained pathology slides will be incorporated into a general discussion for that particular patient's cancer or tumor. The 4th year student will be directly involved in patient discussions regarding evaluation and treatment. There will be a continuity of care inasmuch as pathology slides are reviewed, ordered imaging studies are reviewed and applied to ongoing or definitive decision-making, and the 4th year student will have the opportunity to evaluate patients on the hospital wards and during return visits to the clinical office practice. The close shadowing relationship with division of surgical oncology Faculty allows for a comprehensive experience and continuity. The 4th year student will be present during office practice hours on specific days including Monday afternoon at the VA Medical Center, Tuesday morning at the Texas Tech Office Practice, and Thursday afternoon at the Texas Tech Office.

MSUR 8459 AW-Female Breast Disease and Treatment This elective is designed to expose the 4th year medical student to and educate him/her in all aspects of female breast disease. The student will participate in the outpatient clinics evaluating patients and participate in the diagnosis and treatment of benign and malignant disease. The student will assist on breast biopsies in the outpatient clinic and will assist at hospital operative procedures. The student will spend time with the medical oncologist in the outpatient setting and at the Infusion Center. The student will also spend time at the Breast Imaging Center assisting with mammography and ultrasound.

MSUR 8466 AW-Neurological ICU This rotation exposes the fourth-year medical student to the most critically ill patients with neurological pathology. The student will be an integral part of a team from neurosurgery, anesthesia, and other departments, led by an attending physician. Medical students will be assigned patients appropriate for their level of training. The students will learn to thoroughly evaluate the overall condition of the patient and develop and implement a management plan. The students will become familiar with common neurological conditions including vascular pathology and hemorrhage, closed and open head trauma, and increased intracranial pressure, as well as neuro-oncology and management of intracranial pressure monitors and external ventricular drains. Additionally, the student will become familiar with common ICU management practices including central lines, arterial lines, and ventilator management. The student will be expected to round daily with the attending and the team. The student may participate in additional educational activities within the Departments of Surgery including ICU lectures, Morbidity and Mortality conferences and Grand Rounds.

MSUR 8467 AW-Neurological Surgery Sub Internship Elective The Neurological Surgery Sub-I elective offers fourth year medical students with a strong interest in the Neurological Surgery subspecialty, an opportunity to acquire and assimilate advanced clinical responsibilities at an intern level, by exposure to neurological patients in various settings: inpatient, outpatient and operating room. This four-week elective rotation will provide an educational curriculum that emphasizes teaching of fundamental concepts of total patient care. The sub-intern will be assigned to a faculty mentor.

FMAT Courses

FMAT Program for TTUHSC School of Medicine

TTUHSC School of Medicine received approval in Spring 2010 for the establishment of a new accelerated educational program named the Family Medicine Accelerated Track (FMAT). This accelerated educational program was developed in recognition of the need to train more physicians who will practice in the major primary care field of Family Medicine. Up to 10 students per year will participate in this program. The major modifications in this program include additional coursework in the summer during Phase 1, a longitudinal Family Medicine Clerkship in their second year and an advanced Family Medicine experience at the end of Phase 2 that covers material normally presented in the advanced clinical training component (Phase 3) of the standard curriculum.

Blocks and Clerkships	Credit Hours	Weeks
Phase 1		
Anatomy, Histology, and Embryology (Fall)	10	10
General Principles (Fall)	8	8
Organ Systems 1 (Spring)	10	10
Organ Systems 2 (Spring)	9	9
Patients, Physicians and Populations 1 (Fall & Spring, MS1)	4	3
Introduction to Clinical Medicine 1 (Fall & Spring, M1)	3	0
FMAT 1 (Summer)	8	8
Organ Systems 3 (Fall)	7	7
Organ Systems 4 (Fall)	12	13
Organ Systems 5 (Spring)	8	8
Step 1 Enhancement	4	7
Patients, Physicians and Populations 2 (Fall & Spring, M2)	3	2
Family Medicine Clerkship/FMAT 2 (Fall & Spring)	12	(12)
Phase 2 (Required Clerkships)		
Internal Medicine	8	8
Surgery	8	8
Obstetrics & Gynecology	8	8
Pediatrics	8	8
Psychiatry	8	8

FMAT 3	16	16
Integration Seminar - Student Grand Rounds	0	0
Total for FMAT	154	141

FMAT Courses Course Descriptions

FMAT 6201 (Lubbock HSC) Family Medicine Accelerated Track 1 (The Science of Family Medicine) This 8-week concentrated course will be taken during the summer between Year 1 and Year 2 under the supervision of Family Medicine faculty. This course will prepare students to begin the Longitudinal Family Medicine Clerkship during Year 2. Students in the regular curriculum take four integrated blocks in Year 2 that cover areas of neurobiology and pathophysiology of human disease. The FMAT 1 course will cover topics from these courses that are particularly important for students during the Family Medicine Clerkship.

FMAT 6202 (Lubbock HSC) Family Medicine Accelerated Track 2 (Longitudinal Family Medicine Clerkship) This will be a longitudinal Family Medicine Clerkship that introduces students to the care of the undifferentiated ambulatory patient. Emphasis will be on clinical problem-solving, management of common problems, and prevention and health promotion. Learning objectives from DOCS-2 and the Geriatrics rotation will also be incorporated.

FMAT 7201 (Amarillo HSC, Covenant Branch HSC, Lubbock HSC, Odessa HSC) Family Medicine Accelerated Track 3 (Family Medicine Inpatient and Critical Care Experience) This 8-Week course takes place during May and June of the MS3 year. Experiences include ICU and critical care and Family Medicine inpatient service, with time available to take the Step2 CK exam. Students will participate in graduation activities in May but will not complete the course until the end of June, when they will participate in orientation for their residency program.

School of Medicine Faculty

Faculty Directory