



TEXAS TECH UNIVERSITY  
HEALTH SCIENCES CENTER  
School of Medicine™

*Course Catalog*  
2006 – 2007

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Lubbock, TX 79430

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Fax: (806) 743-2725  
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All inquiries regarding immunizations, graduation, student organizations/events, and orientation should be addressed to:

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

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Fax: (806) 743-4165  
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All inquiries regarding curriculum, advancements, and grades should be addressed to:

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# Administration

## Texas Tech University Health Sciences Center

### Board of Regents

Larry K. Anders  
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C. Robert “Bob” Black  
E. R. “Dick” Brooks  
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L. F. “Rick” Francis, Chair  
Mark Griffin  
J. Frank Miller, III, Vice Chair  
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Daniel “Dan” T. Serna  
Windy M. Sitton  
Bob L. Stafford, M.D.

### Texas Tech University Health Sciences Center

Kent Hance, Chancellor  
Bernhard T. Mittermeyer, M.D., Interim President for the Health Sciences Center  
Vacant., Vice President for Clinical Affairs  
Patti Patterson, M.D., Vice President for Rural and Community Health  
German Nunez, Vice President for Diversity and Multicultural Programs  
Roderick Nairn, Ph.D., Vice President for Academic Affairs  
Rial Rolfe, Ph.D., Associate Vice President for Academic Affairs

### TTUHSC Presidents

Grover Elmer Murray (1966-1976)  
Maurice Cecil Mackey (1976-1979)  
Lauro Fred Cavazos (1980-1988)  
Robert Lawless (1988-1996)  
David Smith (1996-2002)  
M. Roy Wilson (2003-2006)  
Bernhard T. Mittermeyer -Interim (2006-Present)

## Texas Tech University Health Sciences Center

### **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 strategic 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 TTUSHC as an efficient and effective institution

### **Vision**

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

## Historical and System Information

### 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 five schools in the Health Sciences Center. The other four being the Schools of Nursing, Allied Health Sciences, Pharmacy, and the Graduate School of Biomedical Sciences. All five 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, 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 2005. 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 497 with 46 part time faculty and 909 volunteer faculty.

The goal of populating West Texas with physicians is currently being achieved with 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 the 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.

### 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.

## **El Paso Campus**

In 1973, El Paso became a vital regional center for Texas Tech University Health Sciences Center. Often referred to as Texas Tech El Paso, its clinical sites are provided at R. E. Thomason General Hospital, William Beaumont U.S. Army Medical Center, Providence Hospital, El Paso Psychiatric Center, and various primary care clinics dispersed throughout the city.

## **Odessa Campus**

The Odessa campus was established in 1979 and currently 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 Pediatrics. 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, the class is divided with approximately 35 to 40 students in Amarillo, 45 to 50 students in Lubbock, and 60 to 65 students in El Paso. The campus at Odessa provides only graduate training and certain undergraduate elective experiences.

Assignments to the regional campuses are based to the extent possible on the expressions of student preference obtained prior to entry into the first year. There is a possibility for change in assignment for due cause. At the beginning of the first year, there is an active orientation program that includes a day spent 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 diversity of experience in community hospitals and in the School of Medicine's own 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 examinations, 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, Internal Medicine, Obstetrics & Gynecology, Ophthalmology, Orthopaedic Surgery, Pathology, Pediatrics, Psychiatry, and Surgery. The sub-specialty programs



(fellowships) include Pain Management, Cardiology, Dermatopathology, Gastroenterology, Nephrology, and Pain Management.

For the latest detailed information on Texas Tech University Health Sciences Center residency programs, visit: <http://www.ttuhsoc.edu/som/gme>

## **The Future at TTUHSC**

In mid-2004, the Texas Tech University Health Sciences Center broke ground on a new clinical building that will house all of the current clinics in the main HSC building. This will greatly enhance the capabilities of the primary health care professionals of the HSC.

Currently, the plan is for the regional El Paso campus to become a 4-year medical school beginning in the fall of 2009. This will be a separate school, but will remain as part of the Texas Tech University Health Sciences Center. Concurrently, the Texas Tech Odessa campus is being considered to replace El Paso as an undergraduate regional campus and as such will receive a portion of the 3rd and 4th year medical students.

2006-2007

## School of Medicine Office of Admissions

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Associate Professor, Cell Biology and Biochemistry

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Location: 2B116  
Mail Stop: 6216  
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## 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 the adjacent counties of eastern New Mexico and southwestern Oklahoma that comprise the service area of the Health Sciences Center. Out-of-state residents will be considered on an individual basis. Only 10% of the class can be from out of state, so an applicant should have competitive academic credentials to apply (e.g. 3.6 overall GPA or higher and an MCAT score of 29 or higher). One hundred forty students are selected for each entering class. This total includes 8 M.D./M.B.A. students, and a handful of M.D./Ph.D., AAMC Early Decision, Joint Admission Medical Program, and Special Undergraduate Honors Agreement students. The Admissions Committee carefully examines each application for the personal qualities and proven academic ability to determine potential as an effective and competent physician. If all other qualifications are equal, some preference may be given to individuals with ties to the West Texas region. 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, motivation, maturity, personal integrity, and the ability to communicate effectively as traits of the consummate physician. 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, sex, age, ethnic origin, religion, sexual orientation or disability. 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. In 2003, the U.S. Supreme Court upheld the position maintained by applicants to the University of Michigan that race and national origin/ethnicity may be considered among other criteria for admission purposes in order to obtain diversity in its student body. *Grutter v. Bollinger*, 539 U.S. 306,327, 156 L. Ed. 2d 304 123 S. Ct. 2325 (2003).

Therefore, at Texas Tech University Health Sciences Center, the Admissions Committee considers such factors as race/ethnicity in addition to many other factors, including: first generation college graduate, multilingual proficiency, socio-economic background while attending elementary/secondary school,

responsibilities while attending school such as employment or assisting in the care of brother/sisters, community involvement as well as other life circumstances.

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 at Texas Tech. The Committee examines each applicant for overall suitability, and it makes an effort to select a class of 140 individuals with varied backgrounds, interests, and life experiences resulting in a 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. The completion of a baccalaureate degree, however, is highly desirable before entrance into medical school. Students applying without a baccalaureate degree are considered only if they have a significantly superior scholastic record and exhibit personal maturity.

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 challenge provided by course selection and gives preference to students with a broad educational background.

## Prerequisite Course Listing

Required Courses	Duration	Semester Hours
General Biology or Zoology	1 year	6
Biology or Zoology Labs		2
Upper division Biology or Zoology	1 year	6
General Chemistry	1 year	6
General Chemistry Labs		2
Organic Chemistry	1 year	6
Organic Chemistry Labs		2
Physics	1 year	6
Physics Labs		2
English	1 year	6
Statistics as offered by Math Dept. <i>OR</i> Calculus	½ 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.

## Official Admission Timeline Recommendations & Required Deadlines

Date	Classification	Description
<b>Year 1</b>		
Fall	Freshman	<ul style="list-style-type: none"> <li>• Focus on grades, take no more than 15 hours of coursework</li> <li>• Research and begin prerequisite courses: Chemistry, Biology, Physics, etc.</li> <li>• No MCAT preparation</li> <li>• Little or no health care exposure</li> <li>• Join a premedical organization or society</li> </ul>
Spring	Freshman	<ul style="list-style-type: none"> <li>• Focus on coursework, but begin weekly healthcare exposure</li> </ul>
Summer	Freshman/New Sophomore	<ul style="list-style-type: none"> <li>• Continue with coursework</li> <li>• Taking pre requisites during summer is not recommended</li> <li>• Focus on health care exposure</li> </ul>
<b>Year 2</b>		
Fall	Sophomore	<ul style="list-style-type: none"> <li>• Focus on academics, prerequisites</li> <li>• Continue healthcare exposure</li> <li>• Establish solid relationships with mentors, professors, MDs, or other supervisors that could write Letters of Evaluation</li> </ul>
Spring	Sophomore	<ul style="list-style-type: none"> <li>• Begin researching medical schools, fees, towns of the schools</li> <li>• Begin research into formal MCAT preparation courses</li> <li>• Continue to focus on academics, healthcare exposure</li> </ul>
Summer	Sophomore/New Junior	<ul style="list-style-type: none"> <li>• Explore possible research opportunities, premedical academies, or other scientific internships</li> <li>• Take summer school courses if needed (not prerequisites)</li> <li>• Focus on healthcare exposure if no internship presents itself</li> </ul>

Date	Classification	Description
<b>Year 3</b>		
Fall	Junior	<ul style="list-style-type: none"> <li>• Begin composing of personal statement for medical school application</li> <li>• Approach prospective letter of evaluation writers and seek feedback on performance under their supervision</li> <li>• Revisit degree plan to make sure nothing is missed</li> <li>• Sit down with pre-medical advisor to confirm status, receive guidance</li> <li>• Maintain good grades</li> <li>• Commence MCAT preparation (if Organic Chemistry I and Physics I have been completed)</li> <li>• Explore and prepare application for premedical academies</li> </ul>
Spring	Junior	<ul style="list-style-type: none"> <li>• Visit prospective medical schools</li> <li>• Continue preparations for summer camp applications</li> <li>• Prepare mentally, financially, logistically, for medical school application / interviewing season</li> <li>• Application for Texas State medical schools opens May 1</li> <li>• Early submission of application is recommended for prime interviewing opportunity</li> <li>• Remain active with premedical / service organizations</li> <li>• It is recommended that the spring administration of MCAT is taken</li> </ul>
Summer	Junior/Early Senior	<ul style="list-style-type: none"> <li>• Attend summer premedical camp / academy (if applicable)</li> <li>• Submit medical school applications, (main apps and secondaries)</li> <li>• Attend summer school to catch up with coursework (if applicable)</li> <li>• Texas medical school interviews typically begin early to mid-August</li> </ul>

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Date	Classification	Description
<b>Year 4</b>		
Fall	Senior	<ul style="list-style-type: none"><li>• Continue preparations for medical school interviews</li><li>• Maintain grades</li><li>• Continue with healthcare exposure</li></ul>
Spring	Senior	<ul style="list-style-type: none"><li>• Submit rank list of medical schools where interviewed. Due February 1</li><li>• “Match Day,” the day when students discover where they will be going to medical school is Feb. 15 (Note: non-residents, special programs acceptances begin October 1. Also, note that the TMDSAS medical schools begin rolling admission Nov. 15)</li><li>• Maintain grades and course schedule in order to graduate on time.</li><li>• (If not accepted) Sit down with premedical advisor and develop a plan as to improve application for next interview season. It is not recommended to wait to start doing this after mid-March.</li></ul>
Summer	NA	<ul style="list-style-type: none"><li>• (If Accepted) Travel, do some extracurricular activities</li><li>• Prepare to move to respective medical school</li><li>• Medical school classes begin early August</li></ul>

## Medical College Admission Test (MCAT)

Completion of the Medical College Admission Test (MCAT) within 3 years of application 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:

MCAT Program Office

P.O. Box 4056

Iowa City, IA 52243

(319) 337-1357

[mcat\\_reg@act.org](mailto:mcat_reg@act.org)

<http://www.aamc.org/students/mcat/start.htm>

## Application to TTUHSC SOM

In order for an applicants file to be reviewed for a prospective interview, all aspects to the application must be submitted, received, and processed by the Office of Admissions. This process can take 4-6 weeks if everything required is submitted at the same time to TMDSAS. (Remember: Texas Tech also has a secondary application which must be completed by all applicants.)

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

### Required Elements

Main, TMDSAS Application, Fees, Photos, and Signature page	Submitted electronically
TTUHSC SOM Secondary Application, \$50 application fee, signature page	Submitted electronically via Admissions Website
Letters of Evaluation	All letters declared by the applicant on the TMDSAS application must be received.
MCAT Scores	No more than 3 years old from the time of the application.
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.

2006-2007

## Application Timeline

The Fall of 2006 will see the beginning of a new application process for the Texas medical schools with the exception of Baylor School of Medicine.

### Entering Year 2007 - Medical School Application Dates

May 1	Applications become available; all medical school secondary applications become available
Early to Mid-June	Texas Tech HSC SOM receives first batch of submitted applications; file evaluations begin
Early August	Interview offers initiated; interviewing season begins at TTUHSC SOM
October 15	Application Deadline
November 15	Rolling Admissions Session begins; open acceptance period to applicants
December 31	Rolling Admissions Session ends; interviewing season at TTUHSC SOM ends
January 15	Deadline for applicants holding multiple seats to declare desired school
February 1	Deadline for applicant preferences and school rank lists even if accepted by school(s) during the rolling admission period
February 15	Texas Medical School Match Day; all remaining applicants learn about matching to a medical school or not
February 16	Rolling Admissions Session 2 begins; alternate list formulated at TTUHSC SOM
Mid August	Rolling Admissions Session 2 ends as the first year medical student class orientation begins; previous admissions season is official concluded.



### **Texas Medical & Dental Schools Application Service (TMDSAS)**

Applications will be available beginning May 1 of the year of application and are due no later than October 15. This deadline includes all supporting documents as well. (Letters of evaluation, transcripts, etc.) The main application can be accessed and submitted on the web from the Texas Medical and Dental Schools Application Service (TMDSAS). The TMDSAS application fee should be mailed to the Application Service office. In addition, official transcripts and letters of recommendation should be sent to the Application Service office. TMDSAS also requires other logistical elements to be submitted. Please visit the TMDSAS website to learn more.

The Texas State application and more information on general requirements is available at the following URL:

Main application: <http://www.utsystem.edu/tmdsas>

### **TTUHSC School of Medicine Secondary Application**

TTUHSC School of Medicine also requires a Secondary Application. This application can be accessed and submitted on the web and the application fee is sent to the Office of Admissions of Texas Tech University HSC School of Medicine. For up-to-date information on the application process and fees, consult the web addresses indicated below. Each application must be submitted with a signature page and a \$50 application fee.

Secondary application: <http://www.ttuhsoc.edu/som/admissions>

*Note: There is a \$50 application fee. Please make check payable to: TTUHSC SOM Admissions*

### **File Evaluation & Interview (June 1 – December 31)**

Each completed application will be reviewed by Admissions Officers and personal interviews will be offered to those students deemed most competitive for admission. All interviews are conducted at the Lubbock or El Paso campuses.

On the day of the interview, there is also an opportunity to tour the medical school, talk with students, and sit in on classes if desired. Each applicant, who has been sent an interview invitation, and is applying through the regular MD program, is given two (2), 30 minute interviews. M.D./M.B.A. and M.D./Ph.D. invited applicants are given three (3) interviews, two (2) for the medical school, and one (1) from the Texas Tech University Rawls College of Business OR the TTUHSC Graduate School of Biomedical Sciences (GSBS), respectively.

After the interviews, the Admissions Committee considers the applicant's overall academic record, grade trends, healthcare exposure, extracurricular activities, MCAT results, pre-professional evaluations, impressions of interviewers, and any other pertinent information. Any applicant who is offered an acceptance to medical school has two weeks in which to accept or decline the offer in writing.

### **Rolling Admissions Session (November 15 – December 31)**

For the first time, in the Fall of 2006, the Texas medical schools will be entering a dual rolling admissions / match system. During this 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. Texas Tech University HSC School of Medicine will be very proactive about recruiting desired applicants during this period.

On December 31, the rolling admissions process is suspended. All applicants holding multiple acceptances must formally decide on the medical school they plan to attend no later than January 15th. These applicants must also formally withdraw from any other TMDSAS medical schools where they had an offer (withdraw notification, in writing.)

### **The Texas Match** ***(February 1 – February 15)***

Texas Tech University HSC School of Medicine participates in the match with the other Texas Schools listed on the application form. The Match system in which Texas Tech University HSC has participated since 1999 will continue to exist, but in a slightly different timeframe. All interviewed applicants whether they have been accepted to a Texas medical school (TMDSAS) during the Rolling Admission Session or not will enter 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 on February 1. “Match Day”, the day where interviewed applicants find out about their status, will be February 15. Results of the Match will be listed on the web (at TMDSAS & TTUHSC SOM) and acceptance letters mailed February 15.

The actual match works as follows:

Each interviewed applicant will rank his/her preference of schools via the web at the TMDSAS website. The preference list may be submitted and the rank order may be changed at any time until the deadline date on February 1. The last preference submitted prior to the deadline date will be used in the matching process.

- Interviewed applicants must submit at least one preference ranking to TMDSAS.
- Each medical school will also submit a list of interviewed applicants ranked in order of acceptability on the basis of factors considered in the selection process by TTUHSC SOM.
- The final preference from each applicant and the ranked lists from the respective schools are entered into a computer database. The database matches the applicant with the highest choice medical school that ranked the applicant high enough to be selected.
- Applications are automatically withdrawn from all schools with a lower applicant preference than the school to which the applicant is matched.
- Applications will remain active to all schools with a higher applicant preference for possible acceptance later if the applicant is placed on the school’s alternate list.
- For more information on the Texas State Match, please visit the TMDSAS website.

### **Development of Alternate List (TTUHSC)** ***(February 16 – Mid-August)***

Sometime after the Match, the Director and Associate Dean of Admissions, in consultation with the Dean of the School of Medicine, will formulate an official “alternate list” from interviewed applicants that remain available even after the rolling admission session, and after the February 15th match. In the event an accepted applicant gives up his/her seat in the class, a replacement will be selected from the alternate list. This process is generally intermittent and unpredictable. The applicants selected for the alternate list

are not placed in a rank order. Applicants may be selected from the alternate list up until the beginning of orientation at TTUHSC SOM.

## Matriculation Policies

### Background Check

In order to provide a safe environment for patients, visitors, faculty, employees and students at TTUHSC, criminal background checks will be instituted as of September 1, 2006. Compliance with this policy will be required of all Entering Year 2007 applicants. Criminal background checks (CBSs) 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 SOM, all prospective matriculants will submit a background check, through a prescribed vendor, to the TTUHSC Office of the Registrar. Refusal to complete the self-disclosure/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 consent forms, 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 or withdrawal/revocation of acceptance/admission will be made by the School of Medicine.

### Admissions Policies for Non-Residents of Texas

As of the Entering Year 2006, all non-resident applicants to the participating TMDSAS Texas schools were removed from the Match. Acceptance of non-resident, interviewed applicants begins October 15th.

Texas Tech University HSC School of Medicine is a Texas state school and is required by law to have 90% of the entering class made up of qualified Texas residents.

### Determining Texas Residency

Applicants to TTUHSC SOM 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 will 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.)

- a. The residency of the parent who has custody at the time of application if parents are divorced;
- b. 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
- c. 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:

- a. 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.
- b. 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.

## **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 a Residency Questionnaire form, which provides more detailed background information than is available from the admission application.

The Residency Questionnaire can be obtained via the TMSAS website:

<http://www.utsystem.edu/tmsas>

## Immunizations & Health Insurance

The Associate 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 student must be compliant with the school's immunization requirements in order to register for classes.**

Requirements:

- **Tetanus/Diphtheria:** Primary series of Tetanus immunizations, plus Tetanus/Diphtheria booster within ten (10) years of matriculation.
- **Measles (Rubeola):** Proof of immunity as determined by serologic titer.
- **Varicella (Chicken Pox):** Proof of immunity as determined by serologic titer.
- **Mumps:** Proof of immunity as determined by serologic titer *OR* physician-documented disease *OR* vaccination.
- **Tuberculosis:** PPD (TB skin test) within twelve (12) months of matriculation. If you have ever tested positive, you must provide results of a chest x-ray.
- **Polio:** Basic series of oral or inactivated polio immunization.
- **Hepatitis B:** Series of three (3); initial dose, second dose one (1) month after initial, third dose five (5) months after second dose *OR* serologic proof of immunity after Hepatitis B infection. The third dose must be received no later than December 1 of the entering semester. Students who decline to be vaccinated will be required to sign a formal waiver at orientation.

**Student are expected to have hospitalization insurance coverage for each semester enrolled. Students should be prepared to provide proof of coverage at the time of registration.**

TTUHSC will make available information on student health insurance providers for all registered students in the University. Student may investigate other insurance plans. Insurance packets are available in the TTUHSC Office of Student Services.

## 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 October 1 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 Texas Tech School of Medicine prior to October and commits to matriculate at Tech if the position is offered. Applicants will be notified of the Committee's decision on or before October 1. If an individual is not accepted under the Early Decision Program plan, that applicant will still be considered in the regular applicant pool at Tech and may also then apply to any other medical schools.

### **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 request will be considered 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 make application 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: [http://www.ttuhschool.edu/som/admissions/adv\\_admiss.aspx](http://www.ttuhschool.edu/som/admissions/adv_admiss.aspx)

Under very exceptional circumstances, applicants from related health care fields such as dentistry or veterinary medicine and applicants who have completed all requisite basic science courses as graduate students may be considered for acceptance into the appropriate level of medical school. In most cases, the applicant would be required to apply for a first year position regardless of degree held. If judged acceptable at interview, the candidate then could request the opportunity to demonstrate competence by taking final block examinations covering the areas of Anatomy, Biochemistry, Histology, Physiology, and Integrated Neurosciences. All of these would have to be passed at or above the class mean and would have to be completed by July 1 of the summer preceding possible entry. He/she could then be admitted to the second year curriculum. He/she would be required to take all courses of the second year curriculum with the understanding that failure of a single course in either semester could be a basis for dismissal. If the student passes all second year courses, he/she would be promoted to the third year as a "regular" student subject to the rules and regulations applicable to all other students.

All applicants for advanced standing must be bona fide 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).

## Other Degree Programs

### The MD/MBA Joint Degree Program

In this joint degree program, the student will receive both M.D. and M.B.A. degrees within the four years of medical school. The intent of this program is to produce outstanding physicians with additional insight into the intricacies of health care management systems, finance, economics and delivery. With this educational background, physicians will have an advanced business background to use as they develop medical practices or as they begin careers in management for major health care organizations.

In the program structure, students will complete the 51-hour M.B.A. program in four years, including the summers before and after the first-year medical school curriculum. Areas of study will include accounting, management strategy, business decision-making skills and methods, business information systems, as well as other core skills in the business curriculum. For a broader knowledge of the organizational context in which health care is provided, students will complete a four-course concentration in Health Organization Management (HOM) as part of the program.

The M.B.A. (HOM) program is accredited by the Accrediting Commission on Education for Health Services Administration (ACEHSA). This accreditation assures the prestige and enhances the value of M.D./M.B.A.

Enrollment for the combined M.D./M.B.A. program is limited to a maximum of eight (8) students per year.

Additional information may be obtained from:

Office of Admissions  
TTUHSC School of Medicine  
3601 4th Street, STOP 6216  
Lubbock, TX 79430  
Phone: (806) 743-2297  
Fax: (806) 742-2725

Health Organization Management  
M.B.A. & M.D./M.B.A. Program  
Texas Tech University  
Box 42101  
Lubbock, TX 79409-2101  
Phone: (806) 742-1236  
Fax: (806) 742-2308

Web: <http://www.ttuhsoc.edu/som/admissions/mba.aspx>

### The M.D./Ph.D. Combined Degree Program

For those students interested in pursuing a career in academic medicine as a physician-scientist, simultaneous enrollment in both the School of Medicine and Biomedical Graduate Program 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 in one of the School of Medicine's approved graduate programs. Accepted M.D./Ph.D. students will receive both stipend support and tuition (medical and graduate program) scholarships throughout the combined degree program. This program is designed to be completed in six to seven years and will provide the student with rigorous training in both clinical medicine and biomedical research. Students interested in this program should so indicate on the application forms they submit to both the TTUHSC School of Medicine and the Graduate School of Biomedical Sciences.

### M.D./Ph.D. Application Procedures

The student applies simultaneously to the School of Medicine and the Graduate School of Biomedical Sciences with a complete application to each school as determined by the schools' criteria. The student indicates on each application that he/she is applying for the M.D./Ph.D. program and includes a one-page statement on the goals and reasons for interest in the program.

## M.D./Ph.D. Admission

Students who have been admitted to the M.D./Ph.D. program begin graduate studies during the two summer sessions preceding their first year of admission into the medical school curriculum. During these summer sessions, 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.

## Acceptance Criteria for M.D./Ph.D. Program:

- MCAT 30
- GPA 3.5

## Enrollment Pattern

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

There is a requirement by the graduate school for applicants for its graduate programs to take the GRE. For MD/PhD applicants, this has been waived in lieu of the MCAT. Further information about M.D./Ph.D. programs and other graduate programs offered through the Health Sciences Center Graduate School of Biomedical Sciences may be obtained by contacting:

The Graduate School of Biomedical Sciences  
 Texas Tech University Health Sciences Center  
 Mail Stop 6206  
 Lubbock, TX 79430  
 Phone: (806) 743-2556 or 1-800-528-5391  
 Fax: (806) 743-2656  
 E-mail: [graduate.school@ttuhsc.edu](mailto:graduate.school@ttuhsc.edu)  
 Web: <http://www.ttuhsc.edu/gsbs/>

Programs are subject to change, depending on availability of resources and educational goals.

Additional information may be obtained from:

Office of Admissions  
 TTUHSC School of Medicine  
 3601 4th Street, STOP 6216  
 Lubbock, TX 79430  
 Phone: (806) 743-2297  
 Fax: (806) 742-2725

Graduate School of Biomedical Sciences  
 TTUHSC  
 3601 4<sup>th</sup> Street, STOP 6211  
 Lubbock, TX 79430  
 Phone: (806) 743-2556  
 Fax: (806) 743-2656

Web: <http://www.ttuhsc.edu/gsbs/prospective>  
<http://www.ttuhsc.edu/gsbs/academics/mdphdprogram.aspx>



## **Research Honors Program**

This program has been established to provide the 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.

## **Special Programs (Undergraduate)**

### **Summer Premedical Academy (SPA)**

The SPA is primarily for MCAT preparation, but also provides prospective medical students with aid in all aspects of the medical school application process including, shadowing of physicians, oral/written communication courses. The training also includes extensive admissions counseling, participation in summer community events, dinners and with motivational speakers. The program is designed for prospective students that are interested in premedical training in a strict, regimented environment. The program duration is 6 weeks, going from late May to the first week of July. Students live on the Texas Tech University undergraduate campus for the duration. All students are mentored by medical students that have completed their first year of training. The major benefit to the program is the fact that all of the training is free if accepted. The application opens November 1 each year for the next year's summer session. All room and board is paid. For more details on the application period, process, and the application itself, please visit the website:

<http://www.ttuhsoc.edu/som/admissions/spa.aspx>

### **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 as undergraduate students and desire entrance to the TTUHSC SOM. 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 be a minimum of 6 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. 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 will be interviewed by TTUHSC SOM in the spring of their senior year in high school. If determined to be qualified, the student will be accepted by the medical school. For more details on the application period, process, and the application itself, please visit the website:

<http://www.ttuhsoc.edu/som/admissions/umsi.aspx>

### **Undergraduate Honors Agreements**

TTUHSC SOM has early acceptance agreements with the Honors Colleges/Programs of the following schools: Austin College, Texas Tech University, University of Texas at El Paso, and West Texas A&M. Students that have been accepted in the Honors Colleges at these respective schools and have met all the

prescribed requirements, are eligible to be accepted to medical school early. Prospective, qualified applicants are interviewed in the Fall of their Sophomore or Junior years, typically one or two full years earlier than the traditional applicant. If accepted, the student is guaranteed a seat in the medical school class at TTUHSC SOM and the MCAT requirement is waived. Please note that specific requirements may vary per participating school. Students interested should contact the respective Honors College for the detailed requirements. More information can also be found at:

[http://www.ttuhsoc.edu/som/admissions/spec\\_programs.aspx](http://www.ttuhsoc.edu/som/admissions/spec_programs.aspx)

## **Joint Admission Medical Program (JAMP)**

Texas Tech University HSC SOM participates in the state mandated Joint Admission Medical Program, or JAMP. This program is a Texas state-wide premedical academy designed for competitive students with aspirations of one day becoming physicians. This program was initiated by the Texas Senate Bill 940 of the 77th Texas Legislature. More specifically, it is designed to provide services which support and encourage highly qualified, economically disadvantaged students pursuing a medical education. Second, to award undergraduate and medical school scholarships to its students. Third, JAMP is to provide for the admission of its students who satisfy both academic and nonacademic requirements to at least one participating medical school in Texas. Essentially, JAMP students that maintain the requirements are guaranteed admission to a medical school. All medical schools in Texas currently participate in the program. Students selected for this program will receive mentoring from their respective undergraduate college or university and do a summer internship at one of the participating medical schools. The primary qualification for students eligibility for Pell Grant funding. For more information on the JAMP program, please visit:

<http://www.utsystem.edu/jamp>

AND/OR the TTUHSC SOM Office of Admissions site:

<http://www.ttuhsoc.edu/som/admissions/jamp.aspx>

## **Dr. Bernard H. Harris Premedical Society (DHPS)**

Started in 1998, by undergraduate premedical students and sanctioned by the TTUHSC SOM Office of Admissions, the Bernard H. Harris Premedical Society is a premedical society designed to do the following:

- Provide prospective students with the pertinent admissions information from the various medical schools in Texas.
- Provide close advising by the TTUHSC SOM Office of Admissions.
- Provide healthcare / volunteer opportunities for its members, essentially aiding the prospective student in the essential, non-academic areas of the medical school application.

All Texas Tech students are eligible for this student organization. Meetings are typically held monthly on the Texas Tech University main campus. For more information on DHPS, please visit the website:

<http://student.ttuhsoc.edu/BHPS>

# Statistical View of Medical Student Admissions

## Official Admissions Applicant vs. Matriculant Detail Descriptive Statistics 2005

2006 Change		Criteria	Applicants		Interviewees		Matriculants	
App	Mat							
		Average MCAT VR	8.59	SD: 2.02	9.50	SD: 1.67	9.50	SD: 1.62
		Average MCAT PS	8.59	SD: 2.04	9.56	SD: 1.69	9.39	SD: 1.53
		Average MCAT BS	9.11	SD: 1.89	10.10	SD: 1.40	10.02	SD: 1.83
		Average Composite MCAT	26.30	SD: 4.90	29.16	SD: 3.39	28.90	SD: 2.92
		Average Overall GPA	3.46	SD: 0.35	3.64	SD: 0.29	3.59	SD: 0.27
		Average Science GPA	3.36	SD: 0.42	3.57	SD: 0.34	3.52	SD: 0.33
Average SAT			1228.00		1279.24		1260.50	
Average ACT			26.23		27.43		27.70	
Average Age			24.39		22.69		24.11	
Highest MCAT VR			15		14		13	
Highest MCAT PS			15		15		13	
Highest MCAT BS			15		14		13	
Highest Composite MCAT			41		40		36	
Highest Overall GPA			4.0		4.0		4.0	
Highest Science GPA			4.0		4.0		4.0	
Highest SAT			1600		1600		1550	
Highest ACT			36		35		32	
Highest Age			53		41		41	
Lowest MCAT VR			1		5		6	
Lowest MCAT PS			3		4		6	
Lowest MCAT BS			2		4		7	
Lowest Composite MCAT			10		15		23	
Lowest Overall GPA			1.85		2.69		2.82	

2006 Change		Criteria	Applicants	Interviewees	Matriculants
App	Mat	Lowest Science GPA	1.50	2.55	2.62
		Lowest SAT	625	809	980
		Lowest ACT	12	17	19
		Lowest Age	19	19	20
Number of re-applicants			983, 34.42%		52, 36.90%
Number of imported deferrals			NA	NA	7, 4.96%
MCAT Aug. 05 Examinees			1158, 40.55%	185, 24.34%	36, 25.53%
"Disadvantaged"			1730, 60.57% 1: 917, 32.10%; 2: 466, 16.32%; 3: 347, 12.15% Avg: 1.01	416, 54.74% 1: 248, 59.62%; 2: 100, 13.16%; 3: 68, 8.95% Avg: 0.86	85, 60.28% 1: 44, 51.76%; 2: 26, 30.59%; 3: 15, 17.65% Avg:
AAMC Early Decision			10, 0.35%		6, 4.29%
MD/PhD			49, 1.72%		2, 1.43%
MD/MBA			176, 6.16%		8, 5.71%
Number of Texas Residents			2511, 89.92%	731, 96.18%	134, 95.71%
Totals to TTUHSC			2856	760	140 (Mats)

## TTUHSC SOM 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

## Official Admissions Applicant vs. Matriculant Chronology 1972 - 2006

Year	Applicants			Accepted				
	Male	Female	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

2006-2007

# School of Medicine

## Office of Student Affairs

Terry McMahon, M.D., Associate Dean for Educational Programs  
Professor, Neuropsychiatry

JoAnn Larsen, Ed.D., Assistant Dean for Student Affairs  
Tamara Lane, Student Affairs Manager  
Karen Turner, M.Ed., LPC, Student Affairs Manager/Academic Advisor

Location: 2B130  
Mail Stop: 6222  
Phone: 806-743-3005  
Fax: 806-743-4165  
Web: <http://www.ttuhschool.edu/som/StudentAffairs>

## Medical Student Affairs

### Mission Statement

The mission of the Office of Student Affairs and Medical Education 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 Texas Tech School of Medicine. The goal of each office is for every medical student to be successful and to develop professional skills and personal relationships that will last a lifetime. As student advocates, the Student Affairs staff work to ensure that the students' rights are protected and that all students are treated fairly.

### Code of Professional Conduct/Honor System

By registration in the School of Medicine, each student subscribes to the Code of Professional and Academic Conduct that was developed and approved conjointly by students and faculty. The code is compatible with the regulations of the University, but is designed expressly for the School of Medicine. 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 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 given 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.

The School of Medicine recognizes that certain disabilities can be accommodated without compromising the standards required by the school or the fundamental integrity of its curriculum. The school is committed to the development of innovative and creative ways of opening its curriculum to competitive and qualified disabled candidates.

## Background:

In 1979 the Association of American Medical Colleges (AAMC) convened a Special Advisory Panel on Technical Standards for Medical School Admission. The summary recommendations of that panel are:

- The medical education process, which focuses so largely on patients, differs markedly from postsecondary education in fields outside the health sciences.
- The primary responsibility for the selection of students and for the content of the curriculum rests with the medical school and its faculty.
- The M.D. degree is, and must remain, a broad and undifferentiated degree attesting to the acquisition of general knowledge in all fields of medicine and the basic skills requisite for the practice of medicine.
- The guidelines for the admission of students and for the education of students as set forth by the Liaison Committee on Medical Education (LCME) must continue to govern the decisions of medical school faculties.
- All students of medicine must possess those intellectual, ethical, physical, and emotional capabilities required to undertake the full curriculum and to achieve the levels of competence required by the faculty.
- Although certain disabilities or combinations of disabilities will prevent some candidates from meeting these minimum technical standards, individual schools should take all necessary steps to prevent discrimination against the disabled.

The 1979 report was based on the proposition that the educational objective of a medical school was to prepare undifferentiated students to enter graduate medical training, and that students admitted to a medical school should have the intellectual and physical powers to gain the knowledge, behaviors, and clinical abilities that they would need to pursue any pathway of graduate medical education. These assumptions took note of the increasing involvement with patients during medical training and reflected concern for the safe care that students must render.

## 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.

## **Standards for Accreditation of a Medical School:**

The following information is excerpted from the Functions and Structure of a Medical School published by the Liaison Committee on Medical Education. This body is a joint committee constituted by the American Medical Association and the Association of American Medical Colleges. The Liaison Committee is the official accrediting body for American and Canadian medical schools. A complete copy of the guidelines for accreditation may be found in the Office of Student Affairs.

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 in 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 physicians. 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 to devise 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, the medical school faculty are guided by LCME standards. 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 experience 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 consistently, quickly, and accurately to integrate all information received by whatever sense(s) 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. Observations 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, the clinical skills demanded of physicians, requires 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. In recent years, certain learning disabilities have been recognized as a subset of integrative patterns. The details for definition and diagnosis of learning disabilities are attached as an Appendix to these Standards for Curricular Completion.
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. Questions of breach of ethical conduct will be referred to the Student Affairs Committee for resolution under the Code of Professional and Academic Conduct.

In determining the minimum standards for completion of the medical school curriculum, the Texas Tech University Health Sciences Center School of Medicine recognizes that certain disabilities can be accommodated without compromising the standards required by the school or the fundamental integrity of the curriculum. The school is committed to development of innovative and creative ways of opening the curriculum to competitive and qualified disabled candidates. At the same time, the school recognizes the essential need to preserve the standards and integrity of curriculum requisite for the competent and effective physician. Since the treatment of patients is an essential part of the educational program, the health and safety of those patients must be protected at all costs. Therefore, it is not only reasonable but essential for good patient care to require minimum standards for the education of physicians.

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. Copies of the request and documentation will then be forwarded to the SOM Office of Student Affairs. The deadline for requests with supporting documentation is normally 30 days prior to the beginning of the first semester of enrollment. 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 Educational Programs, the Assistant Dean for Admissions and Student Affairs, the Student Affairs Committee, and ad hoc faculty 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 prior to the start of classes. For requests with documentation received prior to April 15, effort will be made to notify the student of the decision regarding their request prior to May 15.

The Faculty through the Grading and Promotions Policy (Section 4.1) 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 such a disability and 2.) a written request from the matriculant for such an accommodation based on that disability. As noted above, while students will be expected to complete the curriculum in four years, such as an accommodation 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.

In the area of learning disabilities, 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

(Steps I, II, and III) and that this process is an addition to and separate from any request for accommodation by the Texas Tech School of Medicine.

## Criteria for Diagnosis of Learning Disability

### Definition:

A learning disability (as defined by the Rehabilitation Services Administration, RSA PPD-85-1, 1985, p.2) is, “A disorder in one or more of the central nervous system processes involved in perceiving, understanding, and/or using concepts through verbal (spoken) or written language or nonverbal means.” The term learning disabilities is used to refer to a heterogeneous group of disorders characterized by significant difficulties in spelling, reading, expressing ideas in writing, or solving mathematical problems. They are presumed to be due to a dysfunction in the central nervous system and can occur across the life span. While difficulties with social and behavioral problems may co-exist with learning disabilities, they do not constitute a learning disability in themselves.

### Guidelines:

The Ad Hoc Committee on Learning Disabilities of the Association of American Medical Colleges (AAMC) has promulgated guidelines for the assessment of learning disabilities and these are used as a basis for the guidelines at TTUHSC School of Medicine.

#### A. Comprehensive Assessment

1. A comprehensive assessment must have been done within the last three years.
2. A qualified professional, e.g., a licensed psychologist, a learning disabilities diagnostician, an educational psychologist, with experience in assessing adults must conduct the assessment.
3. The assessment must address the areas of aptitude, achievement, and information processing.
4. The assessment must provide clear and specific evidence and identification of a learning disability. “Learning styles” and “learning differences” do not constitute a learning disability.
5. Information regarding vocational interests and aptitudes may be included.
6. Students are responsible for the costs of any and all testing done with regard to learning disabilities.
7. If the student has already matriculated and applies for accommodation, the student must be assessed by a professional approved by the institution.
8. The following tests are considered acceptable.
  - a. Aptitude. The Weschler Adult Intelligence Scale-Revised (WAIS-R) with subtest scores is preferred. Also acceptable are the Woodcock-Johnson Psychoeducational Battery-Revised and the Stanford-Binet Intelligence Scale- Fourth Edition.
  - b. Achievement. Levels of functioning in reading, mathematics, and written language are required. Acceptable instruments include:
    - Woodcock-Johnson Psychoeducational Battery-Revised Tests of Achievement.

- Stanford Test of Academic Skills (TASK).
- Scholastic Abilities Test of Adults.

Or specific achievement tests such as:

- Test of Written Language-2 (TOWL-2).
- Woodcock Reading Mastery Tests-Revised.
- Stanford Diagnostic Mathematics Test.

The Wide Range Achievement Test-Revised is not acceptable.

- c. Information Processing. Use of subtests from the WAIS-R or the Woodcock-Johnson Tests of Cognitive Ability to assess specific areas of information processing (e.g., short- and long-term memory, sequential memory, auditory and visual perception and processing, and processing speed) are acceptable.

9. All reports must contain the following information:

- The name, degree, title, address, and telephone number of the assessor;
- Information on the professional credential of the evaluator and the areas in which the individual specializes;
- The date of the assessment;
- The names and results of the tests (i.e., scores);
- The nature and effect of the learning disability;
- An appraisal of the student's academic strengths and weaknesses;
- Recommendations for strategies and accommodations.

10. Students who claim learning disability must review the guidelines with the professional who does the assessment.

11. The diagnosis for learning disability must confirm less than expected academic functioning as demonstrated by a converted score of 15 or more points less than a full scale IQ on individually administered standardized achievement tests.

12. A HISTORY OF SUBSTANTIAL LONG-TERM FUNCTIONAL IMPAIRMENT MUST BE PRESENT.

## B. Evaluation and 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 must be presented in writing to the Office of Student Affairs along with supporting documentation about the disability from an appropriate specialist and the proposed accommodation(s). Generally the deadline for requests with supporting documentation is 30 days prior to the beginning of the first semester of enrollment. 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 Educational Programs, the Assistant Dean for Admissions and Student Affairs, the Student Affairs Committee, and ad hoc faculty knowledgeable regarding the area of disability in question. 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 prior to the start of classes. For requests with documentation received prior to

April 15, effort will be made to notify the student of the decision regarding their request prior to May 15.

The student is responsible for any and all costs associated with the evaluation, including any additional testing that is found to be indicated after matriculation. If testing is indicated after matriculation, the student can be assessed by a professional of the student's choice whom the school shall also approve. Such approval will not be unreasonably withheld.

Accommodation by the National Board of Medical Examination for Steps I, II and III of the United States Medical Licensing Examination is an independent and additional process and must be pursued by the individual student when applying for the examinations.

All files and documentation regarding learning disabilities and accommodation will be kept confidential and in the Office of Student Affairs.

## **Procedure for Students with Disabilities**

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. An application for accommodation may be obtained from the TTUHSC Office of Student Services and must be presented in writing to the TTUHSC Office of Student Services along with supporting documentation about the disability from an appropriate specialist and the proposed accommodation(s). The deadline for requests with supporting documentation is normally 30 days prior to the beginning of the first semester of enrollment. 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 Educational Programs, the Associate Dean for Admissions and Minority Affairs, the Student Affairs Committee, and ad hoc faculty 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. An application that is subject to disapproval will be discussed with the ADA Compliance Office and the Office of General Counsel. If the request for accommodation is denied, the student will be notified in writing prior to the start of classes.

For requests with documentation received prior to April 15, effort will be made to notify the student of the decision regarding their request prior to May 15. The Application for Accommodation and supporting documentation will be sent to the ADA Compliance Officer for official record keeping.

In the area of learning disabilities, 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 (Steps I, II, and III) and that this process is in addition to and separate from any request for accommodation by the Texas Tech School of Medicine.

The School of Medicine has traditionally been noted for the open friendliness of its student body and faculty. The relatively small size of its classes makes for an enhanced ability to get acquainted with each other. Lubbock, Amarillo, and El Paso offer good quality of life for students and student families. In the first two years at Lubbock, the geographic relationship of the School of Medicine to the Texas Tech University campus provides a wealth of recreational and cultural experiences. Housing is easily available and relatively economical and the non-humid climate is an agreeable one. Thus, the unstructured "quality of student life" is generally a good one. There are a number of organizations and resources that are designed to facilitate the ability to enjoy and gain from the medical school experience.

## **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 as well as help students coordinate study groups.

Sometimes personal problems can have a deleterious effect on academic performance. Students can self-refer to the Health Sciences Center Program for Student Assistance for free counseling services.

## **Grading**

All blocks or clerkships in Years 1, 2, 3 and 4 are graded as Honors, 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 Subject Examinations in selected blocks or courses.

Third year clerkship grades are derived from several components, including clinical evaluations by attending faculty and residents, department examinations, and NBME Clinical Subject Exams. Fourth year grades are derived from evaluations by attending faculty and residents.

## **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 Grading and Promotions Committee that represents the faculty at large. The Grading and Promotions Committee is appointed by the Executive Committee of the Faculty Council and is charged with the responsibility to review and evaluate the academic and behavioral progress of each medical student enrolled at TTUHSC School of Medicine. It 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 that might adversely affect the students.

In general, students who receive a final grade of Fail will meet with the Grading and Promotions Committee to discuss their academic performance and possible actions by the committee. Possible actions include remediation, repetition of the year, or dismissal.

## **United States Medical Licensing Examination (USMLE)**

Students are required to take Step 1 of the USMLE prior to beginning the third year of the curriculum and must pass achieve a passing score before beginning any fourth year course work. Students must also pass the Step 2 Clinical Knowledge Exam and the Step 2 Clinical Skills Exam as requirements for graduation from the medical school curriculum.

# School of Medicine Office of Curriculum

Lynn Bickley, M.D., Associate Dean for Curriculum,  
Professor, Internal Medicine and Neuropsychiatry

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## Doctor of Medicine Program

### Institutional Educational Vision, Goals, and Objectives

#### **Vision:**

Graduates of the TTUHSC-SOM will be knowledgeable, competent, and compassionate clinicians who communicate and collaborate with patients and colleagues in a caring and professional fashion.

The curriculum that prepares these graduates will emphasize acquisition and application of medical knowledge, clinical skills, and professional behaviors. Multiple modalities of instruction which promote integration of basic and clinical science information, development of problem solving and clinical reasoning abilities, and development of life-long learning habits will be utilized.

The educators involved in the instruction of these graduates will be role models who reflect and emphasize professionalism in their teaching, science, clinical care of patients, and modes of communication with patients and colleagues.

#### **Goals:**

The goal of medical education at the Texas Tech University Health Sciences Center School of Medicine is to promote excellence in the clinical, scientific, and humanistic skills of our graduates and to instill the competence and compassion that distinguishes outstanding physicians. Our program is designed to graduate physicians who:

- Provide competent and humane medical care to individuals, families and the larger society based on the scientific and clinical principles of health and its promotion; of disease and its prevention and management; and of psychosocial factors influencing patients well being.
- Demonstrate competence in life-long learning including self-directed study of basic and clinical science, critical assessment of medical literature, and use of evidence-based medicine.



- Demonstrate proficiency in clinical assessment, namely the ability to obtain a patient’s history, to perform a comprehensive physical examination, and to assess and treat patients’ medical and emotional needs.
- Demonstrate proficiency in clinical reasoning, including identification of clinical problems using scientific methods, data collection, hypothesis formulation, and the retrieval, management, and appropriate use of biomedical information for decision-making.
- Demonstrate sensitivity to the diverse psychosocial and spiritual needs of their patients and communicate clearly, respectfully, and compassionately with their patients, their families and other health care professionals.
- Display the highest standards of professional integrity and exemplary behavior, including compassion, truthfulness, and ethical reasoning.

### Objectives:

The Texas Tech University Health Sciences Center School of Medicine has identified key objectives for our educational program relating to the knowledge, skills, behaviors, and attitudes for students acquiring the degree of Doctor of Medicine. Further, the TTUHSC SOM endorses the competencies in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice recognized by the Accreditation Council for Graduate Medical Education. Each block and clerkship 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 to ensure that the vision and goals are met.

- A. Knowledge: *The student will demonstrate an exemplary and contemporary fund of knowledge in basic and clinical sciences essential to the practice of medicine, to also include:*
- Scientific method and its application to problem solving in the basic and clinical sciences.
  - Analytical tools for data collection, quantitative analysis, critical reading and investigation, and evidence-based medicine, and their application to the clinical care of patients.
  - Definition of clinical problems and formulation of differential diagnosis, diagnostic investigation, clinical treatment and management by application of data from the clinical interview and clinical examination.
  - Organization of the health care delivery system and the professional, legal, and ethical expectations of physicians.
  - Principles of behavioral and social sciences as applied to family systems and their effect on patient health.
- B. Skills: *The student will demonstrate excellence in patient care, including the ability to:*
- Communicate effectively, both orally and in writing, with patients and their families, colleagues, and other health care professionals about clinical assessments and findings, diagnostic testing, and therapeutic interventions.
  - Conduct comprehensive and problem-specific physical examinations appropriate to the patients’ concerns, symptoms, and history.

- Integrate the patient interview and physical examination findings with medical knowledge to identify the clinical problems of patients, formulate differential diagnoses, and develop plans for treatment, diagnostic investigation, and management.
  - Utilize varied methods of self-directed learning and information technology to acquire information in the basic and clinical sciences needed for patient care.
  - Interpret laboratory results and diagnostic procedures.
  - Select and perform basic diagnostic and therapeutic procedures.
- C. **Behaviors:** *The student will model the professional behaviors of a skilled and competent physician, including:*
- Patient care based on evidence, skilled clinical reasoning, and the current state of medical art and science.
  - Patient care that is compassionate and empathic, particularly in settings involving pain management, substance abuse, mental health disorders, or terminal illness.
  - Sensitivity to the diverse factors affecting patients and their health care beliefs and needs, including age, gender, sexual orientation, religion, culture, income, and ethnicity.
  - Demeanor, speech, and appearance consistent with professional and community standards.
  - Dedication to the highest ethical standards governing physician-patient relationships, including privacy, confidentiality, and the fiduciary role of the physician and health care systems.
- D. **Attitudes:** *The student's attitude will exemplify the highest ethical standards, including:*
- Respect for each patient's unique needs and background and how they affect the patient's concerns, values, and health care decisions.
  - Recognition of the social nature of health care and respect for patients, other health care professionals, and administrative members of the health care systems.
  - Commitment to life-long learning as a hallmark of professional excellence throughout a physician's career.

## **Undergraduate Medical Education**

Texas Tech University 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 2005 our School launched a new curriculum beginning with the Class of 2009 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 (see p.16-17), 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 the 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, Dean Berk fully supports the offices charged with the SOM educational mission: the Office of Student Affairs and Educational Programs, 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 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 Years 1 and 2, the SOM has limited contact hours to ~22 per week and lecture hours to ~10 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 (LCME). The Liaison Committee on Medical Education represents the Association of American Medical Colleges (AAMC) and the American Medical Association (AMA) as the national accreditation body for medical schools. In May 2002 the Texas Tech University Health Sciences Center School of Medicine received a full seven year accreditation, the longest period of accreditation awarded to a medical school of high quality.

## Blocks & Clerkships for 2006 – 2007 Academic Year

<b>Blocks and Clerkships</b>	<b>Credit Hours</b>
<b>Year One</b>	
Clinically Oriented Anatomy (Fall)	9
Biology of Cells and Tissues (Fall)	9
Structure and Function of Major Organ Systems (Spring)	9
Host Defense (Spring)	9
Early Clinical Experience I (Fall & Spring)	9
<b>Year Two</b>	
General Principles and Integrated Neurosciences (Fall)	9
Multi-systems Disorders and Cancer (Fall)	9
Systems Disorders I (Spring)	9
Systems Disorders II and Life Span Issues (Spring)	9
Early Clinical Experience II (Fall & Spring)	9
<b>Year Three (Required Clerkships)</b>	
Internal Medicine	9
Surgery	9
Obstetrics & Gynecology	9
Pediatrics	9
Psychiatry	9
Family Medicine	9
<b>Year Four</b>	
Neurology	6
Electives (4 minimum)	24
Critical Care Selective	6
Ambulatory Care Selective	6
Sub-internship	6

**Texas Tech University Health Sciences Center  
School of Medicine  
Curriculum 2006 – 2007: TRANSITION YEAR I**

		Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
<b>Year 1</b>	Clinically Oriented Anatomy			Biology of Cells and Tissues			Structure & Function of Major Organ Systems		Host Defense				
	Early Clinical Experience I												
<b>Year 2</b>	General Principles & Integrated Neurosciences	Multisystem Disorders and Cancer			Systems Disorders I		Systems Disorders II and Life Span Issues						
	Early Clinical Experience II												
<b>Year 3</b>	Pediatrics		Internal Medicine		Family Medicine		Surgery		Psychiatry		Obstetrics/ Gynecology		
	<b>Year 4</b>	Required *	4-week rotation		4-week rotation		4-week rotation		4-week rotation		4-week rotation		4-week rotation
Subinternship		4-week rotation		4-week rotation		4-week rotation		4-week rotation		4-week rotation		4-week rotation	
Ambulatory	4-week rotation		4-week rotation		4-week rotation		4-week rotation		4-week rotation		4-week rotation		
Critical Care / ER	4-week rotation		4-week rotation		4-week rotation		4-week rotation		4-week rotation		4-week rotation		
Neuropsychiatry	4-week rotation		4-week rotation		4-week rotation		4-week rotation		4-week rotation		4-week rotation		
Electives **	4-week rotation		4-week rotation		4-week rotation		4-week rotation		4-week rotation		4-week rotation		
		* 4 X 4 weeks each ** 3 X 4 weeks each; 2 X 2 weeks each											
The Curriculum for 2006 – 2007 shows the blending of the new curriculum in Years 1 & 2 with our transition curriculum for Years 3 & 4													
08/03/2006													

## Year 1

The first year is divided into four interdisciplinary blocks: Clinical Oriented Anatomy, Biology of Cells, Structure and Function of Major Organ systems, and Host Defense. Running continually throughout this year is the longitudinal block, Early Clinical Experience I, which introduces students to skills for patient assessment. More specifically, these five equally weighted elements have the following objectives:

Block Number	Name/General Description
MSCI 5030-001	<p><b>Structure and Function of Major Organ Systems</b></p> <p>This block, in Weeks 23-34, covers structural and functional aspects of the cardiovascular, respiratory, renal/urinary, gastrointestinal, endocrine, and reproductive systems, integrating structure with function at the gross, cellular and molecular levels. A two week segment devoted to nutritional concepts and their clinical application accompanies the discussion of the structure function of the gastrointestinal system.</p>
MSCI 5040-001	<p><b>Host Defense</b></p> <p>This block, which occupies weeks 35-41, covers the structural and functional aspects of the immune system, integrating structure with function at the tissue, cellular and molecular levels; and examines the pathogenic microorganisms that invade humans. The mechanisms by which these microorganisms cause disease and the specific immune responses that develop to eliminate the microorganisms are emphasized</p>

Block Number	Name/General Description
MSCI 5060-001	<p><b>Clinically Oriented Anatomy</b>            This block, consisting of Weeks 1-11, provides students with the foundation in anatomy and embryology necessary for success in the remainder of the curriculum and introduces students to applications of anatomy to the practice of medicine. It includes the traditional content and concepts of gross and developmental anatomy presented in a clinical context, coordinated with introductions to case based presentations and panel discussions with physicians.</p>
MSCI 5070-001	<p><b>Biology of Cells and Tissues</b>            This block, in Weeks 12-22, includes the structure and function of cells and tissues and an introduction to genetics. The segment concerning cells and tissues includes contributions from the traditional disciplines of biochemistry, histology, physiology and pathology and is organized in a progression from molecules to cells to tissues. The segment on genetics begins with an introduction to classical genetics and proceeds to the concepts and clinical applications of recombinant DNA technology. The segment concludes with the genetic aspects of neoplasia.</p>
MSCI 5080-001	<p><b>Early Clinical Experience I</b>            This block, which begins in week 1 and extends throughout Years 1 and 2, provides the framework for students to learn the fundamental skills of patient assessment. The students in groups of four are assigned to Master Teachers to learn history taking and physical examination. Students grow accustomed to clinical care, its varied settings, and the operations of the health care team. They also master specific skills and learn the essentials of patient care from these first patient exposures.</p>

In Year 1 an elective in medical Spanish is also available. Between Years 1 and 2 there are also opportunities for clinical or research experiences.

## Year 2

Year 2 features an interdisciplinary organ-based systems approach, combining principles and content from microbiology, pathology, neurosciences, and clinical medicine including: General Principles and Integrated Neurosciences, Multisystem Disorders and Cancer, Systems Disorders I, and Systems Disorders II and Life Span Issues. Running continually throughout this year is Early Clinical Experience II, where students continue their training in clinical care in practicing physician offices.

Block Number	Name/General Description
MSCI 6010-001	<b>General Principles and Integrated Neurosciences:</b> This block covers Year 2 Weeks 1-12 and begins with a two-week overview of population health, cytogenetics, and principles of pharmacology. This is followed by a comprehensive six-week segment on the central nervous system that integrates microscopic structure, neuroanatomy, and neurological systems with both normal function and clinical signs and symptoms. The block ends with a segment covering neuropharmacology, neuropathology, and the etiology (biological and psychosocial factors), signs, and symptoms of various neuropsychiatric disorders.
MSCI 6020-001	<b>Multisystem Disorders and Cancer:</b> This 7-week block in Weeks 13-19 begins with 2 weeks of review of organisms that cause infectious diseases with emphasis on the drugs used to treat these diseases and the pharmacology of these drugs; epidemiologic issues are also covered. A section on forensic pathology is followed by three weeks focusing on disorders/diseases affecting the “whole body” systems – musculoskeletal, hematopoietic, and lymphoreticular –in the context of pathophysiology, diagnosis, treatment, and pharmacology of the agents used to treat these diseases. The block concludes with a week on general principles of oncology and antineoplastic agents.
MSCI 6030-001	<b>System Disorders I:</b> This block, Weeks 22-30, covers cardiovascular, pulmonary, renal, gastrointestinal, and hepatobiliary systems with complete integration of pathophysiologic processes, clinical diagnosis and therapy, and pharmacology of relevant therapeutic agents.
MSCI 6040-001	<b>System Disorders II and Life Span Issues:</b> This block, which occupies Weeks 31-38, will cover the pathophysiology and clinical aspects of the major endocrine disorders and metabolic diseases. It also addresses issues in women’s health, most notably the pathology and physiology of the reproductive system. The block provides a brief introduction to clinical dermatology, ophthalmology, and the aging patient.
MSCI 6080-001	<b>Early Clinical Experience II:</b> This block continues the longitudinal clinical experience begun in Year 1. Students are assigned to community physicians as mentors and attend their clinic one morning each month. They also attend special skill sessions in various clinical settings in the hospital and the community. They learn about the complex dimensions of clinical care, its varied settings, and the operations of the health care team. They master specific skills and learn the essentials of patient care from their patient assessments.

During Years 3 and 4, each student has a faculty advisor who assists with decisions about career options and residency plans. The Office of Student Affairs maintains active orientation programs and provides individualized attention and counseling for students selecting residencies. In the past several years, Tech

graduates have competed successfully in the National Resident Matching Program with approximately 80% of students being matched with their first, second, or third choice of postgraduate training programs.

### Year 3

In Year 3 students move to the clinical arena on one of our three campuses: Lubbock, Amarillo, or El Paso. Each student focuses on one clinical discipline at a time, and in 2006-2007 will rotate through six eight-week clerkships in Internal Medicine, Surgery, Family Medicine, Obstetrics/Gynecology, Pediatrics, and Psychiatry. 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. Students at each campus are tested at the end of each clerkship with an Objective Structured Clinical Examination (OSCE) and the same external national examination. Our students are thus compared with national norms as well as with each other on the three campuses. The values are well correlated and can be described as 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.

Course Number	Clerkship Name/General Description
MFAM 7096-401 (Amarillo) MFAM 7096-801 (El Paso) MFAM 7096-001 (Lubbock)	<b>Family Medicine</b> 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 7091-401 (Amarillo) MINT 7091-801 (El Paso) MINT 7091-001 (Lubbock)	<b>Internal Medicine</b> 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-7094-401 (Amarillo) MOBG-7094-801 (El Paso) MOBG-7094-001 (Lubbock)	<b>Obstetrics-Gynecology</b> 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.



Year 3 continued...

Course Number	Name/General Description
MPED-7093-401 (Amarillo) MPED-7093-801 (El Paso) MPED-7093-001 (Lubbock)	<p><b>Pediatrics</b></p> <p>During the clerkship students rotate through the pediatric inpatient, ambulatory care and new 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.</p>
MPSY-7095-401 (Amarillo) MPSY-7095-801 (El Paso) MPSY-7095-001 (Lubbock)	<p><b>Psychiatry</b></p> <p>The primary goals of this rotation are to provide educational situations that facilitate continued learning regarding psychiatric disorders and neurologic disorders and, Clinical experiences which 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, ambulatory psychiatry care, ambulatory neuropsychiatry/behavioral neurology, and on-call emergency room coverage.</p>
MSUR-7091-401 (Amarillo) MSUR-7091-801 (El Paso) MSUR-7091-001 (Lubbock)	<p><b>General Surgery</b></p> <p>An introduction to the pathophysiology of surgical diseases and the principles and techniques used in their diagnosis and management. Course includes participation in pre- and post-operative patient care, operating room and clinic experience as a member of a team of the surgical faculty.</p>

## Year 4

In Year 4 each of the regional campuses in Amarillo, El Paso, and Lubbock offer both required and elective rotations. Elective rotations are also offered in Odessa. Students complete a one-month clerkship in Neurology, two one-month selective experiences chosen from Family Medicine, Obstetrics/Gynecology, Pediatrics, or Psychiatry, a sub-internship chosen from Internal Medicine, Surgery, or Pediatrics, and four months of broadly based elective experiences. Each student plans an individualized program that is reviewed by a faculty committee to ensure breadth of general educational experience and appropriateness to the particular student's academic background. In this manner, each student can test or compare various disciplines as potential career choices, can shore up perceived areas of weakness, and can broaden exposures to a variety of experiences and locations.

## Senior Electives (MSIV)

### Anesthesiology

Course Number (Campus)	Name/General Description
MANE-806A-401 (Amarillo) MANE-806A-801 (El Paso) MANE-806A-001 (Lubbock)	<p><b>Anesthesiology</b> 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.</p>
MANE-806B-001 (Lubbock)	<p><b>Pain Center/Pain Management</b> The Pain Center and the Pain Service have become a busy referral-type service where patients come from other medical disciplines usually suffering from chronic or intractable pain. The student will be involved in the initial interview, assessment, and management of these patients. Patients are seen in the Pain Center and in the inpatient setting at the University Medical Center. The students will be expected to become proficient in the understanding of common pain syndromes and have on-hand experience in carrying out pain relieving procedures.</p>
MANE-806C-001 (Lubbock)	<p><b>Anesthesiology Research</b> This elective is designed to introduce students to clinical and basic science research in anesthesiology. Students will participate in on-going research projects with faculty.</p>

### Cell Biology and Biochemistry

Course Number (Campus)	Name/General Description
MBCH-806A-401 (Amarillo) MBCH-806A-001 (Lubbock)	<p><b>Biochemical Research</b> This elective is designed to meet the needs of those students who wish to obtain experience in biochemical research as it relates to human health. Students will work on an ongoing project of one of the Faculty members of the department.</p>

*Cell Biology and Biochemistry continued...*

Course Number	Name/General Description
MBCH-806B-401 (Amarillo)	<p><b>Biochemical Research in Molecular Medicine</b></p> <p>This elective is designed for the student interested in enhancing their understanding of the basic science of molecular diagnostic technology and recent advances in immunoprophylaxis. Special emphasis will be placed on pathogens of interest in Agricultural Medicine and Rural Health. The student will receive an introduction to both basic and advanced biochemical, immunological and molecular research techniques. The student will also gain experience in designing an experimental protocol, conducting experiments, statistical analyses of data, and preparing a scientific report. It is anticipated that the student will present the data at the student research forum and serve as author-co-author on abstracts and manuscripts submitted for publication.</p>
MCBA-806B-001 (Lubbock)	<p><b>Advanced Anatomical Studies</b></p> <p>This elective involves in-depth studies in selected areas of surgical anatomy, gross anatomy, histology, embryology, and neurosciences or cell biology.</p>
MCBA-806C-001 (Lubbock)	<p><b>Advanced Gross Anatomy</b></p> <p>This is an in-depth gross anatomical study devoted to one of the following areas of emphasis: topographical anatomy, head and neck, thorax and abdomen, pelvis and perineum, extremities and back, depending on the needs of the student. The courses may be repeated for credit if another are of emphasis is selected.</p>
MIDS-803C-001 (Lubbock)	<p><b>Biomedical Information Management</b></p> <p>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.</p>

**Dermatology**

Course Number (Campus)	Name/General Description
MDER-806A-401 (Amarillo) MDER-806A-801 (El Paso) MDER-806A-001 (Lubbock)	<p><b>Dermatology Clinics</b></p> <p>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.</p>

Course Number	Name/General Description
MDER-806B-001 (Lubbock)	<p><b>Dermatology Research</b> This elective is designed to introduce students to clinical and basic science research in dermatology. Students will participate in on-going research projects with faculty.</p>
MDER-806C-001 (Lubbock)	<p><b>Dermatopathology</b> This elective is designed to give 4th year medical students exposure to and experience in dermatopathology.</p>

## Emergency Medicine

Course Number (Campus)	Name/General Description
MSUR-806C-401 (Amarillo) MSUR-806C-801 (El Paso) MSUR-806C-001 (Lubbock)	<p><b>Emergency Medicine</b> 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.</p>
MSUR-806H-001 (Lubbock)	<p><b>Trauma/Emergency Medicine</b> This elective under the supervision of a preceptor provides an opportunity to learn techniques in resuscitation and the management of trauma in a special intensive care setting. The student will learn and apply techniques of monitoring vital system functions including the use of monitoring devices. Experience in Emergency Room services is a component of this elective.</p>

*Emergency Medicine continued...*

Course Number	Name/General Description
MSUR-806R-801 (El Paso)	<p><b>EMS and Pre-Hospital Care</b></p> <p>This elective is designed to provide instruction and experience in pre-hospital emergency medical care and EMS systems. The curriculum includes riding with the EMS units, working with EMS administration, observing and participating in EMS communications, teaching and participating in EMS training and continuing education sessions, and working closely with medical direction. The objectives are to familiarize the student with physician medical direction of EMS systems and pre-hospital care; to provide exposure to disaster planning and management; to involve the student in EMS training and continuing education as both instructor and participant; to become familiar with EMS radio communications including telemetry, the 911 system, call screening, and aspects of dispatch; to provide experience in pre-hospital emergency care by riding on ambulances and participating in-patient care; to observe EMS administration including operations and budgetary considerations; to be exposed to ongoing quality control mechanisms in the pre-hospital setting; and to provide the student with didactic sessions on a number of aspects of EMS systems and pre-hospital care.</p>

**Family Medicine**

Course Number (Campus)	Name/General Description
MFAM-8061-801 (El Paso) MFAM-8061-001 (Lubbock) MFAM-8061-240 (Permian Basin)	<p><b>Family Medicine Senior Clerkship</b></p> <p>This elective 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.</p>
MFAM-806A-401 (Amarillo) MFAM-806A-801 (El Paso) MFAM-806A-001 (Lubbock) MFAM-806A-240 (Permian Basin)	<p><b>Family Medicine Preceptorship</b></p> <p>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.</p>

Course Number	Name/General Description
MFAM-806B-001 (Lubbock)	<p><b>Family Medicine Sub-Internship</b></p> <p>This elective cannot be used to satisfy the senior sub-internship requirement. Patients of all ages, of both sexes, and with diverse medical problems will be managed. 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.</p>
MFAM-806D-401 (Amarillo)	<p><b>Correctional Medicine</b></p> <p>This elective provides an introduction to medicine in the prison system. Students will be supervised by Texas Tech University HSC Faculty at the Clements Unit in Amarillo. Topics covered include preventive medicine, emergency medicine, community medicine, as well as general medical care.</p>
MFAM-806E-401 (Amarillo)	<p><b>Geriatric Care</b></p> <p>This elective is an introduction to geriatric assessment and evaluation. Topics covered are Physiology of aging Demographics of the aged Long-term care policies Commonly used geriatric evaluation scales Evaluation of function in the aged Long-term care.</p>
MFAM-806G-801 (El Paso) MFAM-806K-001 (Lubbock)	<p><b>Community Medicine</b></p> <p>This course provides a comprehensive community experience for students and focuses on clinical management and comprehensive primary care in a rural underserved setting. The course affords an opportunity to bring together concepts and experiences developed in Internal Medicine and Family Medicine and to work in a multi-discipline setting with other health care professionals and trainees. Emphasis will be placed on patient care in the ambulatory setting with the student working directly with the faculty preceptor in providing primary care to a wide range of patients. The student will see a multitude of clinical problems that allows the development of strong management skills.</p>

## Family Medicine continued...

Course Number	Name/General Description
MFAM-806G-001 (Lubbock)	<p><b>Student Health and Adolescent Medicine</b></p> <p>This elective allows the student to develop their skills and knowledge of student health and adolescent medicine. Emphasis is on the application of clinical skills with the demands and limits of a university student health clinic.</p>
MFAM-806I-401 (Amarillo)	<p><b>Family Medicine – Women’s and Children’s Healthcare</b></p> <p>The student will be responsible for rounding on unassigned postpartum and nursery patients, also know as "team moms and babies". The student will have five (5) calls in the rotation, with one call being on a weekend day. While on call, the student will follow the upper level resident and be responsible for seeing patients with obstetrical and gynecologic complaints. During the rotation, the student will be assigned a patient at approximately 37-38 weeks. The student will then be responsible for coming to labor and delivery to work up complaints, under the supervision of the resident assigned to that patient and the Faculty physician on call. The student will assist in the peripartum management to the level of their ability, and follow the patient in the postpartum period. The student will see primarily women and children patients in the outpatient setting, but also be available to see walk-in obstetric patients. In-patient procedures and responsibilities will take precedence. Two (2) presentations will be prepared during the elective, one dealing with women’s health and the other dealing with newborn care. The goal of this rotation is for the 4th year student to become familiar with and appreciate the continuity of care family physicians are in the unique position to provide their obstetric patients and their families. Grading will be based on clinical performance (90%) and presentations (5% each).</p>
MPRM-806A-401 (Amarillo)	<p><b>Occupational Medicine</b></p> <p>This elective is a unique opportunity for students to observe and participate in both a previous occupational medicine clinic and an industrial clinic. Rotation includes didactic and clinical material including; diagnosis and treatment of congenital injuries and diseases, setting up preventive health services for employee groups, i.e., hearing conversation, respiratory surveillance; and designing and implementing employee health and fitness programs. The application of preventive medicine to clinical practice will be emphasized. The treatment and diagnosis capabilities as well as the competency of the medical staff assure the student of a fine learning experience.</p>

## Internal Medicine

Course Number (Campus)	Name/General Description
MINT-806A-401 (Amarillo) MINT-806A-801 (El Paso)	<p><b>General Internal Medicine</b></p> <p>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.</p>

Course Number	Name/General Description
MINT-806B-401 (Amarillo) MINT-806B-801 (El Paso) MINT-806B-001 (Lubbock)	<p><b>Cardiology</b></p> <p>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.</p>
MINT-806C-401 (Amarillo) MINT-806C-801 (El Paso) MINT-806C-001 (Lubbock)	<p><b>Endocrinology</b></p> <p>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.</p>
MINT-806D-401 (Amarillo) MINT-806D-801 (El Paso) MINT-806D-001 (Lubbock)	<p><b>Gastroenterology</b></p> <p>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.</p>
MINT-806E-801 (El Paso) MINT-806E-001 (Lubbock)	<p><b>Infectious Diseases/Advanced Bedside Medicine</b></p> <p>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.</p>
MINT-806F-401 (Amarillo) MINT-806F-801 (El Paso) MINT-806F-001 (Lubbock)	<p><b>Hematology-Oncology</b></p> <p>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.</p>



Course Number	Name/General Description
MINT-806G-401 (Amarillo) MINT-806G-801 (El Paso) MINT-806G-001 (Lubbock)	<p><b>Medical Intensive Care Unit</b></p> <p>This 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. The student will be evaluated on medical knowledge, the ability to integrate pertinent data to arrive at a proper management plan, clinical skills in history taking, physical examination and procedural skills, the ability to relate to patients and work with other physicians and ancillary staff, professional and humanistic behavior, and the student's contribution as a member of the health care team.</p>
MINT-806H-401 (Amarillo) MINT-806H-801 (El Paso) MINT-806H-001 (Lubbock)	<p><b>Nephrology</b></p> <p>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.</p>
MINT-806I-001 (Lubbock)	<p><b>Nephrology Basic Research</b></p> <p>This elective affords students interested in basic biomedical research an opportunity to develop a proposal for a research project within the framework of ongoing studies (membrane transport, isolated perfused tubules, solute clearance, or vascular endothelial biology) under the close supervision and guidance of an experienced investigator. The student will be guided in a critical analysis of background literature, gain familiarity with a variety of laboratory methods and techniques, and learn the process of gathering, recording, and analyzing data. The student will then write up his/her study in preparation for publication and/or presentation of a scientific meeting. Periodic presentation of data in conference will be expected.</p>
MINT-806K-801 (El Paso) MINT-806K-001 (Lubbock)	<p><b>Pulmonary Medicine</b></p> <p>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.</p>

Course Number	Name/General Description
MINT-806L-801 (El Paso) MINT-806L-001 (Lubbock)	<p><b>Rheumatology</b></p> <p>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.</p>
MINT-806M-001 (Lubbock)	<p><b>Allergy and Clinical Immunology</b></p> <p>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.</p>
MINT-806P-801 (El Paso) MINT-806P-001 (Lubbock)	<p><b>Internal Medicine Sub-Internship</b></p> <p>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.</p>
MINT-806S-401 (Amarillo)	<p><b>Radiation Oncology</b></p> <p>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.</p>
MINT-806T-401 (Amarillo) MINT-806T-001 (Lubbock)	<p><b>Clinical and Laboratory Research</b></p> <p>Students may elect to adopt an independent research project in either the laboratory or the clinical area. The student will be instructed in how to review the literature, how to apply the scientific method to clinical and laboratory problems, how to analyze data, and how to write scientific papers. The student will discuss with the Faculty research sponsor detailed plans for the research project at least two months prior to the proposed initiation of the elective. A minimum of two months is needed to do a research project. This project can only be undertaken by special arrangement.</p>

*Internal Medicine continued...*

Course Number	Name/General Description
MINT-806U-401 (Amarillo)	<p><b>Hospice</b></p> <p>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.</p>
MINT-806V-001 (Lubbock)	<p><b>Internal Medicine - Community Medicine Preceptorship</b></p> <p>In this elective, the student will be assigned to a participating community preceptor in Internal Medicine (general or subspecialty) for a four-week period. During this time, the student will see and participate in the care of a variety of patients (predominantly ambulatory) and be asked to prepare brief reports on topic of relevance in their care.</p>
MNEU-806F-401 (Amarillo)	<p><b>Neurology</b></p> <p>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.</p>

**Microbiology and Immunology**

Course Number (Campus)	Name/General Description
MMIC-806A-001 (Lubbock)	<p><b>Microbiology and Immunology Research</b></p> <p>This elective is a reading and conference course considering the involvement of infectious agents and host responses in disease processes.</p>

**Neuropsychiatry and Behavioral Sciences**

Course Number (Campus)	Name/General Description
MNEU-8061-801 (El Paso) MNEU- 8061-001 (Lubbock)	<p><b>Neurology Senior Clerkship</b></p> <p>This clerkship 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.</p>
MNEU-806B-001 (Lubbock)	<p><b>Pediatric Neurology</b></p> <p>Students will round with the clinical team on the pediatric units, attend pediatric neurology clinics, and participate in a wide range of teaching activities. They will learn to do a competent neurological examination on infants and children. Additionally, students will become familiar with electroencephalograms and imaging studies as applied to diagnosis and treatment of children.</p>

Course Number	Name/General Description
MNEU-806G-801 (El Paso)	<p><b>Clinical Neurosciences in Surgical Neurology and Child Neurology</b> This elective in neurosurgery and child neurology may be arranged on an individual basis for any student.</p>
MNEU-806H-001 (Lubbock)	<p><b>Electrophysiology</b> Students will have the opportunity to enhance their clinical experience and knowledge in the areas of electroencephalography, electromyography, and evoked potentials. Along with this, they will have increased exposure to the evaluation and care of patients with epilepsy and neuromuscular disease.</p>
MPSY-806A-001 (Lubbock)	<p><b>Adult Inpatient Psychiatry</b> 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.</p>
MPSY-806D-001 (Lubbock)	<p><b>Child/Adolescent Psychiatry</b> This 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.</p>
MPSY-806F-001 (Lubbock)	<p><b>Montford Prison Hospital Psychiatric Triage/Emergency Service</b> This elective is designed to acquaint the student with practice within the psychiatric hospital prison setting. There will be special emphasis on rapid assessment, differentiation of malingering and crisis management of severe emergent psychiatry inmate patients from the surrounding prison population. The student will also become familiar with psychological as well as psychiatric assessment.</p>
MPSY-806G-001 (Lubbock)	<p><b>Montford Prison Hospital Acute Inpatient Service</b> This elective is designed to give the student an opportunity to work with patients within the psychiatric hospital prison setting suffering from severe or major psychiatric disorders. Emphasis will be placed on diagnosis and formation of treatment plans and treatment. The student will be exposed to treatment modalities provided in an inpatient setting. The student will work with an interdisciplinary team of clinicians and participate in selected therapies.</p>
MPSY-806H-401 (Amarillo)	<p><b>Assessing Children and Adolescents: Disruptive and Affective Problems</b> This elective focuses on common problems seen in children and adolescents, ways to assess for these problems, developing treatment plans and eclectic therapeutic intervention approaches. The student may accompany the psychologists as assessment opportunities occur on inpatient and outpatient services.</p>

Course Number	Name/General Description
MPSY-806I-001 (Lubbock)	<p><b>Montford Prison Hospital Long-Term Service</b></p> <p>This elective is designed to give the student exposure to the psychiatric inmate patient in an extended care setting. Emphasis will be placed on formation of treatment plans and multi-disciplinary treatment. The student will be exposed to aspects of long-term medication use and habilitative therapy.</p>
MPSY-806I1-801 (El Paso) MPSY-806I1-001 (Lubbock)	<p><b>Psychiatry Senior Clerkship</b></p> <p>This senior clerkship 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.</p>
MPSY-806J-801 (El Paso)	<p><b>Community Services in Child Psychiatry</b></p> <p>This elective offers the opportunity to participate in the evaluation and treatment of children and adolescents with emotional and developmental disorders in a variety of community agencies. At least 75% of the time will be spent as consult service on the ward and approximately 25% time will be in the clinic.</p>
MPSY-806K-401 (Amarillo)	<p><b>Eating Disorders</b></p> <p>This offers a bio-psycho-social approach to understanding and treating anorexia nervosa, bulimia nervosa, and compulsive overeating. For students interested in the field of psychiatry, behavioral health, preventive medicine, or biological medicine, this elective is designed to provide a broad overview of eating disorders from the complexity of the causes to the multi-dimensional treatment considerations.</p>
MPSY-806L-801 (El Paso)	<p><b>Family Intervention Techniques</b></p> <p>This elective offers the opportunity to attend didactic seminars in family therapy and community assignment (under supervision) with well-known family therapists in the community. There is no consult service and 100% of the time is spent on the ward.</p>
MPSY-806M-801 (El Paso)	<p><b>Human Values</b></p> <p>This elective offers the opportunity to review current work on spiritual values and its relationship with psychiatry. The reading material will be discussed in an evening seminar with other colleagues. There is no ward or clinic experience, no consultation service, and no call.</p>
MPSY-806N-801 (El Paso)	<p><b>Forensic Psychiatry</b></p> <p>The student will be able to identify the basic concepts of forensic and legal psychiatry. The student will also be involved in the actual evaluation procedure for court-referred cases with forensic implications and will attend actual trials and observe psychiatric expert testimony.</p>
MPSY-806O-401 (Amarillo)	<p><b>Group Therapy Techniques</b></p> <p>This elective offers the opportunity to learn about how to start and run group therapy, as well as the dynamics of group interaction. The student will act as co-therapist with the supervisor for an on-going group and possibly do the screening process to start another group.</p>

Course Number	Name/General Description
MPSY-806P-801 (El Paso)	<p><b>Sleep Disorders Medicine</b></p> <p>This elective must be combined with another topic of interest during the rotation. This elective reviews the basics of sleep physiology and gives clinical exposure to a wide range of sleep pathology. The student will become acquainted with polysomnography procedures in the Sleep Disorders Center. Disorders such as insomnias, sleep apneas, narcolepsy, and parasomnias will be seen. Students will be expected to observe polysomnographies at night.</p>
MPSY-806R-401 (Amarillo)	<p><b>Techniques of Practices of Psychotherapy</b></p> <p>This elective will introduce the student to various methods of psychotherapy: Individual therapy, group therapy, and family and marital therapy. By the end of the elective the student should have acquired some of the basic techniques of those modalities and be able to determine the appropriate use of each. The student should be comfortable selecting methods for each of these therapies.</p>
MPSY-806S-401 (Amarillo)	<p><b>Working with Families</b></p> <p>This elective will introduce the student to various forms of families seen in physicians' offices. It will increase understanding of members who come from divorced, blended, single parent, alcoholic and/or abusive families. By the end of the course, students will have an understanding of the stresses that accompany the roles members play in these families.</p>
MPSY-806T-401 (Amarillo)	<p><b>Using Computers in Mental Health</b></p> <p>This elective will cover student interests blending psychiatric topics and anticipated specialization. Possible focuses are computerized personality testing, computer-assisted counseling, using the Internet to obtain mental health information. Individualized problems are possible as long as they focus on psychiatric topics. As the opportunity arises, the student may interview-assess patients.</p>

## Obstetrics and Gynecology

Course Number (Campus)	Name/General Description
MOBG-8061-801 (El Paso) MOBG-8061-001 (Lubbock)	<p><b>Obstetrics/Gynecology Senior Clerkship</b></p> <p>This clerkship is a compilation of the Benign Gynecology elective and OB/Maternal-Fetal elective. It includes office and hospital based OB/GYN, family planning, and primary care for women. Two weeks will be spent on each service. Lectures and resident education conferences will be attended as well as discussions with the attending physicians and resident physicians on assigned reading topics.</p>

Course Number	Name/General Description
MOBG-806A-001 (Lubbock)	<p><b>Benign Gynecology</b></p> <p>This elective offers further growth, improvement in skills, and broadening of knowledge in benign gynecologic problems, the performance of gynecologic procedures, and an introduction to office management. The student will participate in the pre-operative and post-operative management of patients (both in clinic and in the inpatient setting), in evaluating and treating patients (both in an emergency room and clinic settings), and in gynecologic surgery. Post-operative care will provide an opportunity to learn wound care, respiratory support, rehabilitation, and resolution of post-operative ileus. In surgery, the student will learn suturing, knot tying, wound closure techniques, hysteroscopy, and dilation and curettage. The outpatient clinic training will include clinical medicine, as well as the "business of medicine." Assessment and treatment of vulvar/vaginal infections, STDs, and chronic pelvic pain will be stressed. Endometrial biopsy will be taught. Colposcopy procedures for cervical lesions will be covered. This elective is also applicable to students who plan a career in primary care specialties such as Internal Medicine or Family Medicine. Emphasis will be directed towards developing competency in pelvic examination, obtaining and interpreting Pap smears, diagnosing and treating vaginitis, prescribing hormone replacement therapy, and managing patients on oral contraception. The student will be expected to make rounds with the GYN team daily. Lectures and resident education conferences will be attended as well as discussion with the attending physician and resident physicians of the GYN team of assigned reading topics.</p>
MOBG-806B-001 (Lubbock)	<p><b>Obstetrics/Maternal-Fetal Medicine</b></p> <p>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.</p>

Course Number	Name/General Description
MOBG-806C-001 (Lubbock)	<p><b>Gynecologic Oncology &amp; Gynecologic Surgery</b></p> <p>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. Post-operative 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.</p>
MOBG-806E-001 (Lubbock)	<p><b>Reproductive Endocrinology/Infertility</b></p> <p>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.</p>
MOBG-806L-401 (Amarillo) MOBG-806G-801 (El Paso) MOBG-806G-240 (Permian Basin)	<p><b>General Obstetrics and Gynecology</b></p> <p>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.</p>



*Obstetrics and Gynecology continued...*

Course Number	Name/General Description
MOBG-806H-801 (El Paso) MOBG-806H-240 (Permian Basin)	<p><b>Perinatal Medicine</b></p> <p>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.</p>
MOBG-806I-240 (Permian Basin)	<p><b>Rural Obstetrics</b></p> <p>The student will participate in rural outreach clinics with a faculty member and a nurse practitioner for the evaluation of prenatal patients at the clinics that have been established in Kermit, Monahans, Stanton, and McCamey. The student will become acquainted with the problems involved in providing care in a community where physician services are not readily available and how these problems can be addressed. The student will also become familiar with recognition of high-risk conditions that would require management with consultation from specialists in maternal-fetal medicine. The elective provides primarily clinical experience; night call on the Labor and Delivery Unit is recommended. The frequency is negotiable.</p>
MOBG-806J-001 (Lubbock)	<p><b>Obstetrics and Gynecology Research</b></p> <p>This elective is designed to teach medical students selected fundamentals of research, as well as the provide opportunity to learn laboratory skills, and potentially participate in a research topic that will be presented at a national meeting. Students will learn how to perform hormone assays, radioimmunoassay, ELISAs, etc., data entry, and fundamentals of experimental design and statistics and be involved in a manuscript presentation. The opportunity to be involved in patient enrollment in studies also exists. Lectures and resident education conferences will be attended as well as discussions with the director of clinical research on assigned reading topics.</p>
MOBG-806M-401 (Amarillo)	<p><b>Obstetrics and Gynecology Imaging</b></p> <p>This elective is designed to acquaint the 4th year medical students with clinical genetics and imaging modalities that are currently used frequently in the practice of obstetrics and gynecology. This will include taking histories and ultrasound, both obstetrical and gynecologic, and bone density scanning. The student will rotate through the various departments and will take advantage of these services that are offered through the Texas Tech Clinic, University Women's Health Center. They will also spend time with Dr. Overton reviewing and interpreting bone density scans. There will be outside reading material that will be made available to the student, as well as any pertinent video tapes and CD ROMs. At the completion of the rotation, the student will be expected to make a 30-minute presentation to the residents and Faculty concerning some aspect of reproduction genetics and imaging.</p>

## Ophthalmology and Visual Sciences

Course Number (Campus)	Name/General Description
MOPH-806A-401 (Amarillo) MOPH-806A-801 (El Paso) MOPH-806A-001 (Lubbock)	<p><b>Clinical Ophthalmology</b></p> <p>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.</p>
MOPH-806C-001 (Lubbock)	<p><b>Ophthalmology Research</b></p> <p>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.</p>

## Orthopaedic Surgery

Course Number (Campus)	Name/General Description
MORS-806A-401 (Amarillo) MORS-806A-001 (Lubbock)	<p><b>Orthopaedic Surgery</b></p> <p>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.</p>
MORS-806B-001 (Lubbock)	<p><b>Musculoskeletal Research</b></p> <p>Students with an interest in conducting musculoskeletal research will be assigned to one of the full time orthopaedic faculty members. Under the guidance of this faculty member (and possibly in cooperation with other members of the full time faculty and clinical faculty), the student will be required to directly participate in a research project. The nature and extent of this project is to be agreed upon prior to participation, and credit will not be given unless the agreed upon objectives are accomplished. If the project is completed during the elective, the student is expected to present a written and oral report to the orthopaedic residents and faculty. If it is agreed that the research cannot be completed in the allotted time, the student will be expected to present a report of the progress that has been accomplished during the elective. Minimum time for this elective is one month; recommended time is two months.</p>

*Orthopaedic Surgery continued...*

Course Number	Name/General Description
MORS-806C-801 (El Paso) MORS-806C-001 (Lubbock)	<p><b>Physical Medicine and Rehabilitation</b></p> <p>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.</p>
MORS-806E-801 (El Paso)	<p><b>Inpatient Orthopaedic Surgery</b></p> <p>Students will be assigned to one of the orthopaedic services (trauma, orthopaedics, or hand surgery) 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 on all patients admitted to the service and present the work-ups to the junior resident 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. The orthopaedic experience is organized along subspecialty services, and students may spread their experience over these services. This elective is for students contemplating a career in orthopaedic surgery and desirable for those interested in surgical specialties or an in-depth experience in orthopaedic surgery.</p>
MORS-806F-801 (El Paso)	<p><b>Outpatient Orthopaedics</b></p> <p>Students will be assigned to the Orthopaedic Outpatient Clinic and see patients with resident and faculty supervisors. Participation in emergency room call is expected during the day and is optional at night. The student is expected to attend all orthopaedic conferences and make a presentation on a subject assigned by the faculty. The opportunity to learn casting and splinting techniques is available. This rotation is especially valuable for those students contemplating careers in primary care such as Family Medicine, Emergency Medicine, and Internal Medicine.</p>
MORS-806H-001 (Lubbock)	<p><b>Sports Medicine</b></p> <p>This elective is designed to give senior medical students experience in the management of sports related injury and illness, emphasizing examination, diagnosis, and treatment of sports related injuries.</p>

**Pathology**

Course Number (Campus)	Name/General Description
MPAT-806A-001 (Lubbock)	<p><b>Diagnostic and Clinical Parasitology</b></p> <p>Students will be familiarized with the microscopic and immunologic techniques for diagnosing parasitic and related diseases. The student will become familiar with the concordant pathology and clinical manifestations of these disease processes through informal presentations and study of case histories. No formal patient consults are required.</p>

Course Number (Campus)	Name/General Description
MPAT-806B-401 (Amarillo)	<p><b>Pathology</b></p> <p>This elective is designed as an introduction to the general practice of pathology. The program will provide an opportunity for a medical student to evaluate diagnostic problems by means of radiology and to follow these patients through surgery, with a special emphasis on surgical pathology. Pathology findings at surgery are correlated with clinical history and radiology. Students will be expected to attend and occasionally present at conferences. Independent study and reading time will be included in each day.</p>
MPAT-806B-001 (Lubbock)	<p><b>Clinical Pathology: Correlation With Disease</b></p> <p>This elective will introduce the student to the effective clinical utilization and interpretation of laboratory tests. The student rotations in sub-disciplines of the clinical laboratories (clinical chemistry, hematology, blood banking, immunology, microbiology, virology, and histocompatibility testing) will be tailored to the student's interests. A clinical pathologist will provide formal and informal instruction in various aspects of the sub-discipline. The student will be encouraged to participate in a variety of problem-solving situations, and he/she can perform laboratory procedures under supervision if they wish. Concepts of quality control, testing limitations, biochemical profiling and normal values will be emphasized. Interesting clinical cases will be reviewed at a daily conference attended by students and pathologists. One formal presentation on a laboratory topic of the student's interest will be required in the four-week experience. Opportunities for independent study and involvement in on-going research will be available. Four-week experiences are preferred, but a two-week session can be arranged after discussion with the department.</p>
MPAT-806C-001 (Lubbock)	<p><b>Anatomic Pathology</b></p> <p>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.</p>

Course Number	Name/General Description
MPAT-806F-801 (El Paso)	<p><b>Anatomic and Clinical Pathology</b></p> <p>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.</p>

## Pediatrics

Course Number (Campus)	Name/General Description
MPED-8061-801 (El Paso)	<p><b>Pediatrics Senior Clerkship</b></p> <p>The purpose of this senior clerkship 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.</p>
MPED-8061-001 (Lubbock)	<p><b>Pediatrics Senior Ambulatory Experience</b></p> <p>The purpose of this senior clerkship 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.</p>
MPED-806A-401 (Amarillo) MPED-806A-801 (El Paso) MPED-806A-001 (Lubbock)	<p><b>Adolescent Medicine</b></p> <p>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.</p>

Course Number	Name/General Description
MPED-806B-401 (Amarillo) MPED-806B-801 (El Paso) MPED-806B-240 (Permian Basin)	<p><b>Ambulatory Pediatrics</b></p> <p>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.</p>
MPED-806C-401 (Amarillo)	<p><b>Behavioral Pediatrics</b></p> <p>This elective is designed to help students understand the behavioral aspects of a medical condition. Based upon the AAPs concept of the New Morbidity, the behavioral clerkship focuses on chronic conditions and the behaviors that impact upon treatment, compliance, and outcome (e.g., ADHD, diabetes, asthma, cancer, cerebral palsy, learning disabilities, prematurity, sickle cell disease, Down syndrome, blindness, deafness, or multiple impairments). Students will work with families, school personnel, and community agencies to develop long-term care. Attendance at school planning meetings, completion of documentation needed to access services (SSI, CIDC, and Special Education) as well as monitoring long-range treatment of chronic patients is presented. Included in this rotation is the follow-up of NICU graduates to monitor development and learning as well as PICU patients as they return to home, school, and community.</p>
MPED-806D-801 (El Paso) MPED-806D-001 (Lubbock)	<p><b>Pediatric Endocrinology</b></p> <p>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.</p>
MPED-806E-801 (El Paso) MPED-806E-001 (Lubbock)	<p><b>Pediatric Endocrinology – Diabetes Camp</b></p> <p>This elective offers a unique opportunity to learn day-to-day management of Type 1 diabetes. The student attends a one- or two-week session at a camp for children with diabetes and takes a direct primary-care responsibility for a group of children at the camp. Training is provided under the camp medical directors who are highly trained and thoroughly experienced in managing diabetes in children. Duties include supervision and monitoring of daily blood sugar testing and insulin injections. Pre-camp training and reading assignments will be provided. Daily meetings during the camp will provide some additional educational opportunities.</p>

Course Number	Name/General Description
MPED-806F-001 (Lubbock)	<p><b>Genetics</b></p> <p>This elective offers students the opportunity to participate in all aspects of a comprehensive clinical genetics program including dysmorphology consultations, genetic counseling sessions, prenatal testing, and laboratory testing. Time will be about equally divided between clinical and laboratory settings. Most students are encouraged to initiate a short clinical project or family study of special interest.</p>
MPED-806G-801 (El Paso) MPED-806G-001 (Lubbock)	<p><b>Pediatric Infectious Disease</b></p> <p>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.</p>
MPED-806H-001 (Lubbock) MPED-806H-240 (Permian Basin)	<p><b>Clinical Neonatology (NICU)</b></p> <p>Students will participate in the delivery of neonatal care in a modern, neonatal intensive care unit setting. Initially, the student will be oriented to the fundamentals of the physical examination, feeding, and preventive health maintenance of the normal newborn. Later, the student will participate in the care of the sick and/or premature infants admitted to the NICU under the close and direct supervision of the full time medical staff, assuming increasing responsibility in the care of the acutely ill neonate. This elective will provide the student with the opportunity to learn and perform procedures used in neonatal intensive care: resuscitation, intubation, umbilical vessel catheterization, chest tube placement, radial artery punctures, exchange transfusions, ventilatory management, etc.</p>
MPED-806I-801 (El Paso) MPED-806I-001 (Lubbock)	<p><b>Inpatient Pediatrics</b></p> <p>This elective provides an individualized, problem-oriented rotation for the student to help develop a systematic approach to the pediatric patient for evaluation and management while the patient is hospitalized, with plans for follow-up. The student assumes the role of extern, and night call schedule and activities are coordinated with the senior resident on the ward. Pertinent reference material will be provided, and literature searches by the student will be encouraged. The faculty attending and the senior resident will provide supervision.</p>

Course Number	Name/General Description
MPED-806J-801 (El Paso) MPED-806J-001 (Lubbock)	<p><b>Pediatric Cardiology</b></p> <p>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.</p>
MPED-806K-001 (Lubbock)	<p><b>Child Abuse and Neglect</b></p> <p>This elective is designed to prepare future clinicians to successfully interview in 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 be placed with professional mentors within the community from the District Attorney's Office, the Police Department, and Children's Protective Services. When the situation allows, the student will be permitted to participate during forensic evaluations.</p>
MPED-806M-401 (Amarillo) MPED-806M-001 (Lubbock)	<p><b>Pediatric Gastroenterology</b></p> <p>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.</p>
MPED-806N-401 (Amarillo) MPED-806N-801 (El Paso)	<p><b>Developmental and Behavioral Pediatrics</b></p> <p>The medical student will become familiar with normal child development and normal child behavior. In addition, the student will participate in the evaluation of children with developmental delays (language and motor), learning disabilities, attention deficit and hyperactivity disorder, and oppositional defiant disorder. The student will also attend high-risk follow-up clinic, in which former premature infants are evaluated.</p>



Course Number	Name/General Description
MPED-806O-401 (Amarillo)	<p><b>Neonatal Intensive Care</b></p> <p>This 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.</p>
MPED-806O-801 (El Paso)	<p><b>Advanced Neonatology (NICU)</b></p> <p>This elective offers exposure to a cross-section of neonatal pathology with emphasis on critical care. The student will function at the sub-internship level assuming responsibility for establishing the differential and primary diagnosis, management, and follow-up care of the patient. The student will be closely supervised by the second or third year resident and attending neonatologist. It is expected that the student will become proficient in procedural skills and resuscitation of the newborn. A 45-minute presentation on a topic agreed upon by the neonatologist will be presented at the end of the rotation.</p>
MPED-806P-401 (Amarillo) MPED-806P-001 (Lubbock) MPED-806P-240 (Permian Basin)	<p><b>Pediatric Intensive Care (PICU)</b></p> <p>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.</p>
MPED-806Q-401 (Amarillo)	<p><b>Pediatric Oncology</b></p> <p>The student will be exposed to the various clinical disciplines that form the multi disciplinary team for diagnosis and management of children with cancer. Students will gain an understanding of the psychosocial approach to families, pathophysiology clinical and laboratory diagnosis and management of primary oncologic disease and complications, pharmacology and various chemotherapies, the need and implementation of aggressive, supportive care for problems of infection and bleeding in the compromised host, the principles of clinical research and data management, and the role of the physician in detection and co-management of children with cancer. Students will have inpatient and outpatient responsibilities and will be expected to attend and present at various conferences.</p>
MPED-806R-401 (Amarillo)	<p><b>Pediatric Hematology</b></p> <p>The student will be exposed to all hematological problems: Anemia, Coagulation, and abnormal function of WBC. The student will evaluate and read blood smears, evaluate lab data, and understand the complication of Sickle Cell Anemia and Hemoglobinemia. The student will also have inpatient and outpatient responsibilities.</p>

Course Number	Name/General Description
MPED-806S-401 (Amarillo)	<p><b>Pediatric Nephrology</b>            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.</p>
MPED-806T-401 (Amarillo)	<p><b>Clinical Pharmacology and Therapeutics</b>            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.</p>
MPED-806U-401 (Amarillo)	<p><b>Pediatric Acting Internship</b>            The student will work as a member of a team caring for patients admitted to the pediatric ward and will participate in pediatric ambulatory clinics two afternoons per week. 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 will have an opportunity to perform procedures such as spinal taps, bladder taps, and IV placement. The student assumes the role of extern and will take call with the residents every fourth night. Supervision will be by a Faculty attending as well as a senior resident.</p>
MPED-806V-801 (El Paso) MPED-806V-001 (Lubbock)	<p><b>Pediatric Sub-Internship</b>            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.</p>

*Pediatrics continued...*

Course Number	Name/General Description
MPED-806X-801 (El Paso)	<p><b>Pediatric Pulmonology</b></p> <p>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.</p>
MPED-806Z-801 (El Paso)	<p><b>General Pediatric Externship</b></p> <p>The general clinic serves as the chief setting for primary care and general pediatric resident/student education. The student is exposed to a wide range of issues in treating a diverse population. Emphasis is placed on the development of clinical skills and differential diagnosis. This elective is offered to foster the concept of continuity of care and help the student understand how pediatric diseases respond to more intensive treatment. Patients seen in the subspecialty clinic are referred from the general pediatric clinic as well as directly by private physicians in the community. Senior students spend half of their one-month elective in the general clinic and half in the subspecialty clinic. The student will be responsible for a written history/physical assessment, and plan to be entered into the hospital chart on each patient the student admits. The student will also be responsible, with resident and faculty supervision, for the day-to-day management of patients. The student will learn how to manage general pediatrics problems, how to become more proficient in work-ups, and how to organize information and present patients at morning report and on daily rounds.</p>

## Pharmacology and Neuroscience

Course Number (Campus)	Name/General Description
MPHA-806B-001 (Lubbock)	<p><b>Pharmacology Independent Study</b></p> <p>An independent study elective is offered in Lubbock and Amarillo for students desiring an in-depth study of a specific area in basic or clinical pharmacology under the guidance of a faculty member. The purpose of this study elective is to allow the student to comprehend more fully the rational basis for drug selection and use, and to appreciate the potential hazards associated with drug therapy in one (or more) of the following areas: Autonomic, Cardiovascular, Endocrine, Neurochemical, Biochemical, or Molecular Pharmacology; Pharmacokinetics; Chemotherapy; Neuropharmacology; or Neuropsychopharmacology.</p>

Course Number	Name/General Description
MPHA-806A-001 (Lubbock)	<p><b>Pharmacology Research</b></p> <p>A laboratory research elective is offered in Lubbock for medical students desiring a research experience in pharmacology. It is intended that the student will perform laboratory research under supervision of an experienced faculty investigator in one (or more) of the following areas: Autonomic, Cardiovascular, Endocrine, Neurochemical, Biochemical, or Molecular Pharmacology; Alcohol Toxicity; Neuropharmacology; or Neuropsychopharmacology.</p>

## Physiology

Course Number (Campus)	Name/General Description
MPHY-806A-001 (Lubbock)	<p><b>Research in Cardiovascular Sciences</b></p> <p>Medical students will be able to participate fully in bench research, journal clubs, and seminars under the mentorship of those faculty with active research programs in cardiovascular physiology.</p>
MPHY-806B-001 (Lubbock)	<p><b>Research in Membrane Transport/Endocrinology</b></p> <p>Medical students will be able to participate fully in bench research, journal clubs, and seminars under the mentorship of those faculty with active research programs in membrane transport/endocrinology.</p>
MPHY-806C-001 (Lubbock)	<p><b>Research in Neurophysiology</b></p> <p>Medical students will be able to participate fully in bench research, journal clubs, and seminars under the mentorship of those faculty with active research programs in neurophysiology.</p>
MPHY-806D-001 (Lubbock)	<p><b>Research in Renal Physiology</b></p> <p>Medical students will be able to participate fully in bench research, journal clubs, and seminars under the mentorship of those faculty with active research programs in renal physiology.</p>

## Radiology

Course Number (Campus)	Name/General Description
MRAD-806A-401 (Amarillo)	<p><b>Radiology</b></p> <p>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.</p>
MRAD-806A-801 (El Paso)	

## Surgical Specialties

Course Number (Campus)	Name/General Description
MSUR-806A-801 (El Paso)	<p><b>General Surgery</b></p> <p>As an external member of a team, which includes faculty members, residents, and junior clerks, senior students will participate in the care of surgical patients in the emergency room, surgical wards, operating room, and clinic. Pre- and post-operative care and management of patients in the Surgical Intensive Care Units will be stressed. Assignments to selected clinical faculty preceptors are also available.</p>
MSUR-806A-001 (Lubbock)	
MSUR-806B-401 (Amarillo)	<p><b>Cardiovascular/Thoracic Surgery</b></p> <p>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.</p>
MSUR-806B-801 (El Paso)	
MSUR-806B-001 (Lubbock)	
MSUR-806C-401 (Amarillo)	<p><b>Trauma/Emergency Medicine</b></p> <p>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.</p>
MSUR-806C-001 (Lubbock)	
MSUR-806D-801 (El Paso)	<p><b>Otolaryngology</b></p> <p>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.</p>
MSUR-806D-001 (Lubbock)	
MSUR-806E-001 (Lubbock)	<p><b>Pediatric Surgery</b></p> <p>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-/post-operative 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.</p>
MSUR-806F-401 (Amarillo)	<p><b>Plastic Surgery</b></p> <p>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.</p>
MSUR-806F-801 (El Paso)	
MSUR-806F-001 (Lubbock)	

Course Number	Name/General Description
MSUR-806G-001 (Lubbock)	<p><b>Surgical Research</b> This elective is served in the Surgical Research Laboratories at Lubbock. The clerk will receive an introduction to the design and conduct of a laboratory investigation and will participate in one or more on-going projects.</p>
MSUR-806H-801 (El Paso)	<p><b>Trauma</b> This elective clerkship, under the supervision of a preceptor, provides an opportunity for the student to learn techniques in resuscitation and the management of trauma in a special intensive care setting. The student will learn and apply techniques of monitoring vital system functions including the use of monitoring devices.</p>
MSUR-806I-401 (Amarillo)	<p><b>Urology</b> 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.</p>
MSUR-806I-801 (El Paso)	
MSUR-806I-001 (Lubbock)	
MSUR-806K-401 (Amarillo)	<p><b>General Surgery Sub-Internship</b> 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.</p>
MSUR-806K-801 (El Paso)	
MSUR-806K-001 (Lubbock)	
MSUR-806L-401 (Amarillo)	<p><b>Neurosurgery</b> This elective is designed to allow the student to "wear the moccasins" of a neurosurgeon for one month. There will be exposure to outpatient and inpatient consultations including review of radiological and neurophysiologic studies, and the neurological decision-making process. There will be the opportunity to participate in the operating room, intensive care unit, and regular ward care of neurosurgical patients.</p>
MSUR-806L-001 (Lubbock)	
MSUR-806M-401 (Amarillo)	<p><b>Otorhinolaryngology (ENT)</b> The student will work as a preceptor with one of the clinical Faculty surgeons.</p>
MSUR-806O-801 (El Paso)	<p><b>Surgical Intensive Care (SICU)</b> This elective is an experience in the management of surgical patients in the intensive care unit.</p>
MSUR-806O-801 (Lubbock)	

Course Number	Name/General Description
MSUR-806S-401 (Amarillo)	<p><b>Surgical Oncology</b></p> <p>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.</p>
MSUR-806T-401 (Amarillo)	<p><b>Surgical Critical Care</b></p> <p>By participating in the initial assessment and subsequent management of surgical patients requiring Critical Care, the student will recognize the abnormalities in the physiologic status of these patients and the pathology that has defined these physiologic derangements. Through direct participation in the development of management strategies, the student will gain an appreciation for the complexity of interaction necessary to care for these patients. Patients admitted to the SICU by Texas Tech surgical Faculty will be assigned to the 4th year medical student patients based on severity of presenting illnesses. Evaluation and subsequent care of these patients will be provided by this student under the direct supervision of the assigned surgical Faculty member. The student participating on this Surgical Critical Care elective will interact with the 4th year student completing the Surgical Sub-Internship and direct assignment of 3rd year clerks in the assignment and follow of all Texas Tech surgery patients in the SICU. All SICU patients will be examined and a note written by the assigned student prior to morning Attending Rounds, which will be conducted daily. The 4th year student on this elective may choose to participate in daily ward rounds, but in conjunction with the attending will have the responsibility of facilitating all subsequent daily care for SICU patients as defined during A.M. rounds. This student will make evening check out rounds with the assigned attending, and will remain on call from home for these ICU patients as directed by the on call attending. The 4th year student completing this elective will have preference in the performance of all procedures to be performed in the SICU on patients to whom he-she is assigned.</p>

Course Number	Name/General Description
MSUR-806U-401 (Amarillo)	<p><b>Wound Care</b> The student will work as a preceptor with one of the clinical Faculty surgeons.</p>
MSUR-806U-001 (Lubbock)	<p><b>Burns/Wounds/Nutrition</b> This 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.</p>
MSUR-806V-801 (El Paso)	<p><b>Female Breast Disease and Treatment</b> 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.</p>



# Faculty Index

## A

**Abedin, Zainul**, Clinical Associate Professor, Internal Medicine, El Paso, 2000. M.D., Nagpur University Medical College, 1968.

**Aguirre-Hauchbaum, Salvador F.**, Clinical Associate Professor, Neuropsychiatry, El Paso, 2003. M.D., Universidad Autonoma de Chihuahua, 1971.

**Ahmed, Syed H.**, Assistant Professor, Surgery, Amarillo, 2005. M.D., Karachi University, 1984.

**Akins, Ralitsa B.**, Assistant Professor, Pediatrics, El Paso, 2006. M.D., Varna Medical University, 1994. Ph.D., Texas A&M University, 2004.

**Allen, Terry W.**, Assistant Professor, Pediatrics, El Paso, 2003. M.A., 1970. Ph.D., Michigan State University, 1973.

**Allison, Walter M.**, Assistant Professor, Internal Medicine, Amarillo, 2006. M.D., Texas Tech University Health Sciences Center, 1965.

**Alroumoh, Manaf**, Assistant Professor, Internal Medicine, Odessa, 2006. M.D., 1996, M.S., Damascus University Medical School, 2001.

**Al-Tamimi, Hamed A.**, Assistant Professor, Internal Medicine, Lubbock, 2006. M.B. B.S., Jordan University, 1992. M.D., Texas Tech University Health Sciences Center, 2000.

**Ambat, Ma Teresa Cosa**, Instructor, Pediatrics, El Paso, 2006. M.D., University of St. Tomas, Philippines, 1994.

**Antowan, Cenana M.**, Assistant Professor, Pediatrics, El Paso, 2005. M.D., College of Medicine/University of Baghdad, 1988.

**Aragon, Lorenzo**, Assistant Professor, Family Medicine, El Paso, 1993. M.D., School Medicine Leon Ni, 1985.

**Arif, Ahmed A.**, Assistant Professor, Family Medicine, Lubbock, 2001. M.B. B.S., Sindh Medical College, Pakistan, 1991. M.S., Western Kentucky University Bowling Green, 1996. Ph.D., University of Texas Health Sciences Center Houston, 2001.

**Arredondo, Mark**, Professor, Surgery, Amarillo, 2000. M.D., University of Texas Southwestern Medical School, 1983.

**Arredondo, Rodolfo M.**, Professor, Neuropsychiatry, Lubbock, 1972. M.Ed., 1972, Ed.D., Texas Tech University, 1976.

**Atkinson, Darryl A.**, Assistant Clinical Professor, Emergency Medicine, El Paso, 1993. D.O., Oklahoma, Tulsa, 1988.

## B

**Bacchi-Smith, Donna**, Associate Professor, Pediatrics, Lubbock, 1997. M.D., University of Cincinnati College of Medicine, 1981. M.P.H., Johns Hopkins School of Public Health, 1988.

**Badgwell, J. Michael**, Professor, Anesthesiology, Lubbock, 1984. M.D., Baylor College of Medicine, 1971.

**Bagg, Raymond J.**, Professor, Orthopaedic Surgery, El Paso, 1977. M.D., New York Medical College, 1958.

**Baker, Laura K.**, Associate Professor, Family Medicine, Lubbock, 1987. M.D., Texas Tech University Health Sciences Center, 1981.

**Baker, Teresa E.**, Assistant Professor, OB/GYN, Amarillo, 2004. M.D., University of Texas Southwestern Medical School, 2001.

**Baldwin, David M.**, Assistant Dean, Research, Odessa, 1999. M.S., Oklahoma State University, 1967. Ph.D., University of California Davis, 1972.

**Balmes, Marichu M.**, Assistant Professor, Family Medicine, Amarillo, 2005. M.D., De La Salle University College of Medicine, 1987.

**Banister, Melinda D.**, Assistant Professor, Surgery, Lubbock, 1998. M.D., University of Nebraska, 1998.

**Banister, Ronald E.**, Instructor, Anesthesiology, Lubbock, 1999. M.D., Tulane Medical School, 1998.

**Barclay, David L.**, Professor, OB/GYN, Amarillo, 1999. M.D., University of Washington, 1955.

**Beale, Elmus G.**, Associate Professor, Cell Biology & Biochemistry, Lubbock, 1984. Ph.D., Baylor College of Medicine, 1977.

**Bell, Todd E.**, Assistant Professor, Family Medicine, Amarillo, 2006. M.D., University of Arkansas for Medical Sciences, 2001.

**Bennett, Robert E.**, Regional Chairperson, Pediatrics, Odessa, 1990. M.D., University of Arizona, 1977.

**Benton, Timothy J.**, Assistant Professor, Family Medicine, Amarillo, 2005. M.D., Texas Tech University Health Sciences Center, 1994.

**Bergquist, Carol A.**, Clinical Professor, OB/GYN, Odessa, 1983. M.D., University of Alberta, 1967.

**Berk, Steven L.**, Academic Dean, Dean, Lubbock, 1999. M.D., Boston University, 1975.

**Bhairavarasu, Kalpana R.**, Assistant Professor, Internal Medicine, Odessa, 2006. M.D., Mount Vernon Hospital, 2006.

**Bhatt, Rajat S.**, Assistant Professor, Internal Medicine, Lubbock, 2006. M.D., Mahatma Gandhi Missions Medical College, 1999.

**Bickley, Lynn S.**, Professor, Internal Medicine, Lubbock, 1999. M.D., University of Rochester, 1982.

**Biskinis, Evanthia K.**, Associate Clinical Professor, Pediatrics, Amarillo, 1993. M.D., Natl Kapodistri, 1961.

**Blackwell, David E.**, Clinical Professor, OB/GYN, Lubbock, 2003. M.D., Bowman Gray School of Medicine, 1973.

**Blandon, Pedro A.**, Assistant Professor, Internal Medicine, El Paso, 2006. M.D., Universidad de Guadalajara, 1995.

**Blanton, Michael P.**, Associate Professor, Pharmacology & Neuroscience, Lubbock, 1995. Ph.D., University of California Santa Cruz, 1989.

**Blumenfeld, Daniel G.**, Assistant Clinical Professor, Ophthalmology, El Paso, 1997. M.D., University of Texas Southwestern Medical School, 1991.

**Blunk, Dan I.**, Associate Professor, Neuropsychiatry, El Paso, 2005. M.D., University of Texas Medical Branch at Galveston, 1974.

**Boger, James A.**, Associate Clinical Professor, Pediatrics, Amarillo, 1994. M.D., University of Texas Medical Branch at Galveston, 1966.

**Bolton, Jack A.**, Assistant Professor, Anesthesiology, Lubbock, 2000. M.D., Texas Tech University Health Sciences Center, 1990.

**Boman, Darius A.**, Director, Pathology, El Paso, 2005. M.D., Bombay University, 1973.

**Boswell, Mark.** Professor, Anesthesiology, Lubbock, 2005. Ph.D., 1982, M.D., Case Western Reserve University, 1984.

**Bourgeois, Michael J.**, Professor, Pediatrics, Lubbock, 1981. M.D., Louisiana State University School of Medicine, 1975.

**Bradley, Charles A.**, Professor, Pathology, Lubbock, 1987. Ph.D., University of Kentucky, 1975.

**Bridges, Walter J.**, Associate Clinical Professor, Pediatrics, Amarillo, 2000. M.D., Texas Tech University Health Sciences Center, 1988.

**Bright, Robert K.**, Associate Professor, Microbiology & Immunology, Lubbock, 2002. Ph.D., University of Texas Health Sciences Center at San Antonio, 1994.

**Bright, Tamis M.**, Associate Clinical Professor, Internal Medicine, El Paso, 1995. M.D., Loyola Stritch Medical School, 1989.

**Brindley, George.** Associate Clinical Professor, Orthopaedic Surgery, Lubbock, 2006. M.D., University of Texas Medical Branch at Galveston, 1981. M.S., University of Minnesota, 1985.

**Briones, David F.**, Professor, Neuropsychiatry, El Paso, 1976. M.D., University of Texas Medical Branch at Galveston, 1971.

**Brower, Richard D.**, Associate Clinical Professor, Neuropsychiatry, El Paso, 1996. M.D., University of Texas Medical Branch at Galveston, 1985.

**Brown, Elisa L.**, Assistant Clinical Professor, OB/GYN, Odessa, 2005. M.D., Eastern Virginia Medical School, 1994.

**Brown, James M.**, Assistant Clinical Professor, Emergency Medicine, El Paso, 1998. M.D., Texas Tech University Health Sciences Center, 1994.

**Bruker, John R.**, Clinical Instructor, Research & Development, El Paso, 1993. D.V.M., Texas A&M University College of Veterinary Medicine, 1992.

**Bruner, Lia P.**, Assistant Clinical Professor, Family Medicine, Lubbock, 2006. M.D., Harvard Medical School, 2001.

**Bryan, Earl D.**, Assistant Clinical Professor, Emergency Medicine, El Paso, 1995. M.D., University of Texas Health Sciences Center Houston, 1991.

**Bryan, Garnett C.**, Associate Professor, Family Medicine, Amarillo, 1993. M.D., University of Texas Southwestern Medical School, 1958.

**Burks, James K.**, Professor, Internal Medicine, Odessa, 1994. M.D., University of Texas Southwestern Medical School, 1971.

**Butler, Jack M.**, Assistant Clinical Professor, Emergency Medicine, El Paso, 1999. M.D., Texas Tech University Health Sciences Center, 1999.

## C

**Calleros-Macias, Jesus**, Instructor, Radiology, El Paso, 2004. M.D., Universidad Autonoma de Chihuahua, 1991.

**Camp, Tammy M.**, Assistant Clinical Professor, Pediatrics, Lubbock, 1997. M.D., Texas Tech University Health Sciences Center, 1994.

**Casner, Paul R.**, Professor, Internal Medicine, Amarillo, 1983. Ph.D., 1975. M.D., New York Medical College, 1980.

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**Chaffin, W. Lajeau**, Professor, Microbiology & Immunology, Lubbock, 1981. Ph.D., University of Wisconsin, 1972.

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