



**TEXAS TECH UNIVERSITY**

**HEALTH SCIENCES CENTER EL PASO**

**PAUL L. FOSTER SCHOOL OF MEDICINE**

**Catalog for Academic Year 2015 - 2016**

The Texas Tech University Health Sciences Center (TTUHSC) is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award baccalaureate, masters, doctoral, and professional degrees. For additional information, contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of the Texas Tech University Health Sciences Center.

<b>Statement of Equal Opportunity</b> .....	3
<b>Board of Regents</b> .....	3
<b>Administration</b> .....	4
<b>Vision/Mission Statement</b> .....	5
<b>Background and History</b> .....	5
<b>Office of Admissions</b> .....	6
General Philosophy .....	6
Undergraduate Course Requirements .....	7
Admissions Requirements .....	7
Prerequisite Courses .....	8
Medical College Admissions Test (MCAT) .....	8
Application Process .....	8
Admission Policies for Non-Residents of Texas .....	9
Applications .....	10
Application Timeline .....	10
Immunizations, Health Insurance and Disability Insurance .....	10
Special Considerations .....	11
Deferment of Matriculation .....	11
Application for Admission in Advanced Standing .....	11
Academic Scholarships .....	11
<b>Office of Student Affairs</b> .....	12
<b>Code for Professional Conduct</b> .....	12
<b>Standards for Entry and Curriculum Completion</b> .....	12
<b>Procedure for Students with Disabilities</b> .....	17
<b>Student Life and Services</b> .....	20
PASE Program .....	20
Office of the Registrar .....	21
Office of Financial Aid .....	21
Housing .....	22
<b>The Doctor of Medicine Degree Program</b> .....	22
Undergraduate Medical Education .....	22
The College System .....	22
Library .....	23
Grading .....	24
United States Medical Licensing Exam (USMLE) .....	24
Curriculum Content .....	24
Institutional Learning Goals .....	24
The Pre-Clerkship Curriculum .....	28
The Clerkship Curriculum .....	31
<b>Faculty Roster</b> .....	45

The provisions of this catalog do not constitute a contract, expressed or implied, between any applicant, student, or faculty member and the Texas Tech University Health Sciences Center Paul L. Foster School of Medicine. The Texas Tech University Health Sciences Center Paul L. Foster School of Medicine reserves the right to change or withdraw courses at any time. It also may change fees, calendar, curriculum, graduation procedures,

and any other requirement affecting students. Changes will become effective whenever the proper authorities so determine and will apply to both prospective students and those already enrolled.

## **STATEMENT OF EQUAL OPPORTUNITY**

The Paul L. Foster School of Medicine is committed to a policy of equal opportunity. It will not discriminate on the basis of race, color, sex, age, religion, sexual orientation, national origin or physical handicap.

All inquiries and correspondence concerning admission to the School of Medicine should be addressed to:

Office of Admissions  
Paul L. Foster School of Medicine  
Texas Tech University Health Sciences Center  
5001 El Paso Drive  
El Paso, TX 79905  
Phone: (915) 215-4410

## **TEXAS TECH UNIVERSITY SYSTEM BOARD OF REGENTS**

**202 Administration Building**  
**Box 42011**  
**Lubbock, TX 79409-2201**  
**Phone: (806)742-2161**  
**Fax: (806)742-4345**

### **Officers**

Mickey L. Long, Chair  
Debbie Montford, Vice Chair

### **Members**

Term Expires January 31, 2017

Larry K. Anders  
Debbie Montford  
John D. Steinmetz

Term Expires January 31, 2019

John Esparza  
L. Frederick "Rick" Francis  
Tim Lancaster

Term Expires January 31, 2021

Mickey L. Long  
Ronnie Hammonds  
Christopher M. Huckabee

## **TEXAS TECH UNIVERSITY SYSTEM CHANCELLOR**

**124 Administration Building**  
**Box 42013**  
**Lubbock, TX 79409-2013**

**Phone: (806)742-0012**  
**Fax: (806)742-8050**

Robert Duncan, Chancellor, Texas Tech University System

**TEXAS TECH UNIVERSITY**  
**HEALTH SCIENCES CENTER EL PASO**

**Medical Education Building (MEB) Suite 3200**  
**5001 El Paso Drive**  
**El Paso, TX 79905-2827**  
**Phone: (915)215-4300**  
**Fax: (915)783-5533**

Richard Lange, MD, President, TTUHSC El Paso, and Dean, Paul L. Foster School of Medicine  
J. Manuel de la Rosa, MD, Provost and Vice President for Health Affairs, TTUHSC El Paso

**TEXAS TECH UNIVERSITY**  
**HEALTH SCIENCES CENTER**  
**PAUL L. FOSTER SCHOOL OF MEDICINE**  
**ADMINISTRATION**

- Dean* ..... *Richard Lange, MD*
- Associate Dean for Medical Education* ..... *Richard D. Brower, MD*
- Associate Dean for Clinical Affairs* ..... *Michael Romano, MD*
- Associate Dean for Research*..... *Peter S. Rotwein, MD*
- Associate Dean for Faculty Affairs and Development* ..... *Hoi Ho, MD*
- Associate Dean for Admissions and Recruitment*..... *Manuel Schydlower, MD*
- Associate Dean for Student Affairs* ..... *Kathryn Horn, MD*
- Associate Dean for Graduate Medical Education*..... *Armando Meza, MD*
- Associate Dean for Finance and Administration* ..... *Frank Stout*

**VISION**

The Texas Tech University Health Sciences Center Paul L. Foster School of Medicine will promote wellness and relieve human suffering through excellence in health care, intellectual innovation and service beyond borders.

**MISSION**

The mission of the Texas Tech University Health Sciences Center Paul L. Foster School of Medicine is to provide an outstanding education and development opportunities for a diverse group of students, residents, faculty, and staff; advance knowledge through innovation and research; and serve the needs of our socially and culturally diverse communities and regions.

## **BACKGROUND AND HISTORY**

Texas Tech El Paso has played a vital role in El Paso’s healthcare history for over three decades. During that time it has been the academic home to many outstanding medical students, resident physicians, and faculty. The school opened its doors officially in 1973, as the Regional Academic Center in El Paso, providing clinical training to Texas Tech University Health Sciences Center medical students through a teaching affiliation with R.E. Thomason Hospital. In 2001 the El Paso campus received legislative authorization to establish a full four-year medical school and in 2003 and 2005 ground was broken for the construction of state-of –the-art research facilities and a medical education building. In February 2008, the school, now known as the Paul L. Foster School of Medicine, succeeded in being awarded preliminary accreditation by the Liaison Committee on Medical Education (LCME) signifying that its educational programs fully meet the high standards required for admitting its first class of students. That class was seated in July 2009.

Today the Texas Tech University Health Sciences Center Paul L. Foster School of Medicine has close to 1000 faculty and staff and is a flourishing health sciences and medical center. Clinical training sites are provided by University Medical Center (formerly R.E. Thomason Hospital), William Beaumont Army Medical Center, Providence Hospital, and the El Paso Psychiatric Center. Ambulatory experiences are available in affiliated clinics throughout the greater El Paso area, including facilities located in areas that have previously been underserved and lacking in adequate healthcare resources. The Paul L. Foster School of Medicine is committed to providing its students a first rate, clinically based, educational experience that is firmly grounded in the basic sciences and clinical skills that will prepare the new graduate for entry into any medical specialty of his or her choosing. A further goal of the Paul L. Foster School of Medicine is to inculcate the values and attitudes of caring and compassion for the wellbeing of patients and their families with a special emphasis on the unique health care needs of the Texas-Mexico border.

In addition to the four-year curriculum leading to the M.D. degree, the Paul L. Foster School of Medicine provides extensive graduate medical education opportunities in a variety of residency programs including Internal Medicine, Surgery, Family Medicine, Pediatrics, Emergency Medicine, Psychiatry, Obstetrics and Gynecology, and Radiology. These programs, like the newly accredited medical school, all meet the exacting standards of the Accreditation Council for Graduate Medical Education. Students who come to the Paul L. Foster School of Medicine can be assured of training in an environment that will enable them to develop the knowledge and skills necessary to provide the citizens of Texas and the nation with the highest quality of health care.

## **OFFICE OF ADMISSIONS**

### **Paul L. Foster School of Medicine Office of Admissions**

- Associate Dean for Admissions ..... Manuel Schydlower, MD
- Director of Admissions..... John Snelling, MA
- Associate Director of Admissions ..... Laura Olivas, MBA
- Assistant Director of Advising/Recruiting ..... Yolanda Betancourt, MBA
- Assistant Director of Outreach Programs ..... Rene Andre, MBA
- Analyst II..... Melissa Lenderman, BSBA
- Administrative Assistant ..... Martha Lucero



## **General Philosophy**

Texas Tech University Health Sciences Center El Paso (TTUHSCEP) Paul L. Foster School of Medicine invites applications from qualified residents of the state of Texas, including El Paso area counties, and the adjacent county of New Mexico that comprise the service area of TTUHSCEP. Out-of-state residents will be considered on an individual basis. Only 10% of the class can be from out-of-state, therefore, out-of-state applicants should have competitive credentials to apply. Currently 100 students are selected per class. The Admissions Committee carefully examines each application for the personal qualities and proven academic ability to determine potential for becoming an effective and competent physician. 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 the essential role of compassion, motivation, maturity, personal integrity, and the ability to communicate effectively as traits of the consummate physician.

In the screening process, applicants will be evaluated not only on their cognitive merits, but also on non-cognitive or non-academic factors as well. This will include evaluations of their personal statements, letters of recommendation and other life, extracurricular or employment experiences. The interview is specifically designed to focus on non-academic criteria. Interviewers will assess the applicant's medical experiences, motivation to enter medicine, knowledge of issues in medicine, personal characteristics and problem solving ability.

TTUHSCEP-Paul L. Foster School of Medicine is committed to helping meet the needs of an increasingly diverse population by recruiting a diverse medical school class that exhibits qualities indicative of academic success. The School of Medicine admission guidelines call for no discrimination on the basis of race, sex, age, ethnic origin, religion, sexual orientation or disability. To facilitate diversity, disadvantaged and/or underrepresented minority background and interest in the region are among the factors considered by the admissions committee. With equal qualifications, preference may be given to residents of El Paso, the US border region and West Texas.

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. Each applicant is examined for overall suitability. The Admissions Committee makes an effort to select a class with varied backgrounds, interests, and life experiences so that there is a stimulating and broadening learning environment for the medical curriculum.

## **Undergraduate Course Requirements**

A baccalaureate degree is required, and 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 must be completed before the individual applies for admission.

Course work from non-U.S. or Canadian schools will be accepted only if it appears, with a grade, on the transcript of a U.S. or Canadian college or university as an individual course. 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. The Admissions Committee reviews the academic challenge provided by course selection and gives preference to students with a broad educational background.

## **Admission Requirements**

Successful applicants for admission to the Paul L. Foster School of Medicine (PLFSOM) must have completed an undergraduate curriculum and must have been awarded a baccalaureate degree or its equivalent before matriculation. Ninety semester hours, including all prerequisite courses must have been completed at a U.S. or Canadian accredited college or university.

## The Prerequisite Courses Are:

COURSES	HOURS
Biology	<b>12 semester hours</b>
Biology laboratories	<b>2 semester hours</b>
General chemistry with laboratories	<b>8 semester hours</b>
Organic chemistry with laboratories	<b>8 semester hours</b>
Biochemistry*	<b>3 semester hours</b>
Physics with laboratories	<b>8 semester hours</b>
Calculus or Statistics**	<b>3 semester hours</b>
English	<b>6 semester hours</b>

*\*Required with the application for entry year 2017 and beyond, may be used towards fulfilling part of the Biology or Chemistry requirement.*

*\*\*Statistics is required for entry year 2017 and beyond; Calculus is no longer required for entry year 2017 and beyond.*

Grades of C or better are required for all prerequisite courses or AP credit.

Successful applicants also should have pursued a broad educational experience, including topics outside of chemistry, biology, physics and mathematics. Although PLFSOM will have no prescribed course of study beyond the required courses identified above, the Admissions Committee will consider the breadth of the candidate's educational experience in their determination of admission. Additional recommended courses include the following:

Humanities, Social Sciences, or Behavioral Sciences: 12 semester hours.

Additional coursework in Biochemistry\*, Statistics and/or Calculus\*\*, Genetics and Cellular/Molecular Biology is encouraged. Competence in spoken and written English is necessary. A facility in conversational Spanish will be an advantage for students intending to remain in the Southwest.

(\* and \*\* refer to the notes for the table directly above)

### Medical College Admissions Test (MCAT)

The MCAT is also a requirement for admission. The applicant's best score from the last five years will be considered. Information about the MCAT and registration for the exam can be accessed at <http://aamc.org/students/mcat/>.

## **APPLICATION PROCESS**

Applications for admission will be processed through the Texas Medical and Dental Schools Application Service (TMDSAS). Application forms and procedural information are available on the TMDSAS website at <http://www.tmdsas.com>. TMDSAS will notify applicants when their applications have been sent to the school. Applicants will be notified via email to complete the Paul L. Foster School of Medicine secondary application.

Applications will be reviewed for completeness. In addition, applications will be reviewed for adherence to the admissions requirements established by the school. Those candidates whose files are complete and who are considered to be competitive for admission, based on the admissions criteria established by the school, will be invited to interview. These criteria include scores from the MCAT; academic performance as reflected by the science GPA and overall GPA; rigor of the undergraduate curriculum, including course selection, extracurricular activities (medical and non-medical), and employment and their impact on performance and maturation; recommendations from premedical advisors or faculty; socioeconomic and disadvantaged background; personal

statement and its reflection of communication skills, personal qualities, leadership, maturity, determination, and motivation for a career in medicine; regional origin.

Candidates who are selected for interview will be invited for a full day of orientation to the school and interviews. The interview is designed to evaluate their interest and knowledge of the health care field and motivation for a medical career; personal characteristics; and problem-solving skills. The interview can also address questions by the candidate that may have arisen during the application process. These interview sessions will be conducted weekly from early August to the middle of January. All successful candidates must participate in the interview process.

Following each interview session, the Admissions Committee will review the credentials and interview evaluations for each of the candidates and will make decisions for or against admission. The decisions of the Admissions Committee are final. Based upon these decisions, a list of acceptable candidates will be prepared ranking those judged to be best qualified for the study and practice of medicine. Following TMDSAS guidelines, we will make offers to superior candidates between November 16 and December 31. All other candidates will be offered positions through the TMDSAS matching process. All candidates, whether holding an offer or not, must submit preferences to the TMDSAS match by January 21. Match results are announced on February 1. A rolling admissions process will then be used to fill remaining positions.

Students who are accepted for admission will receive a packet of information during the summer before their matriculation. This packet will contain information about the community of El Paso and the school, including lists of books and materials required, class schedules, housing opportunities, and contact information. Additionally, the packet will include information and forms regarding various requirements that the students will need to complete before matriculation, such as acknowledgement of the standards for curricular completion, immunization forms, documentation of health insurance, documentation of a pre-entry physical examination, and a criminal background check.

The TTUHSC Registrar is the custodian of criminal background checks. All reports indicating a criminal record are forwarded to the Associate Dean for Student Affairs for review by a committee consisting of him/herself, the Associate Dean for Admissions, and the Director of Student Affairs. This review will determine if the violations would preclude the student from training in the clinical affiliates based on exclusion lists provided by these institutions.

### **Admissions Policies for Non-Residents of Texas**

Non-resident applicants to the participating TMDSAS Texas schools are not subject to the Texas Match. Acceptance of non-resident, interviewed applicants begins on October 15. TTUHSC Paul L. Foster 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. Residency is determined according to the Texas Higher Education Coordinating Board Rules and Regulations for Determining Residency. Residency information is available on the TMDSAS website. TMDSAS will make an initial determination of each applicant's residency status.

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

JAMP is a special program created to assist and encourage highly qualified, economically disadvantaged students from Texas pursuing a medical education and supported by continuing appropriation from the Texas Legislature. JAMP students who satisfy the program requirements are guaranteed admission to a medical school in Texas. Up to 10% of the entering class may consist of students in this program. All JAMP students are also interviewed and ranked for the separate JAMP matches.



# **APPLICATIONS**

Please submit your application on line through TMDSAS

<http://www.tmdsas.com>

Texas Medical and Dental Schools Application Service

702 Colorado, Suite 6400

Austin, Texas 78701

When notified to do so, please submit the Paul L. Foster School of Medicine secondary application.

Applicants selected for an interview visit will be notified.

## **Application Timeline**

### *Filing of Applications*

Earliest Date: May 1

Latest Date: October 1

### *Interview Period*

August – January

Interviews are conducted on Thursdays during this period.

### *Acceptance Notice*

Pre-Match Open Acceptance Period:

November 15 – December 31

### *Texas Match*

Applicants will rank all schools where they have interviewed regardless of whether or not they are holding a pre-match offer.

Applicant preference list due to TMDSAS: January 10

Applicant Match Day: February 1

There are 100 seats in the entering class. Any seats that become open after the match will be filled from the alternate list.

## **Immunizations, Health Insurance, and Disability Insurance**

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

Students will be required to be up to date on their immunizations and provide documentation of immunization against tetanus, diphtheria, pertussis, measles, mumps, rubella, hepatitis A and B, and meningitis. Because of the school's location on the border and requirement by the principal teaching hospital, students must also demonstrate serologic protective titers against varicella, rubella and rubeola. A tuberculin or equivalent test will also be required in the six-month period prior to beginning the curriculum and annually thereafter. A chest radiograph will be accepted only if the student is known to be skin-test positive.

Students are expected to have health insurance coverage for each semester enrolled. Students should be prepared to provide proof of coverage at the time of registration. The Office of Student Affairs will make available information on student health insurance providers for all registered students of the School of Medicine. Students may investigate other insurance plans or be enrolled in a parent's or spouse's plan.

Each student is assessed a fee during of \$46.80 in the Fall of each academic year to purchase long-term disability insurance. The amount of coverage is negotiated annually. Additional disability insurance may be purchased by the student if desired.

### Special Considerations

#### 1. 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 for 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. PLFSOM scholarships do not carry over if the student is deferred.

#### 2. Application for Admission in Advanced Standing

Applications will be accepted for transfer into the third year only if there are vacancies. Texas residents enrolled in good standing in LCME accredited medical school are preferred; non-residents will be considered on a space available basis. Applicants for advanced standing must have written permission from their Dean of Student Affairs and must have passed Step 1 of the United States Medical Licensing Examination (USMLE 1) as conditions for acceptance Eligible applicants who are acceptable for consideration may be invited for an interview.

The school does not accept transfer applications from students or graduates of schools not accredited by the Liaison Committee on Medical Education. Full details of the advanced standing application process can be found at: <http://el Paso.ttuhschool.edu/fostersom/admissions/> (select the Advance Standing Admission Application button).

### Academic Scholarships

The Paul L. Foster School of Medicine offers a number of competitive academic scholarships. The scholarships are based on merit as determined by the Paul L. Foster School of Medicine Scholarship Committee. Many scholarships do not require an application, are based on a merit rank order list derived from decisions by the Admissions Committee and are awarded prior to matriculation. These scholarships are renewable for up to four years contingent on successful advancement to the next year of medical studies. Numbers of scholarships and award amounts may vary.

## **OFFICE OF STUDENT AFFAIRS**

### Paul L. Foster School of Medicine Office of Student Affairs

Associate Dean for Student Affairs .....Kathryn V. Horn, MD  
Senior Director of Student Affairs .....Alex Garcia  
Director of Academic Support..... Tammy T. Salazar, PhD  
Unit Manager (Student Services/Financial Aid) .....Diana Andrade  
Executive Associate..... Hilda Alarcon, Med  
Registrar ..... Juan A. Camacho

### Mission Statement

The mission of the Office of Student Affairs 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 the Paul L. Foster School of Medicine. The goal of the office is for every medical student to be successful and to develop professional skills and personal relationships that will last a lifetime. The Office of Student Affairs serves as the advocate for students in their academic, career, and personal life.

## **CODE OF PROFESSIONAL CONDUCT/HONOR SYSTEM**

By registration in the Paul L. Foster School of Medicine, each student subscribes to the Code of Professional and Academic Conduct that was originally developed and approved conjointly by Texas Tech School of Medicine students and faculty in 1985. The code is compatible with the regulations of the University, but is designed expressly for the Schools 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 who 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 that includes the detailed Codes, as well as other relevant policies and procedures, is given to each student at matriculation. They are available in the Office of Student Affairs and are posted on the school web site (<http://elpaso.ttuhschool.edu/fostersom/studentaffairs/>).

## **STANDARDS FOR ENTRY AND 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:

- A preparatory phase with at least 90 hours of credit in an accredited U.S. or Canadian college;
- A rigorous professional education leading to the M.D. degree;
- Postgraduate (residency) training; and
- 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 (LCME). This body is a joint committee constituted by the American Medical Association and the Association of American Medical Colleges. The LCME is the official accrediting body for American and Canadian medical schools. A complete copy of the guidelines for accreditation is available at: [www.lcme.org](http://www.lcme.org).

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 physician. Admissions standards for medical school must be rigorous and exacting, and admissions must be extended only to those who are qualified to meet the performance standards of the profession.

### **Development of Medical Curriculum:**



The medical faculty is charged 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, medical school faculty is 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 their 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:

**Observation:** The candidate must be able to observe demonstrations and experiments in the basic sciences. A candidate must be able to observe a patient accurately at a distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation. It is enhanced by the functional use of the sense of smell.

**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.

**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.

**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 follow these Standards for Curricular Completion.

**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.

**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.

## **PROCEDURE FOR STUDENTS WITH DISABILITIES**

TTUHSC complies with the American with Disabilities Act (ADA), Section 504 Rehabilitation Act of 1973, and state and local requirements regarding students with disabilities. Under these laws, no otherwise qualified and competitive individual with a disability shall be denied access to or participation in services, programs and activities of TTUHSC solely on the basis of the disability.

Students with grievances related to discrimination on the basis of a disability may contact the ADA Compliance Officer for Students in the Office of Student Affairs. Any student seeking remedy on the basis of disability must register as a disabled student with the ADA Compliance Office for Students and must provide all required documentation of disability.

### **Evaluation and Accommodation**

In determining the minimum standards for completion of the medical school curriculum, the Paul L. Foster School of Medicine recognizes that certain disabilities, as that term is defined in the Americans with Disabilities Act, 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. The use of a trained intermediary to observe or interpret information is considered to compromise the essential function of the physician.

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.

**To Apply for Accommodations:**

In order to request accommodations, a student must submit an application along with supporting documentation about the disability.

Documentation in the form of an evaluation performed by a qualified professional (such as a licensed physician or audiologist) should be provided to the ADA Compliance Officer for Students. Documentation of physical, sensory, or health-related disabilities (including, but not limited to, orthopedic, hearing, visual, systematic, or chronic illnesses) should include:

1. A diagnosis of the specific disability (including prognosis if appropriate); and
2. An indication of the severity and manner in which the disability limits the student's activity, particularly as it relates to University life; and
3. Recommendations for reasonable academic accommodations to equalize the student's opportunities at a post-secondary level.

Application and documentation must be submitted in writing to the TTUHSC-El Paso ADA Compliance Officer in the Office of Student Affairs. Information and the application can be found on the Student Services website <http://www.ttuhs.edu/studentservices/ada/>. The documentation about the disability must be current (from the last 2 years). The deadline for requests with supporting documentation is normally 30 days prior to the beginning of the first semester of enrollment. All applications for accommodations **must be renewed every year**.

The decision on whether or not an accommodation request will be granted will be made by the ADA Compliance Officer and faculty members who are knowledgeable regarding the area of disability. The School may also seek independent review from a specialist of its choice. Once a decision to grant accommodations is made, an official memo of the decision along with copies of the request will then be forwarded to the Paul L. Foster School of Medicine Student Affairs Committee which will meet and determine how the accommodations will be implemented in the curriculum. The student will receive an official memo of the committee's decision. 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 accommodations occurs during the school year, every effort will be made to expedite the process before the next testing event. If the request for accommodation is denied, the student will be notified in writing.

The Faculty through Promotions Policy 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 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 in addition to and separate from any request for accommodation by the Paul L. Foster 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 the Paul L. Foster School of Medicine.

**Comprehensive Assessment** - A comprehensive assessment must have been done within the last two years. A qualified professional, e.g., a licensed psychologist, a learning disabilities diagnostician, an educational psychologist, with experience in assessing adults must conduct the assessment.

The assessment must address the areas of aptitude, achievement, and information processing.

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.

Information regarding vocational interests and aptitudes may be included.

Students are responsible for the costs of any and all testing done with regard to learning disabilities.

The following tests are considered acceptable:

- **Aptitude.** A complete intellectual assessment with all subtests and standard scores reported. The Wechsler Adult Intelligence Scale-Revised (WAIS-R) with subtest scores or the WAIS-III is the highly preferred instrument. Also acceptable are the Woodcock-Johnson Psychoeducational Battery-Revised: Tests of Cognitive Ability, the Kaufman Adolescent and Adult Intelligence test and the Stanford-Binet Intelligence Scale-Fourth Edition.
- **Achievement.** A comprehensive academic achievement battery is essential with all subtests and standard scores reported for those subtests administered. Levels of functioning in reading, mathematics, and written language are required. Acceptable instruments include:
  - o Woodcock-Johnson Psychoeducational Battery-Revised: Tests of Achievement
  - o Weschler Individual Achievement Test (WAIT)
  - o Stanford Test of Academic Skills (TASK)
  - o Scholastic Abilities Test of Adults (SATA)



*Or specific achievement tests such as:*

- o Woodcock Reading Mastery Tests-Revised
- o Test of Written Language-3 (TOWL-3)
- o Stanford Diagnostic Mathematics Test.

The Wide Range Achievement Test-Revised is not acceptable.

- **Information Processing.** Specific areas of information processing (i.e., short- and long-term memory, sequential memory, auditory and visual perception and processing, processing speed, executive functioning and motor ability) should be addressed. Preferred instruments include the Detroit Tests of Learning Aptitude (DTLA-3), the Detroit tests of Learning Aptitude – Adult (DTLA-A), information from subtests on WAIS-R or the Woodcock-Johnson Psychoeducational Battery – Revised: Tests of Cognitive Ability.

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); standard scores and/or percentiles should be provided and interpreted for all normed measures.
- The nature and effect of the learning disability;
- An appraisal of the student's academic strengths and weaknesses;
- Recommendations for strategies and accommodations.

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

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.

*A history of substantial long-term functional impairment must be present.*

## **STUDENT LIFE AND SERVICES**

The Paul L. Foster School of Medicine is noted for the open friendliness of its student body and faculty. The small size of classes and the college system makes for an enhanced ability to get acquainted with each other. The city of El Paso offers good quality of life for students and student families. The geographic location of the School of Medicine provides a wealth of recreational and cultural experiences both in the city and the surrounding area. Housing is easily available and relatively economical and the semi-arid 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.

**PASE Program – The Office of Student Affairs** houses the Program for Academic Support and Enrichment (PASE), which provides services that are designed to help each student succeed from their first year to their last. It offers many resources to students that will help them maximize their academic potential and learn more efficiently and effectively. Features of the program include: individual assistance in identifying and improving areas such as studying, reading, test-taking, time management, and stress management; group workshops; individualized study plans based on learning preferences, workshops on USMLE Step preparation, and residency

interview preparation. The PASE Program also houses the PLFSOM Medical Student Teaching Center (MSTC) which offers peer assistance to students in many different areas. Services are free for students. The PASE Program is run by the Director of Academic Support and is available to all students – from those who are having trouble to students who just want to brush up on a particular skill or improve their existing study habits. For more information, refer to the Student Handbook at: <http://el Paso.ttuhsoc.edu/fostersom/studentaffairs/SAHandbook2014Revised.pdf>, as well as the Student Affairs website at: <http://el Paso.ttuhsoc.edu/fostersom/studentaffairs/>.

**The Office of the Registrar** is located in the Health Sciences Center in Lubbock and serves as custodian of the students' permanent academic records. The Registrar's Office is also responsible for registration, grade reports, transcript requests, enrollment and veteran certification. The Registrar's Office is easily accessed via the internet, by phone or through the Student Affairs office in El Paso.

**The Office of Financial Aid** serves students desiring financial assistance or information regarding loans and scholarships. A Liaison Financial Aid Officer is stationed at the Paul L. Foster School of Medicine and is located in the Office of Student Affairs. The Texas Tech University Health Sciences Center Office of Student Financial Aid is committed to working with each student in identifying financial resources to meet their financial needs to pursue their medical education.

Financial Aid is available to School of Medicine students in different forms. Funds that do not require repayment consist of Federal and State Grant funds and Scholarships from state, local and private funds. Funds that must be repaid consist of Federal, State, Local and Private Loan Funds. Financial aid is available for tuition, fees, books and supplies and living expenses for each academic year.

These funds are offered to students on the basis of financial need and other qualifications as specified by the Department of Education and the donor organizations.

Financial need is defined as the difference between the anticipated costs of attending the school and the amount of money available to the student from all sources. A needs analysis calculation is required of applicants for most financial aid programs.

The Paul L. Foster School of Medicine offers several types of scholarships which are awarded based on various factors. These include, but are not limited to, financial need, academic achievement, class standing, and areas of specialization.

No student or prospective student shall be excluded for participation in or be denied the benefits of any financial aid program on the basis of race, color, national origin, religion or sex.

Students seeking financial aid or additional information should contact:

Diana Andrade, Unit Manager  
The Office of Student Affairs, TTUHSC PLFSOM 5001 El Paso Drive, El Paso 79905  
Phone: (915) 215-4364  
E-mail: [diana.andrade@ttuhsc.edu](mailto:diana.andrade@ttuhsc.edu)

For more information contact:

The Office of Student Services, Registrar and Financial Aid  
Texas Tech University Health Sciences Center  
3601 4th Street, Room 3B310, MS 8310  
Lubbock, Texas 79430  
Phone: (806) 743-2300 Fax: (806) 743-3027

**Housing** - The School of Medicine does not furnish living quarters for its students. Each student makes his/her own arrangements. All students live in apartments or houses in the community. The Office of Student Affairs can provide information on available housing.

## **THE DOCTOR OF MEDICINE PROGRAM**

### **Undergraduate Medical Education**

The goal of the Paul L. Foster School of Medicine is to provide students with a broad base of knowledge in the basic and clinical sciences, so that each graduate is well prepared to enter any field of postgraduate medical training. The students will be exposed to an integrative curriculum that is interdisciplinary in the basic sciences and the clinical sciences.

To achieve these objectives, the curriculum is continually reviewed and appropriately modified to ensure the personal and professional growth of future physicians. The Paul L. Foster School of Medicine has endorsed the efforts of the Association of American Medical Colleges to examine and modify curricula in order to make education and training relevant to physician practice in the twenty-first century.

There is a firm commitment to the philosophy that the curriculum is the property and responsibility of the faculty rather than the component departments of the school. The Dean selects a Curriculum and Education Policy Committee that represents the faculty and the student body. This committee is charged with overall responsibility for establishing educational leading to high quality and well-balanced medical education programs. The management of the curriculum has been formally endorsed by the Liaison Committee on Medical Education. The Liaison Committee on Medical Education (LCME) represents the Association of American Medical Colleges and the American Medical Association as the national accreditation body for medical schools. In 2011 the Texas Tech University Health Sciences Center Paul L. Foster School of Medicine was accorded provisional accreditation, and full accreditation was granted in 2013.

### **The College System**

Students receive a variety of support services above and beyond the formal academic program. Upon admission, each student will be assigned to one of four medical student colleges that consist of students from each year of school as well as two college masters. These colleges will serve as the academic home for the student throughout the curriculum. In addition, the college will provide a social center for its members. This system gives students ready access to faculty for assistance and they are actively encouraged to utilize this valuable resource. The College Masters will meet regularly with the Senior Associate Dean for Medical Education, the Associate Dean for Student Affairs, and the Director of Academic Support to report on student performance, to identify students who might benefit from counseling on personal matters or study skills, and to share observations about the implementation of the curriculum.

### **Library**

The Delia Montes-Gallo Library of the Health Sciences at TTUHSC-El Paso is located in two buildings on campus. The AEC site is located on the first floor of the Academic Education Center (AEC) building, across from the Clinical Science Building (CSB) on Alberta Avenue. The AEC location houses clinical sciences materials. It includes a computer lab and a group study room in addition to study carrels and computer stations (both PC and Mac).

The MEB site is located on the second floor of the Medical Education Building (MEB). The collection at this location includes basic sciences materials. It has an audiovisual room as well as a large conference room, a reading room, and a study room. There are also three small group study rooms located directly outside of the MEB library. In addition, there are study carrels and tables at which students may study and connect to the

network via ethernet cables or wifi. Computer stations are available for use as well (both PC and Mac).

Many services are available to students, including reference assistance (both in-person and online), interlibrary loan, and library instruction classes. Library instruction sessions are available to individuals or groups and can be tailored to specific coursework and/or projects. The library also provides students with formal courses in years 3 and 4. These classes serve to teach the students effective searching techniques for accessing the vast amount of information available to them.

In addition to the more than 50,000 physical items in the library, there are thousands of electronic resources available to students, faculty and staff. This includes over 42,000 electronic books, 28,000 subject-related electronic journals, and 500 electronic databases. Some examples include: PubMed, ClinicalKey, Exam Master (USMLE prep), Anatomy.tv, Netter Presenter, MICROMEDEX and EMBASE, Evidence-Based Medicine databases (DynaMed, Essential Evidence Plus, Cochrane, etc.), Scopus and ISI Web of Knowledge among many others.

Many of these resources are also available for download to mobile devices. Students have remote access to all electronic resources as well by using their eRaider login when off-campus.

Please visit the library's website <http://www.ttuhschool.edu/libraries/> for detailed information about these and other services at each of the TTUHSC library sites

Those persons using the collections and services of the Library of the Health Sciences are reminded that violations of Copyright law (Title 17, United States Code) are criminal activities. This includes the "pirating," or illegal copying of software. Violators run the risk of arrest, substantial fine, and perhaps incarceration. Students discovered in such activities will be reported to their Deans and will be denied library privileges. Attempts by patrons to coerce or otherwise force library staff to violate copyright law are similarly criminal activities, and will result in the suspension of library privileges for those involved. This library system strictly adheres to copyright guidelines and is a member of the CCC (Copyright Clearance Center, Inc.).

## **Grading**

Courses are graded on a categorical scale with grades of Pass and Fail in the first two years and Honors, Pass, and Fail in years three and four. The Student Affairs Handbook outlines specific policies on grading and promotions. Decisions on progression through the curriculum are based on review of the cumulative record and on demonstration of professional behavior.

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

Medical students are required to take Step 1 of the United States Medical Licensing Examination (USMLE) no later than July 6th of their second year. Since the test is a component of application for licensure to practice medicine, the student is required to pay for the examination. Passing USMLE Step 1 is a condition for continuation into the MS3/clerkship phase of the curriculum. If a student's Step 1 score comes back after the start of the clerkship and is a fail, the student may be required to withdraw from the clerkship until the next block and the student must pass Step 1 before re-initiating the clerkship phase "off-cycle". Students will also be required to take and pass USMLE Step 2 Clinical Skills and Clinical Knowledge prior to graduation. The Student Affairs Handbook has more information on USMLE policies.

## **Curriculum Content**

The M.D. degree will be awarded to students who satisfactorily complete all four-year courses, clerkships, and graduation requirements including passing of Steps 1 and 2 (both clinical knowledge and clinical skills components) of the USMLE examination.



## Institutional Learning Goals

The Curriculum and Educational Policy Committee has identified the following institutional learning goals that all students will achieve by the time they graduate:

<b>Competency Domain:</b>	<b><u>Patient Care</u></b>
<b>Overall Goal:</b>	<b>“Provide patient-centered care that is compassionate, appropriate and effective for the treatment of health problems and the promotion of health.”</b>
1.1	Gather essential information about patients and their conditions through history taking, physical examination, and the use of laboratory data, imaging studies, and other tests.
1.2	Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
1.3	For a given clinical presentation, use data derived from the history, physical examination, imaging and/or laboratory investigation to categorize the disease process and generate and prioritize a focused list of diagnostic considerations.
1.4	Organize and prioritize responsibilities in order to provide care that is safe, efficient, and effective.
1.5	Recognize a patient requiring urgent or emergent care, and initiate evaluation and management.
1.6	Describe and propose treatments appropriate to the patient’s condition and preferences.
1.7	Accurately document history, physical examination, assessment, investigatory steps and treatment plans in the medical record.
1.8	Counsel and educate patients and their families to empower them to participate in their care and enable shared decision-making.
1.9	Provide preventative health care services and promote health in patients, families and communities.
<b>Competency Domain:</b>	<b><u>Knowledge for Practice</u></b>
<b>Overall Goal:</b>	<b>“Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care.”</b>
2.1	Compare and contrast normal variation and pathological states in the structure and function of the human body across the life span.
2.2	Apply established and emerging foundational/basic science principles to health care.
2.3	Apply evidenced-based principles of clinical sciences to diagnostic and therapeutic decision-making and clinical problem solving.
2.4	Apply principles of epidemiological sciences to the identification of health problems, risk factors, treatment strategies, resources, and disease prevention/health promotion efforts for patients and populations.
2.5	Apply principles of social-behavioral sciences to patient care including assessment of the impact of psychosocial, cultural, and societal influences on health, disease, care seeking, adherence and barriers to care.
2.6	Demonstrate an understanding of and potential for engagement in the creation, dissemination and application of new health care knowledge.
<b>Competency Domain:</b>	<b><u>Practice-Based Learning and Improvement</u></b>

<b>Overall Goal:</b>	<b>“Demonstrate the ability to investigate and evaluate the care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.”</b>
3.1	Identify and perform learning activities to address gaps in one’s knowledge, skills and/or attitudes.
3.2	Demonstrate a basic understanding of quality improvement principles and their application to analyzing and solving problems in patient and/or population-based care.
3.3	Accept and incorporate feedback into practice.
3.4	Locate, appraise and assimilate evidence from scientific studies related to patients’ health problems.
3.5	Obtain and utilize information about individual patients, populations or communities to improve care.
<b>Competency Domain:</b>	<b><u>Interpersonal and Communication Skills</u></b>
<b>Overall Goal:</b>	<b>“Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families and health professionals.”</b>
4.1	Communicate effectively with patients and families across a broad range of socio-economic and cultural backgrounds.
4.2	Communicate effectively with colleagues and other health care professionals.
4.3	Communicate with sensitivity, honesty, compassion and empathy.
4.4	Maintain comprehensive and timely medical records.
<b>Competency Domain:</b>	<b><u>Professionalism</u></b>
<b>Overall Goal:</b>	<b>“Demonstrate understanding of and behavior consistent with professional responsibilities and adherence to ethical principles.”</b>
5.1	Demonstrate sensitivity, compassion, integrity and respect for all people.
5.2	Demonstrate knowledge of and appropriately apply ethical principles pertaining to patient privacy, autonomy and informed consent.
5.3	Demonstrate accountability to patients and fellow members of the health care team.
5.4	Demonstrate and apply knowledge of ethical principles pertaining to the provision or withholding of care.
5.5	Demonstrate and apply knowledge of ethical principles pertaining to health care related business practices and health care administration, including compliance with relevant laws, policies, regulations and the avoidance of conflicts of interest.
5.6	Demonstrate honesty in all professional and academic interactions.
5.7	Meet professional and academic commitments and obligations.
<b>Competency Domain:</b>	<b><u>Systems-Based Practice</u></b>
<b>Overall Goal:</b>	<b>“Demonstrate an awareness of and responsiveness to the larger context and system of health care as well as the ability to call on other resources in the system to provide optimal care.”</b>
6.1	Describe the health system and its components, how the system is funded and how it affects individual and community health.
6.2	Demonstrate the ability to identify patient access to public, private, commercial and/or community-based resources relevant to patient health and care.

6.3	Incorporate considerations of benefits, risks and costs in patient and/or population care.
6.4	Describe appropriate processes for referral of patients and for maintaining continuity of care throughout transitions between providers and settings.
<b>Competency Domain:</b>	<b><u>Interprofessional Collaboration</u></b>
<b>Overall Goal:</b>	<b>“Demonstrate the ability to engage in an interprofessional team in a manner that optimizes safe, effective patient and population-centered care”</b>
7.1	Describe the roles of health care professionals.
7.2	Use knowledge of one’s own role and the roles of other health care professionals to work together in providing safe and effective care.
7.3	Function effectively both as a team leader and team member.
7.4	Recognize and respond appropriately to circumstances involving conflict with other health care professionals and team members.
<b>Competency Domain:</b>	<b><u>Personal and Professional Development</u></b>
<b>Overall Goal:</b>	<b>“Demonstrate the qualities required to sustain lifelong personal and professional growth.”</b>
8.1	Recognize when to take responsibility and when to seek assistance.
8.2	Demonstrate healthy coping mechanisms in response to stress and professional responsibilities.
8.3	Demonstrate flexibility in adjusting to change and difficult situations.
8.4	Utilize appropriate resources and coping mechanisms when confronted with uncertainty and ambiguous situations.
8.5	Demonstrate the ability to employ self-initiated learning strategies (problem definition, identification of learning resources and critical appraisal of information) when approaching new challenges, problems or unfamiliar situations.

### **Pre-Clerkship Curriculum (Years 1-2)**

The first two years of the curriculum consists of five required courses: *Scientific Principles of Medicine*; *Medical Skills*; *Society, Community, and the Individual*; *Masters’ Colloquium*; and *ICE Pre-Clerkship Prep*. A table and description of each of these courses follows:

<b>PLFSOM Pre-Clerkship Curriculum</b>						
<b>YEAR 1</b>				<b>YEAR 2</b>		
July	August - May			August - February		Mar
<b>SCL/Spanish “Immersion”</b>	<i>Scientific Principles of Medicine</i>	<b>Comprehensive End of Year Exam</b>	<b>Summer Break and/or Scholarly Activity and Research Program</b>	<i>Scientific Principles of Medicine</i>	<b>ICE Pre-Clerkship Prep ACLS, TSGR, End of Year 2 OSCE, and NBME CBSE</b>	<b>Self-Study and USMLE Step 1</b>
	Medical Skills			Medical Skills		
	Masters’ Colloquium			Master’s Colloquium		
	Society, Community, and Individual			Society, Community, and the Individual		

OSCE: Objective Structured Clinical Examination

NBME CBSE: Comprehensive Basic Science Examination (provided by the NBME)

ACLS: Advanced Cardiac Life Support

TSGR: Tankside Grand Rounds

**The Scientific Principles of Medicine (SPM)** is a two-year course divided into units. These units are: Introduction to Health and Disease (5 weeks), Gastrointestinal System (5 weeks), Integumentary and Musculoskeletal Systems and Introduction to the Nervous Systems (8 weeks), Hematologic System (4 weeks), Cardiovascular and Respiratory Systems (7 weeks), Renal System (4 weeks), Central Nervous System and Special Senses (7 weeks), Endocrine System (4 weeks), Reproductive Systems (6 weeks), and Mind and Human Development (6 weeks). Each unit is organized around a number of “clinical presentations” representing the various ways a patient might present to the physician (e.g., sore throat, headache, referral for abnormal laboratory findings). The clinical presentation serves as the spring-board for the study of the basic sciences (e.g., anatomy, biochemistry, microbiology, pathology, and pharmacology) needed to understand that presentation. Over a two year period students are exposed to approximately 85 common clinical presentations associated with thousands of specific diagnoses. The Scientific Principles of Medicine course employs a variety of teaching and learning modalities including interactive lectures, small groups, laboratory exercises, team-based learning and self-directed study.

**Medical Skills** is a two year course in which students develop the knowledge, attitudes, and skills necessary for the optimal care of the patient. This course addresses communication skills, history taking, physical examination skills, and basic procedural skills. This course is aligned with the units of the Scientific Principles of Medicine course. For example, when students learn about the patient presenting with chest discomfort in the Cardiovascular/Pulmonary unit of SPM, in Medical Skills they learn how to conduct a focused history and physical examination on a patient who presents to the doctor with chest discomfort, enabling them to distinguish between cardiac, pulmonary, and musculoskeletal causes of chest pain. During this period they will also learn to distinguish between normal and abnormal heart sounds and how to administer and interpret ECGs. Training in Medical Skills will take place primarily in a state-of-the-art Clinical Skills and Clinical Simulation Center employing standardized patients, partial task trainers, high tech human body simulators, and virtual reality simulators.



**Society, Community, and the Individual (SCI)** is a two-year long learning experience designed to expose students to population health, public health, the community, and the delivery of health care in the community. SCI is comprised of seven themes that are threaded throughout the first two years: biostatistics, epidemiology, community, family, culture, environmental and occupational health, and finally, Spanish. Given the medical school's location on the Texas-Mexico border and the fact that over 80% of the population in the El Paso area is of Hispanic origins, familiarity with conversational and medical Spanish is integrated into the curriculum. In addition to language instruction, all students will learn about the Border community and culture through a variety of field experiences and exercises. Through SCI, students will also learn principles of evidence based medicine and they will be given opportunities to participate in service learning projects, and community based research.

The **Masters' Colloquium** rounds out the four concurrent courses spanning the first two years. In the Masters' Colloquium students discuss topics related to professionalism, ethics, controversies in medicine, and the "artistry" associated with the practice of medicine. Masters' Colloquium topics will be linked to the clinical presentations in the Scientific Principles of Medicine course. The Masters' Colloquium will also provide a venue for students to share community experiences derived from participation in the Society, Community, and Individual course.

### **The Integrated Curricular Elements (ICE) Program:**

The acronym ICE refers to the "Integrated Curricular Elements". Although most PLFSOM curricular elements fit into one of the four M1 & M2 major courses (SCI, SPM, Master's and Medical Skills) or a specific clinical clerkship, there are some elements that intentionally span across these courses and clerkships. ICE contains these elements. ICE requirements occur in each of the first 3 years with a single element occurring in the fourth year.

The table below shows ICE elements and the students/classes for which the elements are applicable.

<b>Element</b>	<b>M1</b>	<b>M2</b>	<b>M3</b>	<b>M4</b>
<i>Course credit:</i>				
ICE Pre-Clerkship Prep Course				
Advanced Cardiac Life Support (ACLS)		✓		
Tankside Grand Rounds		✓		
End of Year OSCE		✓		
Clinical Basic Science Exam (CBSE)		✓		
<i>Non-course credit but required Integrated Curricular Elements (ICE):</i>				
Comprehensive end of year exam	✓			
Longitudinal Survey	✓	✓	✓	✓
M3 Intersessions			✓	
End of Year OSCE			✓	
Self-Directed Learning	✓	✓		
STEP 1		✓		
STEP 2 (CK & CS)				✓

In addition, non-curricular elements (like holidays) may be placed on the ICE calendars so that you can plan for them.

There are credit and non-credit components of the ICE program. The only for-credit component is an **ICE Pre-Clerkship Prep** Course that occurs at the end of the MS2 year, and that includes the elements highlighted in light blue in the two immediately preceding tables above (ACLS, Tankside Grand Rounds, the end-of-year MS2 OSCE and an NBME Comprehensive Basic Science Examination). The ICE Pre-Clerkship Prep Course is new, and the full instructional plan, course identifier, and credit are still being finalized. These issues will be addressed in a catalog addendum by the end of the Fall semester of AY2015-16.

The integrated curricular elements are graduation requirements and students are expected to complete them as scheduled within the years as indicated and in the framework as described. As with all of the courses and requirements, please consult the relevant syllabi and descriptions in the curriculum management system for additional information.

### **The Scholarly Activity and Research Requirement**

The Paul L. Foster School of Medicine Scholarly Activity and Research Program provides medical students with an opportunity to design and execute an independent scholarly project or research project under the guidance of an expert faculty mentor. A wide variety of topics and research areas are available in three broad categories, allowing for a project to be tailored to a student's background and interests: 1) basic, clinical and translational research; 2) epidemiology, community-based, behavior, public and environmental health; and 3) medical humanities, qualitative research and medical education research. This is a 3 credit (pass/fail) mandatory curriculum requirement, with one credit awarded for selection of a mentor and preparation of a Project Plan, one credit for execution of the project itself, and a final credit awarded for a poster summarizing the project presented at an annual student symposium held in the Fall semester. Students can choose between one of two tracks: Track 1 concentrates execution of the project into the summer between the first and second year with a poster presented in the Fall of the second year; whereas Track 2 provides the student more flexibility, allowing execution of the project anytime during the first 3 years followed by a poster presentation at the next student symposium. For both Tracks, selection of a mentor and preparation of a Project Plan is due at the end of the first year. Students in both Tracks have the option of writing an Honors Thesis on their project in the fourth year. This introduction to the methodology and analytic thinking involved with scholarly activity and research is designed to enhance the medical training experience and provide an appreciation for the tight integration between scholarship, research and clinical practice. Students who excel in scholarly activities and research, based on the judgment of a faculty panel, are eligible for special recognition at graduation with the notation of graduating with Distinction in Research and Scholarship on the diploma.

<b><u>Year 1 and 2 Courses:</u></b>	<b><u>Credits</u></b>
Scientific Principles of Medicine I	14
Scientific Principles of Medicine II	10
Scientific Principles of Medicine III	10
Scientific Principles of Medicine IV	8
Society, Community, and Individual I	6
Society, Community, and Individual II	1
Society, Community, and Individual III	2
Society, Community, and Individual IV	1
Medical Skills I	2
Medical Skills II	1
Medical Skills III	2
Medical Skills IV	1
Masters' Colloquium I	2
Masters' Colloquium II	1
Masters' Colloquium III	1
Masters' Colloquium IV	1
Scholarly Activity Project I	1
Scholarly Activity Project II	1
Scholarly Activity Project III	1
Pre-Clerkship Prep (ICE Program)	TBA

**Additional detail is provided in the following chart:**

TTUHSC- El Paso PLFSOM Curriculum Courses				Fall Semester Courses
Course: Scientific Principles of Medicine				Spring Semester Courses
Subject	Course Number	Course Title	Credit Hours	Updated 5/06/2015
PSPM	5011	Scientific Principles of Medicine I	14	
PSPM	5002	Scientific Principles of Medicine II	10	
PSPM	6001	Scientific Principles of Medicine III	10	
PSPM	6012	Scientific Principles of Medicine IV	8	
Total Course Credits			42	
Course: Medical Skills				
Subject	Course Number	Course Title	Credit Hours	
PMSK	5301	Medical Skills I	2	
PMSK	5312	Medical Skills II	1	
PMSK	6301	Medical Skills III	2	
PMSK	6312	Medical Skills IV	1	
Total Course Credits			6	
Course: Society Community and the Individual				
Subject	Course Number	Course Title	Credit Hours	
PSCI	5211	Society Community and the Individual I	6	
PSCI	5212	Society Community and the Individual II	1	
PSCI	6211	Society Community and the Individual III	2	
PSCI	6212	Society Community and the Individual IV	1	
Total Course Credits			10	
Course: Masters Colloquium				
Subject	Course Number	Course Title	Credit Hours	
PMAS	5101	Masters Colloquium I	2	
PMAS	5112	Masters Colloquium II	1	
PMAS	6111	Masters Colloquium III	1	
PMAS	6112	Masters Colloquium IV	1	
Total Course Credits			5	
Course: Scholarly Activity Research Project				
Subject	Course Number	Course Title	Credit Hours	Explanation
PSAP	5401	Scholarly Activity Research Project I	1	Spring Semester of MS1 Year (Required of ALL MS1)
PSAP	6401	Scholarly Activity Research Project II	1	Fall Semester of MS2 thru MS4 year (Student Choice)
PSAP	7401	Scholarly Activity Research Project III	1	Fall Semester of MS2 thru MS4 year (Student Choice)
PSAP	6401	Scholarly Activity Research Project II	1	<b>Same Course as CRN 10005</b> Offered each Spring MS4 ONLY (in order to graduate)
PSAP	7401	Scholarly Activity Research Project III	1	<b>Same Course as CRN 10006</b> Offered each Spring MS4 ONLY (in order to graduate)
Total Course Credits			3	
ICE Pre-Clerkship Prep				
Subject	Course Number	Course Title	Credit Hours	
TBA*	TBA*	Pre-Clerkship Prep	TBA*	
Total Program Credit Hours			66	<b>PLUS</b> "ICE Pre-Clerkship Prep" course credit (TBA*)

\*TBA - to be announced (see section regarding the ICE Program)

Note regarding the Scholarly Activity and Research Project (SARP) listings in the chart above: SARP is a 3 credit course, though there are additional offerings of SARP II and III to accommodate variability in student schedules.

**Clerkship Curriculum (Years 3-4)**

The organization of the third and fourth year curriculum is illustrated in the following schematic:

PLFSOM Clerkship Curriculum														
YEAR 3					YEAR 4									
May - April					May - May									
16-Week Clerkship Blocks (any order, as assigned)					4-Week Rotations (any order, as assigned – remaining time unassigned)									
Internal Medicine and Psychiatry	Family Medicine and Surgery		Interession	Obstetrics/Gynecology and Pediatrics	Interession	Sub-Internship	Critical Care	Emergency Medicine	Neurology	“Boot Camp”	Elective	Elective	Elective	Elective

**Year 3 Curriculum**

In year 3 students participate in the following clerkships: Internal Medicine (10 weeks), Family Medicine (6 weeks), Obstetrics and Gynecology (8 weeks), Pediatrics (8 weeks), Surgery (10 weeks), and Psychiatry (6 weeks). Subspecialty “selective experiences” are built into the third year schedule in two ways: as 2-4 week blocks including both ambulatory and inpatient experiences; and in two 16 week long longitudinal experiences, one half day a week, in ambulatory settings. The Longitudinal selective experiences will be drawn from the disciplines of internal medicine, family medicine, surgery, and psychiatry. During the 16 week period during which students complete the Obstetrics and Gynecology and Pediatrics blocks, a Maternal/Fetal/Neonatal experience substitutes for the longitudinal selective. The clinical presentations addressed in years 1-2 are revisited in the third year with an emphasis on therapeutics and management.

Additional information regarding the content and administrative structure of the third-year clerkship blocks is provided in the following tables:



16 Weeks	16 Weeks	16 Weeks
Internal Medicine general selective (3 weeks) Psychiatry	Obstetrics-Gynecology Pediatrics	Family Medicine Surgery general (6 weeks) selective (3 weeks)
Integrated Teaching and Learning Experiences	Integrated Teaching and Learning Experiences	Integrated Teaching and Learning Experiences
Longitudinal Selective in Psychiatry	Maternal/Fetal/Neonate Experience	Longitudinal Selective in Family Medicine
<p><b>Threads:</b> Geriatrics, Basic Sciences, Ethics, Professionalism, EBM, Patient Safety, Pain Management, Chronic Illness Care, Palliative Care, Quality Improvement, Communication Skills, Diagnostic Imaging, Clinical Pathology, Clinical and Translational Research.</p>		

Third Year Clinical Clerkship Courses, Class of 2019			
Block	Course	Course Title	Credit Hours
A	PFAM 7001	Family Medicine Clerskhip	7
	PSUR 7001	Surgery Clerkship	10
B	PINT 7001	Internal Medicine Clerkship	10
	PPSY 7001	Psychiatry Clerkship	7
C	POBG 7001	Obstetrics & Gynecology Clerkship	8
	PPED 7001	Pediatric Clerkship	8
<b>Total Credit Hours</b>			50

### **Year 3 Clerkship Descriptions:**

#### **Surgery (10 credit hours)**

This clerkship exposes students to the pathophysiology of surgical diseases and to the principles and techniques of surgical approaches to the diagnosis and management of diseases. As members of the surgical team consisting of attending physicians and residents, students participate in pre-operative, operative, and post-operative patient care. This clerkship is paired with the discipline of family medicine in an integrated 16 week block, of which 6 weeks focuses on general surgery and 4 weeks is allocated to a surgical subspecialty selective experience (e.g., orthopedic surgery, plastic surgery, and neurosurgery). “Shared” teaching and learning experiences spanning the disciplines of surgery and family medicine are provided to expose students to interdisciplinary approaches to patient care and management.

#### **Family Medicine (7 credit hours)**

This clerkship exposes students to the care of the undifferentiated ambulatory patient across the life-span. The emphasis of this clerkship is on the diagnosis and management of common acute problems and the longitudinal management of patients with chronic conditions. Health promotion and prevention are also stressed. This clerkship is paired with the surgery clerkship in a 16 week block, of which 6 weeks is devoted family medicine. In addition, during the 16 week block, students spend one-half day per week in a longitudinal family medicine selective experience designed to give the student opportunities to explore a particular areas within the discipline of family medicine such as chronic disease management, sports medicine, geriatrics, community medicine, or pre-natal care. Students will also have opportunities to participate in a community service activity during the clerkship. Finally, “shared” teaching and learning experiences are provided in both family medicine and surgery (e.g., wound care, pre- and post-operative care, sports medicine, etc.)

#### **Internal Medicine (10 credit hours)**

In this 10 week experience students participate as members of the ward team performing histories and physical examinations and in the integration and documentation of data derived from laboratory investigation and imaging studies leading to the accurate diagnosis of disease. Students are also exposed to standards of care in the treatment of acute and chronic illnesses of adults. Eight weeks of this experience are devoted to general internal medicine and two weeks are set aside for a subspecialty selective in a variety of areas including cardiology, pulmonology, infectious diseases, and rheumatology. The internal medicine clerkship shares an integrated 16 week block with the psychiatry clerkship. A variety of “shared” teaching and learning opportunities are provided to explore the mental health implications of various diseases and the medical implications of psychiatric disorders.

#### **Psychiatry (7 credit hours)**

This clerkship is designed to expose students to the diagnosis and management of common psychiatric illness across the life-span in both ambulatory and in-patient settings. The psychiatry clerkship is paired with the internal medicine clerkship in a 16 week block of which 6 weeks is devoted to experiences in the discipline of psychiatry. In addition, students also participate in a one-half day per week longitudinal selective experience throughout the 16 week block in such areas as child and adolescent psychiatry, sleep medicine, neurology, psychiatric emergency medicine, and consultation-liaison psychiatry. Shared teaching and learning opportunities, including joint medicine-psychiatry rounds, are held to permit students to explore the overlap between the disciplines of medicine and psychiatry.

#### **Obstetrics-Gynecology (8 credit hours)**

In this 8 week clinical rotation, students participate in the comprehensive care of women and include experiences in pre- and post-natal care, labor and delivery, and the medical and surgical management of diseases in women. In-patient and ambulatory experiences are provided. The OB-GYN clerkship is paired in an integrated 16 week block with pediatrics. These disciplines share a “mother-baby” experience in which students are participate in the care of a pregnant patient, participate in that patient’s delivery, and then follow the care of the infant as part of the pediatric component of the clerkship.

### **Pediatrics (8 credit hours)**

This is an 8 week clinical experience that is paired with obstetrics-Gynecology in a 16 week integrated block. Students are exposed to a comprehensive approach to the care of children in the pediatric in-patient, neonatal, and ambulatory settings. As members of ward teams and working under the supervision of faculty physicians in ambulatory settings, students participate in the evaluation and management of children suffering from a variety of acute and chronic health care problems. Wellness and prevention are also stressed. “Shared” learning opportunities with OB-GYN are provided over the 16 week block including a “mother-baby” experience in which students are assigned to a pregnant patient, participate in the delivery of that patient’s infant and then follows the infant into the pediatric care setting.

### **Year 4 Curriculum**

The fourth year curriculum, consists of four required clerkship experiences—a sub-internship, critical care medicine, emergency medicine, and neurology. During the fourth year students also are provided time for elective experiences (both at home and away) and time to travel to other medical centers to interview for residency positions. Finally, all 4<sup>th</sup> year students will participate in a four week long “boot camp” experience designed to tie together the clerkship phase of the curriculum and to prepare for the transition from medical student to first year resident.

<b>Fourth Year Clinical Clerkship Courses, Class of 2019</b>			
<b>Requirement</b>	<b>Course</b>	<b>Course Title</b>	<b>Credit Hours</b>
<b>Emergency Medicine</b>	PEME 8001	Emergency Medicine Clerkship	4
<b>Neurology</b>	PNEU 8001	Neurology Clerkship	4
<b>Sub-Internship</b>	PFAM 8001	Family Medicine Clerkship	4
	PINT 8001	Internal Medicine Clerkship	
	POBG 8001	OB-Gyn Clerkship	
	PPED 8001	Pediatrics Clerkship	
	PSUR 8001	Surgery Clerkship	
<b>Critical Care</b>	PINT 8002	MICU/CVCU	4
	PPED 8002	PICU	
	PPED 8003	NICU	
	PSUR 8002	SICU	
<b>Boot Camp</b>			4
<b>Electives</b>		Please see course listings below.	16
<b>Total Credit Hours</b>			<b>36</b>

### **Year 4 Clerkship Descriptions:**

#### **Emergency Medicine (4 credit hours)**

This is a required four week clerkship that will be taken in most instances in year 4. In unusual circumstances this clerkship may be taken in year 3 but only with the concurrence of the senior associate dean for medical education and that of the associate dean for student affairs. This clerkship provides students opportunities to participate in the care of undifferentiated acutely ill patients presenting to the emergency department.

#### **Clinical Neurosciences (4 credit hours)**

This is a required four week clerkship that will be taken in most instances in year 4. In unusual circumstances this clerkship may be taken in year 3 but only with the concurrence of the senior associate dean for medical education and that of the associate dean for student affairs. This clerkship provides students opportunities to

interpret the significance neurological signs and symptoms, perform neurological examinations, recognize neurological diseases, and participate in the treatment of patients with neurological problems.

#### **Critical Care Medicine (4 credit hours)**

This is a required 4 week experience in the management of critically ill patients who complex medical problems requiring extensive monitoring and intervention. This experience is only available to students who have completed all required third year clerkships. Students will be assigned to any one of the following critical care units to meet the requirements of this clerkship: medical intensive care, cardiovascular intensive care, pediatric intensive care, surgical intensive care or neonatal intensive care.

#### **“Boot Camp” (4 credit hours)**

This 4 week elective is designed to completely manage simulated patients with a variety of issues including IM, pediatric, surgical, obstetric, neurological and orthopedic problems. Students will also receive specific task training and resuscitation measures.

#### **Students are also required to complete 1 four week Acting Internship from the following:**

##### **Internal Medicine (4 credit hours)**

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.

##### **Pediatrics (4 credit hours)**

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.

##### **Surgery (4 credit hours)**

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

##### **Family Medicine (4 credit hours)**

The Acting internship in Family Medicine is a four week rotation on the inpatient service at University Medical Center and weekly continuity clinic at the Family Medicine Clinic. The student will be an integral part of the inpatient team which consists of a family medicine attending, family medicine residents (PGY-1, PGY-2 and PGY-3) a PharmD and the inpatient ancillary staff (nursing, social workers and physical therapy). The student will be exposed to a broad spectrum of acutely ill patients. Student responsibilities include initial evaluation of patients; taking a detailed history and physical, selective of appropriate therapeutics and presentation of the patient to the team and subsequent care during the patient's hospitalization. This includes family medicine patients admitted to the medicine, pediatric or labor and delivery floors.

##### **Obstetrics and Gynecology (4 credit hours)**

This elective will further advance the student's understanding of care of the female patient. It will include ambulatory, hospital, and surgical care of the female patients, from adolescent to the older female patient. Over the course of 4 weeks students will participate on an intern level in the care of obstetrical and gynecological patients.



## **Elective Course Descriptions by Department:**

### **PANE 8010 – Anesthesiology Elective**

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 preoperative and postoperative 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. (2 or 4 weeks, July - May)

### **PEDI 8010 – Advanced Gross Anatomy I:**

This elective is an in-depth, self-directed review of a selected area of gross anatomy including: head and neck, thorax and abdomen, pelvis and perineum, extremities and back, or anatomical imaging depending on the needs of the student. (2 or 4 weeks)

### **PEDI 8011 – Surgical Anatomy:**

This course is coordinated by the anatomy faculty. It is, in essence, a surgery “boot camp”. The course will consist of lecture, cadaver dissection, laparoscopic surgery simulation, and surgical skills. If you are entering a surgical residency and can arrange your schedule to participate in this course, you will be glad you did. This elective is typically offered only once per academic year – check with the Year 3-4 coordinators’ office regarding the schedule. (2 weeks)

### **PEDI 8014 - Putting the Patient Protection and Affordable Care Act (PPACA) into Practice**

The goal of this 4 week elective is to provide the students with an understanding of the health policies inherent in the PPACA legislation and how these policies, when put into practice, impact physician/patient care and reimbursement. Students completing the elective will have a basic understanding on theoretical methods to implement strategies to obtain health policy compliance and sufficient reimbursement to financially thrive in practice. Students who are interested should contact Dr. Wagner for more information. (4 weeks, July - May)

### **PEME 8100 – Emergency Medicine Research:**

Students with an interest in research in Emergency Medicine will spend time in the departmental research division participating in some phase of a research project (design and development, literature review, data gathering and interpretation, write-up) under the supervision of a faculty member directing the project. (2 or 4 weeks)

### **PFAM 8016 – Clinical Research in Primary Care:**

Students interested in clinical research, particularly those considering careers in academic medicine will especially find this elective beneficial. Students will spend time within the research division, participating in an ongoing research project under the guidance of a mentoring research faculty and research associate. (4 weeks)

### **PFAM 8017 - Contributions of Societal Elements to Community Health**

This 4 week elective will review some of the key societal elements contributing to the health of many of our communities, and thus enable learners to see the patient as an individual often shaped by such forces. (4 weeks, August – November, February, May)

### **PFAM 8018 – Community Geriatrics in an Underserved Setting**

Students will be able to practice/apply/demonstrate geriatric competencies learned during years 1 to 3 to geriatric populations throughout El Paso and surrounding communities: PACE unit, Senior Citizen Centers, Assisted Living Centers, Hospice, Social Service agencies, Adult Protective Services. The elective student will interact

with Elder Law specialists, nutritionists, and exercise physiologists and geriatricians. (4 weeks, July - May)

**PFAM 8100 – Community-Based Research**

Students interested in community-based research, particularly those considering careers in academic medicine will especially find this elective beneficial. Students will spend time within the research division, participating in an ongoing research project under the guidance of a mentoring research faculty and research associate. (4 weeks, July – November, January - May)

**PIDP 8010 – Biomedical Info. Management Elective:**

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

**PINT 8011 – Cardiology Elective:**

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

**PINT 8013 – Gastroenterology Elective:**

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

**PINT 8014 – Infectious Disease Elective:**

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

**PINT 8015 – Oncology/Hematology Elective:**

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.

**PINT 8016 – Nephrology Elective:**

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

**PINT 8025 – Nutrition Support**

During this elective, the student will be exposed to a spectrum of conditions that are present in hospitalized patients or could be the reason for hospitalization and will learn first-hand about pathophysiology, treatment approaches including enteral and parenteral nutrition approaches and pharmacologic options to control symptoms. The elective is offered as a 2- or 4-week elective and is available August – April. (2 or 4 weeks, August - May)

**PINT 8100 – Internal Medicine Research:**

Students with an interest in research in Internal Medicine will spend time in the departmental research division participating in some phase of a research project (design and development, literature review, data gathering and interpretation, write-up) under the supervision of a faculty member directing the project.

**PNEU 8100 – Neurology Research:**

Students with an interest in research in Neurology will spend time in the departmental research division participating in some phase of a research project (design and development, literature review, data gathering and interpretation, write-up) under the supervision of a faculty member directing the project.

**PNEU 8010 – Neurology Senior Rotation**

This rotation exposes the student to basic principles of diagnosis and management of common neurologic conditions. Students learn skills in conducting neurologic exams, identifying signs and symptoms of neurologic disorders, and integrating signs and symptoms into syndromes. Students learn about basic neurologic disorders and neurologic complications of systemic conditions. (2 or 4 weeks, July – May)

**POBG 8010 – OB/GYN Senior Rotation:**

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 preoperative and postoperative 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. Postoperative care will provide an opportunity to learn wound care, respiratory support, rehabilitation, and resolution of postoperative 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.

**POBG 8012 - Gynecological Oncology/Surgery:**

This elective is for students interested in becoming more familiar with gynecologic operations and the multidisciplinary care of women with gynecologic malignancies. Specifically, experience will be obtained in the complex peri-operative and operative management of women with pelvic neoplasms. In addition, radiation treatment and planning the administration of chemotherapy will be practiced. Emphasis will also be placed on histopathologic diagnosis and correlation. The students 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. (4 weeks)

**POBG 8015 – General OB/GYN Senior Elective:**

This is a clinical "independent study" elective in which the student, in consultation with the supervising faculty member identifies the topics he/she wishes to address and negotiates elective goals, objectives, and activities with the faculty and the Office of Student Affairs. (2 or 4 weeks)

**POBG 8100 – OB/GYN Research:**



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.

**POPH 8010 – Clinical Ophthalmology Elective:**

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

**POPH 8011 – General Ophthalmology Senior Elective:**

This is a clinical “independent study” elective in which the student, in consultation with the supervising faculty member identifies the topics he/she wishes to address and negotiates elective goals, objectives, and activities with the faculty and the Office of Student Affairs. (2 or 4 weeks)

**POPH 8100 – Ophthalmology Research:**

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.

**PORS 8010 – Orthopaedic Surgery Elective:**

Students will be assigned to an orthopaedic Faculty member and participate as a member of the orthopaedic team in inpatient and outpatient care, emergency room, and operating room activities. Students should perform history and physical examinations upon all patients admitted by the attending surgeon and present these workups 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.

**PORS 8012 – General Orthopaedics Senior Elective:**

This is a clinical “independent study” elective in which the student, in consultation with the supervising faculty member identifies the topics he/she wishes to address and negotiates elective goals, objectives, and activities with the faculty and the Office of Student Affairs. (2 or 4 weeks)

**PORS 8100 – Orthopaedic Research:**

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.

**PPAT 8010 – Anatomic and Clinical Pathology:**

The student will rotate through the sections of the clinical laboratory as follows: (a) Hematology learn how to evaluate electronic differential counts and how to evaluate peripheral smears; (b) Microbiology, learn proper



specimen collection/preservation techniques and how to interpret Gram stains; (c) Chemistry/Special Chemistry, learn how to interpret chemistry tests in the clinical context; (d) Serology, learn about interpretation/indications for serologic tests; and (e) Blood Bank, learn about pretransfusion 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.

**PPAT 8011 – General Pathology Senior Elective:**

This is a clinical “independent study” elective in which the student, in consultation with the supervising faculty member identifies the topics he/she wishes to address and negotiates elective goals, objectives, and activities with the faculty and the Office of Student Affairs. (2 or 4 weeks)

**PPAT 8100 – Pathology Research:**

Students with an interest in research in Pathology will spend time in the departmental research division participating in some phase of a research project (design and development, literature review, data gathering and interpretation, write-up) under the supervision of a faculty member directing the project.

**PPED 8010 – Adolescent Medicine:**

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

**PPED 8011 – Ambulatory Pediatrics:**

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

**PPED 8012 – Pediatric Endocrinology/Metabolism:**

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

**PPED 8013 – Pediatric Diabetes Camp:**

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. Precamp training and reading assignments will be provided. Daily meetings during the camp will provide some additional educational opportunities.

**PPED 8014 – Pediatric Infectious Disease:**

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.

**PPED 8015 – Pediatric Cardiology:**

Students will be provided many opportunities to learn a variety of cardiac problems in pediatric patients. The student will observe or participate in any activities that the pediatric cardiologist will perform in the diagnosis and management of children with cardiac diseases. The student will become familiar with the interpretation of normal and abnormal cardiac manifestations and physical findings of cardiac defects in children. The student will observe noninvasive 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 postoperatively 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.

**PPED 8019 – Pediatric Hematology & Oncology:**

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

**PPED 8020 – Pediatric Senior Elective:**

This is a clinical “independent study” elective in which the student, in consultation with the supervising faculty member identifies the topics he/she wishes to address and negotiates elective goals, objectives, and activities with the faculty and the Office of Student Affairs. (2 or 4 weeks)

**PPED 8100 – Pediatric Research:**

The clinical study guidelines are: Ask a scientific question, to review the literature, formulate a hypothesis, write introduction, materials and methods, result submitted to the IRB and learn to obtain consent.

**PPSY 8010 – Psychiatry Senior Rotation:**

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.

**PPSY 8011 – Community Services/Child Psychiatry:**

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.

**PPSY 8012 – Forensic Psychiatry:**

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.

**PPSY 8013 – Sleep Disorder Medicine:**

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.

**PPSY 8016 – Nutrigenetics/Nutrigenomics**

This 2 week elective is an in-depth survey of the nutrigenetics and personalized nutrition which are components of the concept that in the future genotyping will be used as a means of defining dietary recommendations to suit the individual. This 2 week elective is an in-depth survey of the nutrigenetics and personalized nutrition which are components of the concept that in the future genotyping will be used as a means of defining dietary recommendations to suit the individual. (2 or 4 weeks, August – May)

**PPSY 8017 – Pharmacogenetics in Human Common Diseases**

This 2 week elective is an in-depth survey of the genetic basis of inter-subject variability in response to drugs and will introduce the student to the tools, methodologies, and goals of genomic medicine. (2 or 4 weeks, August – May)

**PPSY 8018 – Advances in Human Genetics and Disease**

This 2 week elective will provide medical students with an overview of current problems and technical approaches in human genetics. Areas of focus will be analysis of disease mutations/variants, epigenetics, or gene regulation using advanced technologies, such as next generation sequencing technology. (2 or 4 weeks, August – May)

**PPSY 8100 – Psychiatric Research Elective:**

Students with an interest in research in Psychiatry will spend time in the departmental research division participating in some phase of a research project (design and development, literature review, data gathering and interpretation, write-up) under the supervision of a faculty member directing the project.

**PRAD 8010 – Radiology Elective:**

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

**PRAD 8012 – Advances in Neuroanatomy and Neuroradiology:**

Students will spend 2 – 4 hours a day participating in patient care under the supervision of the elective director, and they will also spend time reviewing the instructor's teaching files. In addition students will participate in didactic lecture/seminar sessions, complete assigned readings in neuroanatomy, and they will also access information on selected websites as directed by the instructor. Students will also spend at least one day participating in the activities of the neuroangiography suite.

**PRAD 8013 – Radiology Senior Elective**

This is a clinical "independent study" elective in which the student, in consultation with the supervising faculty member identifies the topics he/she wishes to address and negotiates elective goals, objectives, and activities with the faculty and the Office of Student Affairs. Students can enroll in this sub-specialty elective once they have completed the 4 week General Radiology elective. (2 or 4 weeks, July - May)

**PRAD 8014 – Pediatric Radiology**



Students can enroll in this sub-specialty elective once they have completed the 4 week General Radiology elective. (2 or 4 weeks, July - May)

**PRAD 8015 – Interventional Radiology**

Students can enroll in this sub-specialty elective once they have completed the 4 week General Radiology elective. (2 or 4 weeks, July - May)

**PRAD 8100 – Radiology Research:**

Students with an interest in research in Psychiatry will spend time in the departmental research division participating in some phase of a research project (design and development, literature review, data gathering and interpretation, write-up) under the supervision of a faculty member directing the project.

**PSUR 8011 - Otolaryngology/Head/Neck Surgery:**

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

**PSUR 8012 – Pediatric Surgery:**

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

**PSUR 8013 – Plastic Surgery:**

The elective is designed to acquaint the student with the basic principles of plastic and reconstructive surgery including burns, cosmetic surgery, and trauma to extremities. Also included is an introduction to the principles of microsurgery. The student observes as well as participates in the pre/postoperative and follow-up for such patients.

**PSUR 8015 – Neurosurgery:**

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.

**PSUR 8016 – Female Breast Disease/Treatment:**

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

**PSUR 8017 – Senior Surgery Elective:**

This is a clinical "independent study" elective in which the student, in consultation with the supervising faculty member identifies the topics he/she wishes to address and negotiates elective goals, objectives, and activities with the faculty and the Office of Student Affairs. (2 or 4 weeks)

**PSUR 8100 – Surgical Research:** The clerk will receive an introduction to the design and conduct of a laboratory investigation and will participate in one or more ongoing projects.



## **FULL TIME FACULTY**

### **A**

**Abbas, Aamer, M.D.**, 1996, Dow Medical College, University of Karachi, Assistant Professor, Internal Medicine

**Abdelgawad, Amr M., M.D.**, 1998, Ain Shams University, Associate Professor, Orthopaedic Surgery

**Ahmad, Adeel, M.D.**, 2000, Allama Iqbal Medical College, Assistant Professor, Internal Medicine

**Akle, Nassim, M.D.**, 2004, Universite Catholique de Louvain, Assistant Professor, Radiology

**Alozie, Ogechika K., M.D.**, 1999, University of Benin School of Medicine, Assistant Professor, Internal Medicine

**Aly, Fatima F., M.D.**, 1985, University of Manchester School of Medicine, Assistant Professor, Pediatrics

**Ambat, Maria Teresa, M.D.**, 1994, University of Santo Tomas, Assistant Professor, Pediatrics

**Anchondo, Inez, Dr. P.H.**, 2006, University of Texas at Houston, School of Public Health, Assistant Professor, Pediatrics

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

**Aragon, Lorenzo B., M.D.**, 1981, National Autonomous University of Nicaragua, Associate Professor, Family and Community Medicine

**Aun, Jose, M.D.**, 1993 University of Texas Health Sciences Center at Houston, Assistant Professor, OB/GYN

**Ayoub-Rodriguez, Lisa Michelle, M.D.**, 2008 University of Texas Southwestern Medical School at Dallas, Assistant Professor, Pediatrics

**Ayyappan, Anoop, M.D.**, 2003, Trichur Medical College, Assistant Professor, Radiology

### **B**

**Baatar, Dolgor, M.D.**, 1989, Moscow Medical Academy **Ph.D.**, 2000, Oita Medical University, Assistant Professor, Medical Education

**Badugu, Srinivasarao, M.D.**, 2000, Siddhartha Medical College, Assistant Professor, Pediatrics

**Balsiger, Heather, M.Sc.**, 2012, Georgetown University School of Medicine, Faculty Associate, Medical Education

**Blanc, Oscar H., M.D.**, 1990, University of Illinois, Instructor of Clinical, Pediatrics

**Blandon, Pedro, M.D.**, 1995, Universidad Autonoma de Guadalajara, Assistant Professor, Internal Medicine

**Blunk, Dan I., M.D.**, 1974, University of Texas Medical Branch at Galveston, Associate Professor, Medical Education

**Boggs, Courtney, R.N., F.N.P.-C.**, 2009 University of Texas at Austin, Faculty Associate, Pediatrics

**Boman, Darius A., M.D.**, 1972, Seth B.S. Medical College University of Mumbai, Department Chair and Associate Professor, Pathology

**Borron, Stephen W., M.D.**, 1984, University of Texas Medical Branch at Galveston, Professor, Emergency Medicine

**Bright, Tamis M., M.D.**, 1989, Loyola University Stritch School of Medicine, Associate Professor of Clinical, Internal Medicine

**Briones, David F., M.D.**, 1971, University of Texas Medical Branch, Interim Chair and Professor, Psychiatry

**Brower, Richard D., M.D.**, 1985, University of Texas Medical Branch, Associate Dean for Medical Education, Associate Professor and Chair, Department of Medical Education

**Brown, James M., M.D.**, 1994, Texas Tech University School of Medicine, Assistant Professor, Emergency Medicine

**Brunner, Noemi, M.D.**, 1992, Universidad La Salle, Assistant Professor, Radiology

**Bryan, Brad A., Ph.D.**, 2005, Texas A&M University Health Sciences Center, Assistant Professor, Biomedical Sciences

**Bryan, E. David, M.D.**, 1991, University of Texas at Houston, Assistant Professor of Clinical, Emergency Medicine

**Bryson, Staci, M.D.**, 2007, Washington University in St. Louis, Assistant Professor, Pathology

## **C**

**Calleros-Macías, Jesus E., M.D.**, 1991, Universidad Autónoma de Chihuahua, Acting Chair and Assistant Professor, Radiology

**Carcamo, Benjamin, M.D.**, 1980, Universidad de San Carlos, Assistant Professor, Pediatrics

**Cashin, Laura, M., D.O.**, 2007, Philadelphia College of Osteopathic Medicine, Assistant Professor, Internal Medicine

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

**Charmathi, Sastry, M.D.**, 2002, Kasturba Medical College Mangalore, Manipal Academy of Higher Learning, Assistant Professor, Pediatrics

**Chattopadhyay, Munmun, Ph.D.**, 1998, Jiwaji University, Assistant Professor, Biomedical Sciences

**Chaudhary, Humera M., M.D.**, 1996, King Edward Medical College, Assistant Professor, Radiology

**Chheda, Sadhana, M.D.**, 1987, University of Ibadan, Assistant Professor, Pediatrics

**Corral, Javier, M.D.**, 1984, Stanford University School of Medicine, Assistant Professor, Internal Medicine

**Coué, Martine, Ph.D.**, 1986, Paris VI University, Professor, Medical Education

**Crawford, Scott, M.D.**, 2009, Rush University School of Medicine, Assistant Professor, Emergency Medicine

**Cruz-Flores, Salvador, M.D.**, 1986, La Universidad Autonoma de Nuevo Leon, Department Chair and Professor, Neurology

## **D**

**Davis, Brian R., M.D.**, 1999, Baylor College of Medicine, Associate Professor, Surgery

**Davis II, Harry E., M.D.**, 1966, West Virginia University School of Medicine, Associate Professor, Internal Medicine

**De la Mora, Diego, M.D.**, 2010, University of Texas Southwestern Medical Center, Instructor, Internal Medicine

**de la Rosa, J. Manuel, M.D.**, 1984, Texas Tech University School of Medicine, M.Sc., 1993, Harvard School of Public Health, Provost and Vice President for Academic Affairs, Professor, Pediatrics

**DeVargas, Cecilia C., M.D.**, 1966, Universidad del Valle, Associate Professor, Psychiatry

**Dhandayuthapani, Subramanian, Ph.D**, 1987, University of Madras, Associate Professor, Biomedical Sciences

**Diaz, Jesus R., M.D.**, 2008, Universidad Autonoma de Chihuahua, Assistant Professor, Radiology

**Didia, S. Claudia, M.D.**, 1989, University of Buenos Aires School of Medicine, Assistant Professor, Internal Medicine

**Dominguez, Guadalupe D., A.C.N.P**, 2009, Texas Tech University School of Medicine, Faculty Associate, Surgery

**Dou, Huanyu, M.D.**, 1982, Weifang Medical University, Assistant Professor, Biomedical Sciences

**Dudrey, Ellen F., M.D.**, 1982, University of Texas San Antonio School of Medicine, Assistant Professor, Medical Education

**Dwivedi, Alok, Ph.D.**, 2009, All India Institute of Medical Sciences New Delhi, Assistant Professor, Biomedical Sciences

## **E**

**El-Mallah, Wael, M.D.**, 1993, Ain Shams University, Assistant Professor, Internal Medicine

**Escamilla, Michael A., M.D.**, 1983, University of Texas Southwestern School of Medicine, Professor, Psychiatry

**Escobar-Prieto, Adolfo, M.D.**, 1965, Universidad Nacional Autónoma de Mexico, Associate Professor, Radiology

**Estrada, Irma, M.S.N.**, 1998, University of Texas at El Paso, Faculty Associate, Medical Education

## **F**

**Fagan, Rona G., M.A.**, 1986, Webster University, Faculty Associate, Orthopaedic Surgery

**Farrag, Safa E., M.D.**, 2004, Tanta University Faculty of Medicine, Instructor, Internal Medicine

**Figueroa-Casas, Juan B., M.D.**, 1991, Universidad Nacional de Rosario, Associate Professor, Internal Medicine

**Filler, Trent C., D.D.S.**, 1980, Baylor College of Dentistry, Assistant Professor, Surgery

**Fitzgerald, Tamara N., M.D.**, 2004, Boston University School of Medicine, Assistant Professor, Surgery

**Flores, Angela Therese, M.D.**, 1997, University of the East Ramon Magsaysay Memorial Medical College, Assistant Professor, Pediatrics

**Francis, Maureen, D., M.D.**, 1984, Jefferson Medical College, Assistant Dean for Medical Education, and Associate Professor, Medical Education

**Francis, Mark L., M.D.**, 1983, St. Louis University School of Medicine, Professor, Medical Education

**Franck, Agathe, M.D.**, 2006, Ross University School of Medicine, Assistant Professor, Family and Community Medicine

**Fuhrman, Bradley, M.D.**, 1971, New York University School of Medicine, Department Chair and Professor, Pediatrics

## **G**

**Gangwani, Laxman, Ph.D.**, 1993, University of Delhi, Associate Professor, Biomedical Sciences



**Garcia, Blanca I., M.D.**, 1998, Texas Tech University School of Medicine, Assistant Professor of Clinical, Pediatrics

**Garcia, Norma, R.N.**, 2005, University of Phoenix, Faculty Associate, Pediatrics

**Garg, Himanshu, Ph.D.**, 2003, North Carolina State University, Assistant Professor, Biomedical Sciences

**Gaur, Sumit, M.D.**, 1997, Jawahar Lal Nehru Medical College, Assistant Professor, Internal Medicine

**Gavito-Higuera, Jose, M.D.**, 1997, Universidad Autonoma de Guadalajara, Assistant Professor, Radiology

**Gest, Thomas, Ph.D.**, 1983, University of Pittsburgh, Professor, Medical Education

**Gong, Xiaoming, Ph.D.**, 1991, Nanjing Agricultural University, **D.V.M., Jiangxi Agricultural University, Research Assistant Professor, Pediatrics**

**Gonzalez Gilberto A., M.D.**, 1999, Universidad Autonoma de Chihuahua, Escuela de Medicina, Assistant Professor, Orthopaedic Surgery

**Gonzalez, Robert, M.D.**, 2002, University of Texas Southwestern, Assistant Professor, Psychiatry

**Gonzalez, Suzanne, D., Ph.D.**, 2008 University of North Texas Health Sciences Center, Assistant Professor, Biomedical Sciences

**Gorby, Laura R., M.S.N., R.N.-B.**, Faculty Associate, Medical Education

**Gough, David C., M.D.**, 1969, University of Kansas, Associate Professor, Internal Medicine

**Granados, Hector M., M.D.**, 2005, Universidad Autonoma de Juarez, Assistant Professor, Pediatrics

**Greenberg, Harvey, M.D.**, 1971, State University of New York, Associate Professor of Clinical, OB/GYN

**Greer, Veronica L., M.D.**, 1989, University of Texas Health Sciences Center at Houston, Assistant Professor, Emergency Medicine

**Gupta, Jayanta, Ph.D.**, 2008, University of Cincinnati College of Medicine, Assistant Professor, Biomedical Sciences

**Gutierrez, Esperanza, L.C.S.W., M.P.H.**, 2003, University of Texas Health Sciences Center, Faculty Associate, Psychiatry

**Gutierrez, Fatima, M.D.**, 2008, University of New Mexico School of Medicine, Assistant Professor, Pediatrics

**H**

**Hakim, M. Nawar, M.D.**, 1987, Damascus University School of Medicine, Assistant Professor, Pathology

**Handal, Gilbert A., M.D.**, 1967, University of Chile School of Medicine, Professor, Pediatrics

**Hartman, Lisa, M.D.**, 2005, University of Texas Medical Branch, Assistant Professor, Pediatrics

**Herber-Valdez, Christiane, Ed.D.**, 2008, University of Texas at El Paso, Assistant Professor, Medical Education

**Hernan, Lynn J., M.D.**, 1986, George Washington University School of Medicine, Associate Professor, Pediatrics

**Hernandez, Terry L.N.P.**, 1979, University of Texas at El Paso, Faculty Associate, Emergency Medicine

**Heydariyan, Rosalinda, R.N., A.N.P. /G.N.P.**, 1992, University of Colorado Health Sciences Center, Faculty Associate, Internal Medicine

**Ho, Hoi, M.D.**, 1972, University of Saigon School of Medicine, Associate Dean for Faculty Affairs and Development and Professor, Internal Medicine

**Hogg, Tanis E., Ph.D.**, 2001, Friedrich-Schiller University, Assistant Dean for Medical Education, and Associate Professor, Medical Education

**Horn, Kathryn V., M.D.**, 1984, Baylor College of Medicine, Assistant Vice President for Student Services, TTUHSC El Paso, Associate Dean for Student Affairs, and Associate Professor, Family and Community Medicine

**Hughes, Harold W., M.D.**, 1986, University of Texas Medical Branch at Galveston, Associate Professor, Internal Medicine

**Hyde, Rachel, C.N.M.**, 2007, Texas Women's University, Faculty Associate, OB/GYN

## **I**

**Ingram, Kristyn B., M.D.**, 2007, University of Texas Health Sciences Center San Antonio, Assistant Professor, Anesthesiology

**Ipson, Merle A., M.D.**, 1988, Texas Tech University School of Medicine, Associate Professor of Clinical, Pediatrics

## **J**

**James, Janine, M.D.**, 1979, University of Illinois College of Medicine, Assistant Professor, OB/GYN

**Janssen, Herbert F., Ph.D.**, 1980, Texas Tech University School of Medicine, **M.Ed.**, 1973, Texas Tech University, Professor, Medical Education

**Jaraba, Jaime, M.D.**, 2001, University of Texas Health Sciences Center at San Antonio Medical School, Assistant Professor, Family and Community Medicine

**Joshi, Anjali, Ph.D.**, 2004, North Carolina State University, Assistant Professor, Biomedical Sciences

## **K**

**Kalamegham, Ramaswami, Ph.D.**, 1980, Osmania University, Associate Professor of Clinical, Pathology

**Kassar, Darine, M.D.**, 2006, Lebanese University School of Medicine, Assistant Professor, Neurology

**Kilgo, Robert W., M.D.**, 1993, University of New Mexico, Assistant Professor, Emergency Medicine

**Kupesic, Sanja P., M.D.**, 1984, University of Zagreb, School of Medicine, **Ph.D.**, 1991, University of Zagreb, School of Medicine, Assistant Dean for Faculty Development, and Professor, OB/GYN

## **L**

**Lacaze, Mary E., M.D.**, 1991, Mt. Sinai School of Medicine of New York University, Assistant Professor, Pediatrics

**Lacy, Naomi L., Ph.D.**, 1997, University of Nebraska, Associate Professor, Medical Education

**Laks, Shaked, M.D.**, 2004, New York University School of Medicine, Assistant Professor, Radiology

**Lakshmanaswamy, Rajkumar, Ph.D.**, 1997, University of Madras, Associate Professor, Biomedical Sciences

**Lange, Richard, M.D., M.B.A.**, 1982, University of Texas Southwestern Medical School, President, TTUHSC El Paso, Dean, PLFSOM and Professor, Internal Medicine

**Leiner, Marie A., Ph.D.**, 2000, Nova Southeast University, Research Associate Professor, Pediatrics

**Leony-Carrete, Amelia, L.C.S.W.**, 2003, University of Texas at Austin, Faculty Associate, Psychiatry

**Levin, Garrett S., M.D.**, 1973, Universidad Autónoma de Guadalajara, Associate Professor of Clinical, Pediatrics

**Lin, Peter, O.D.**, 2010, State University of New York College of Optometry, Faculty Associate, Surgery

**Loomba, Ashish, M.D.**, 2003, Mahatma Gandhi Memorial Medical College, Assistant Professor, Pediatrics

**Lozano-Guzman, German A., M.D.**, 2004, Escuela Colombiana De Medicina, Assistant Professor, Pediatrics

## **M**

**MacKay Jr., John M., M.D.**, 1984, Medical College of Ohio at Toledo, Assistant Professor of Clinical, Emergency Medicine

**Maiyegun, Sitratullah O., M.D.**, 1984, University of Lagos, College of Medicine, Associate Professor, Pediatrics

**Maldonado, Alfredo A., M.D.**, 2003, J & S Weill Medical College, Cornell University, Assistant Professor, Pediatrics

**Maldonado, Michael F., O.D.**, 2006, Universidad Interamericana de Puerto Rico School of Optometry, Faculty Associate, Surgery

**Mallett, Veronica, M.D.**, 1983, Michigan State University, Department Chair and Professor, OB/GYN

**Manglik, Niti, M.D.**, 2000, Medical College of Baroda, Assistant Professor, Medical Education

**Mansourkhani, Shiva, M.D.**, 1997, Isfahan University of Medical Science and Health Service, Assistant Professor, Psychiatry

**Martin, Charmaine A., M.D.**, 1996, University of Texas Medical Branch at Galveston, Associate Professor, Family and Community Medicine

**Martinez-Lopez, Jorge I., M.D.**, 1950, Louisiana State University Health Sciences Center School of Medicine, Professor, Internal Medicine

**Maspons, Aldo R., M.D.**, 2006, The University of Texas Southwestern Medical Center at Dallas, Assistant Professor, Pediatrics

**Maud, Alberto, M.D.**, 1995, Universidad Nacional de Cordoba, Assistant Professor, Neurology

**McCallum, Richard W., M.D.**, 1968, The University of Queensland and the Queensland Medical School, Professor, Internal Medicine

**McLean, Susan F., M.D.**, 1988, Medical College of Virginia, Associate Professor of Clinical, Surgery

**Mehta, Shivani U., M.D.**, 2004, Maharashtra University Health Sciences, Assistant Professor, Psychiatry

**Mendez, Melissa, M.D.**, 2003, University of California at Irvine College of Medicine, Assistant Professor, OB/GYN

**Mendoza Ladd, Antonio H., M.D.**, 2005, Universidad de San Carlos de Guatemala, Assistant Professor, Internal Medicine

**Meza, Armando D., M.D.**, 1986, Universidad Autónoma de Ciudad Juárez, Associate Dean for Graduate Medical Education and Associate Professor, Internal Medicine

**Milan, Stacey A.**, 2004, Temple University School of Medicine, Assistant Professor, Surgery



**Miller, Wayde D., M.D.**, 1992, University of Texas Medical Branch, Assistant Professor, Anesthesiology

**Minton, Gordon M.D.**, 1989, Texas Tech University School of Medicine, Assistant Professor, Anesthesiology

**Molinares, Vanina, M.D.**, 1992, Universidad Libre de Colombia, Assistant Professor, Internal Medicine

**Molokwu, Jennifer C., M.D.**, 2002, University of Benin School of Medicine, **M.P.H.**, 2007, University of Minnesota, Assistant Professor, Family and Community Medicine

**Monks, Stormy M., Ph.D.**, 2012, University of Texas at El Paso, **M.P.H.**, 2006, New Mexico State University, Assistant Professor, Emergency Medicine

**Montoya, Ignacio, M.D.**, 2006, University of Texas Southwestern Medical School, Assistant Professor, OB/GYN

**Moore, Lisa, M.D.**, 1996, Duke University School of Medicine, Professor, OB/GYN

**Moreu Ramirez, Gil M., D.P.M.**, 1991, Ohio College of Podiatric Medicine, Faculty Associate, Orthopaedic Surgery

**Moujan, Pablo, M.D.**, 1983, University of Buenos Aires-Facultad de Medicina, Interim Chair and Assistant Professor, Anesthesiology

**Mukherjee, Debabrata P., M.D.**, 1988, Government Medical College, Department Chair and Professor, Internal Medicine

**Mulla, Zuber D., Ph.D.**, 2001, University of South Florida, **M.S.P.H.**, 1994, University of South Florida College of Public Health, Associate Professor, OB/GYN

**Murtaza, Ghulam, M.D.**, 1970, King Edward Medical College, Assistant Professor, OB/GYN

## **N**

**Nahar, Tamanna, M.D.**, 1988, Bangalore University, Assistant Professor, Internal Medicine

**Nahleh, Zeina A., M.D.**, 1995, American University of Beirut, Associate Professor, Internal Medicine

**Nelson, Brian K., M.D.**, 1975, Baylor College of Medicine, Department Chair and Professor, Emergency Medicine

**Nesic-Taylor, Olivera, Ph.D.**, 1997, School of Molecular Biology and Physiology, Associate Professor, Medical Education

**Noriega, Oscar A., M.D.**, 1977, University of California in San Francisco School of Medicine, Associate Professor, Family and Community Medicine

**Nwosu, Azikiwe C., M.D.**, 1979, University of Nigeria, Associate Professor, Internal Medicine

## **O**

**Olivas, Cecilia, F.N.P. – C.,** 2008, University of Texas at El Paso, Faculty Associate, Neurology

**Olivas, Victor J., M.D.,** 2007, University of Texas Southwestern Medical School, Assistant Professor, Surgery

**Orlandi, Marc, M.D.,** 1991, Northeastern Ohio Universities College of Medicine and Pharmacy, Assistant Professor, Anesthesiology

## **P**

**Padilla, Osvaldo, M.D.,** 1998, University of Texas at Houston Medical School, **M.P.H.,** 2000, Tufts School of Public Health, Assistant Professor, Pathology

**Parsa, Michael D., M.D.,** 1998, Creighton University School of Medicine, Assistant Professor, Emergency Medicine

**Pasillas, Rebecca, Ph.D.,** 2008, University of Nevada, Assistant Professor, Psychiatry

**Patel, Chetanbabu, M.D.,** 2000, University of Arizona College of Medicine, Assistant Professor, Pediatrics

**Patel, Priti G., M.D.,** 2000, University of Arizona College of Medicine, Assistant Professor, Pediatrics

**Pathak, Indu, M.D.,** 1978, Maharshi Dapanand University, Assistant Professor, Pediatrics

**Peinado, Jesus, M.D.,** 1996, Universidad Juarez del Estado de Durango Escuela de Medicina Humana, Assistant Professor, Pediatrics

**Pema, Kanchan M., M.D.,** 1979, University of Natal, Associate Professor, Internal Medicine

**Penaranda, Eribeth K., M.D.,** 2000, Universidad Nacional Autonoma de Colombia, Assistant Professor, Family and Community Medicine

**Perez, Ruth G., Ph.D.,** 1993, University of Pittsburg School of Medicine, Associate Professor, Biomedical Sciences

**Perry, Cynthia N., Ph.D.** 2011, University of California San Diego, Faculty Associate, Medical Education

**Pfarr, Curtis M., Ph.D.,** 1990, University of Colorado at Boulder, Professor, Medical Education

**Pimentel, Elizabeth A., F.N.P,** 1993, University of Texas at El Paso, Faculty Associate, Orthopaedic Surgery

**Pirela-Cruz, Miguel A., M.D.,** 1980, Temple University, Department Chair and Professor, Orthopaedic Surgery

**Piriyawat, Paisith, M.D.**, 1992, Chulalongkorn University School of Medicine, Associate Professor, Neurology

**Piskurich, Janet F., Ph.D.**, 1994, Case Western Reserve University College of Medicine, Professor, Medical Education

**Porres-Aguilar, Mateo, M.D.**, 2005, Universidad La Salle, Assistant Professor, Internal Medicine

**Poudel, Bindu, D.N.P., C.N.M.**, 2013, University of Utah, Faculty Associate, OB/GYN

**Prieto-Jimenez, Carmen A., M.D.**, 1989, University of El Salvador, Assistant Professor, Pediatrics

## **Q/R**

**Quest, Dale W., Ph.D.**, 1997, University of Saskatchewan, Associate Professor, Medical Education

**Ramirez, Mercedes E., M.D.**, 1987, Universidad Autonoma de Ciudad Juarez, Research Assistant Professor, Psychiatry

**Ramos-Duran, Luis R., M.D.**, 1998, Universidad de Autonoma de Chihuahua, Assistant Professor, Radiology

**Rao, Krishnaswamy, M.D.**, 2001, Siddhartha Medical College, Assistant Professor, Pediatrics

**Reddy, Sireesha, M.D.**, 1995, Columbia University College of Physicians and Surgeons, Professor, OB/GYN

**Rincones, Cheyenne, A.P.N., R.N.**, 2013, Texas Tech University Health Sciences Center, Faculty Associate, Family and Community Medicine

**Robinson, Arvin E., M.D.**, 1964, Medical College of Virginia, Professor, Radiology

**Rodriguez, Carlos, M.D.**, 2005, Universidad Autonoma de Baja California, Instructor, Internal Medicine

**Rodriguez, Gustavo J., M.D.**, 1996, Universidad de Santiago de Compostela, Associate Professor, Neurology

**Rojas Mendez, Patricia, M.D.**, 2009, Universidad Central del Caribe School of Medicine, Instructor, OB/GYN

**Romano, Michael J., M.D.**, 1984, University of Texas Health Science Center at Houston, Associate Dean for Clinical Affairs and Associate Professor, Pediatrics

**Romero, Roberta A., F.N.P.-C.**, 2009, Texas Tech University School of Medicine, Faculty Associate, Internal Medicine

**Rosas-Blum, Eduardo, M.D.**, 2004, Autonomous University of Guadalajara, Assistant Professor, Pediatrics

**Rotwein, Peter, M.D.**, 1975, Albert Einstein College of Medicine, Assistant Vice President for Research, TTUHSC El Paso, Associate Dean for Research, PLFSOM, Regional Dean of the Graduate School of Biomedical Sciences, Department Chair and Professor, Biomedical Sciences

**Rubin, Lewis P., M.D.**, 1982, Yale School of Medicine, Professor, Pediatrics

## **S**

**Salameh, Hasan J., M.D.**, 2007, Ross University School of Medicine, Assistant Professor, Internal Medicine

**Salazar, Tammy T., Ph.D.**, 2006, University of Texas at Austin, Assistant Professor, Family and Community Medicine

**Salinas, Albert, F.N.P.-C.**, 2011, Texas Tech University Health Sciences Center, Faculty Associate, Internal Medicine

**Saltzstein, Edward C., M.D.**, 1957, Northwestern University Medical School, Professor, Surgery

**Sambalingam, Deveraj, M.D.**, 2000, Stanley Medical College, Assistant Professor, Pediatrics

**San Juan, Zinnia T., M.D.**, 2004, University of the Philippines Manila College of Medicine, Assistant Professor, Internal Medicine

**Sandroni, Stephen, M.D.**, 1978, New York Medical College, Professor, Medical Education

**Sarosiek, Irene, M.D.**, 1979, Medical University of Bialystok, Associate Professor, Internal Medicine

**Sarosiek, Jerzy, M.D.**, 1969, Medical University of Bialystok, Professor, Internal Medicine

**Schaffer, Michael G., M.D.**, 1988, University of Florida, College of Medicine, Assistant Professor, OB/GYN

**Schydlower, Manuel, M.D.**, 1971, University of New Mexico School of Medicine, Associate Dean for Admissions and Professor, Pediatrics

**Shankar, Premlata, M.D.**, 1980, All India Institute of Medical Sciences, Co-Director of Center of Excellence for Infectious Diseases and Professor, Biomedical Sciences

**Shokar, Gurjeet S., M.D.**, 1987, Dayan and Medical College and Hospital, Department Chair and Professor, Family and Community Medicine

**Shokar, Navkiran K., M.D.**, 1992, Oxford University Medical School, **M.P.H.**, 2003, University of Texas School of Public Health, Associate Professor, Family and Community Medicine

**Sholey, Gayla, C.N.M.**, 2014, Case Western Reserve University, Faculty Associate, OB/GYN



**Shukla, Vani, M.D.**, 1997, Jawahar Lal Nehru Medical College, Assistant Professor, Internal Medicine

**Siddiqui, Tariq S., M.D.**, 1996, Dow Medical College, University of Karachi, Assistant Professor, Internal Medicine

**Singh, Namrata S., M.D.**, 1990, Dayanand Medical College and Hospital, Associate Professor, Pediatrics

**Skrinak, Nikki A., C.N.M.**, 2014, Ohio State University College of Medicine, Faculty Associate, OB/GYN

**Spalding, Mary C., M.D.**, 1977, University of Texas Medical Branch at Galveston, Associate Professor, Family and Community Medicine

**Stump, Robert F., M.D.**, 1998, University of Texas at San Antonio School of Medicine, Assistant Professor, Emergency Medicine

**Sundin, Olof H., Ph.D.**, 1981, Massachusetts Institute of Technology, Associate Professor, Biomedical Sciences

**Swamy, Manjunath, M.D.**, 1980, All India Institute of Medical Sciences, Co-Director of Center of Excellence for Infectious Disease and Professor, Biomedical Sciences

## **T**

**Tarwater, Patrick M., Ph.D.**, 1999, University of Texas Health Sciences Center at Houston, Professor, Biomedical Sciences

**Taylor, Sabrina, M.D.**, 2003, Georgetown University School of Medicine, Assistant Professor, Emergency Medicine

**Terreros, Daniel A., M.D.**, 1973, Colombia National University, Professor, Biomedical Sciences

**Ting, Stanislaus, M.D.**, 1972, University Rangoon, Professor of Clinical, Pediatrics

**Torabi, Alireza, M.D.**, 1997, Shahid Beheshti University, **Ph.D.**, 2006, University of Nevada, Assistant Professor, Pathology

**Torres, Leigh A., R.N.C., N.M.P.-BC**, 2007, University of Texas Medical Branch at Galveston, Faculty Associate, Pediatrics

**Tyroch, Alan H., M.D.**, 1990, University of Texas Health Sciences Center at Houston, Department Chair and Professor of Clinical, Surgery

## **V**

**Valenzuela, Carlos, C.N.M.**, 2003., Marquette University, Faculty Associate, OB/GYN

**Vallala, Shraavan, M.D.**, 2006, Kakatiya Medical College, Assistant Professor, Pediatrics

**Vallejo, Daniel C., F.N.P.-C.**, 2009, University of Texas at El Paso, Faculty Associate, Surgery

**Vashishtha, Neha, M.D.**, 2007, Kasturba Medical College, Instructor, Pediatrics

**Vazquez, Gerardo, M.D.**, 2010, Texas Tech University Health Sciences Center School of Medicine, Assistant Professor, Family and Community Medicine

**Velasco, Veronica, M.D.**, 2004, University of Texas Southwestern Medical School, Assistant Professor, Medical Education

**Vera, Robert W., M.D.**, 1981, University of Texas Southwestern Medical School, Associate Professor of Clinical, OB/GYN

**Villanos, Ma. Teresa, M.D.**, 1989, Lyceum Northwestern - Philippines, Associate Professor, Pediatrics

**Villa Royval, Silvia M., M.D.**, 2009, Boston University School of Medicine, Assistant Professor, Anesthesiology

## **W**

**Walker, Wendilywn, Ph.D.**, 2003, University of Edinburgh, Assistant Professor, Biomedical Sciences

**Waterman, Nguyen, O.D.**, 2003, University of Missouri, Faculty Associate, Surgery

**Watts, Susan I., Ph.D.**, 1997, Rutgers State University of New Jersey, Assistant Professor, Emergency Medicine

**Weisman, H. W. Jonathan, M.D.**, 1978, Universidad de Monterrey, Associate Professor, Psychiatry

**Wells, Radosveta N., M.D.**, 1994, Higher Medical Institute, Assistant Professor, Emergency Medicine

**Wilson, Brian, B.A.**, 2002, Western Illinois University, Faculty Associate, Emergency Medicine

**Wilson, Harry L., M.D.**, 1973, University of Chicago Pritzker School of Medicine, Associate Professor, Pathology

**Wojciechowska, Joanna M., M.D.**, 1983, Medical Academy, Assistant Professor, Pediatrics

**Woods, Gordon L., M.D.**, 1980, University of New Mexico School of Medicine, **M.H.P.E.**, 2007, University of Illinois, College of Medicine, College Master and Associate Professor, Medical Education

**Woolard, Robert H., M.D.**, 1979, University of Massachusetts Medical School, Professor, Emergency Medicine

**Wright, Justin, M.D.**, 2006, Texas Tech University School of Medicine, Assistant Professor, Family and Community Medicine

**Wu, Haoquan, Ph.D.**, 2000, Fudan University, Assistant Professor, Biomedical Sciences

## **X/Y/Z**

**Xu, Chun, M.D.**, 1983, HMU, **Ph.D.**, 1999, Karolinska Institute, Assistant Professor, Psychiatry

**Ye, Chunting, Ph.D.**, 2010, Jinan University, Research Instructor, Biomedical Sciences

**Yi, Guohua, Ph.D.**, 2004, Wuhan University, Faculty Associate, Biomedical Sciences

**Zavala, Juan M., M.D.**, 2001, University of Texas Health Sciences Center at Houston, Research Assistant Professor, Psychiatry

**Zeng, Mingtao, Ph.D.**, 1997, Tel Aviv University, Associate Professor, Biomedical Sciences

**Zhang, Jun, Ph.D.**, 1998, University of Florida, Associate Professor, Anesthesiology

**Zubia, Rosalia, F.N.P.-C.**, 2007, University of Texas at El Paso, Faculty Associate, Emergency Medicine

**Zuckerman, Marc J., M.D.**, 1977, Tufts University Health Sciences Center, Professor, Internal Medicine



## **PART TIME FACULTY**

### **A/B/C**

**Abedin, Zainul, M.D.**, 1968, ,Indira Gandhi Medical College, Clinical Professor, Internal Medicine

**Aguirre-Hauchbaum, Salvador F., M.D.**, 1971, Universidad Autónoma de Chihuahua, Clinical Professor, Psychiatry

**Agullo, Francisco J., M.D.**, 2001, Universidad Anahuac, Clinical Associate Professor, Surgery

**Blumenfeld, Daniel G., M.D.**, 1991, University of Texas Southwestern School of Medicine, Clinical Assistant Professor, Surgery

**Cuetter, Albert C., M.D.**, 1963, Cartagena University Medical School, Professor of Clinical, Neurology

### **D/E/F**

**Freemyer, Ryan R., M.D.**, 2001, Texas Tech University School of Medicine, Clinical Assistant Professor, Surgery

### **J/K/L**

**Komaragiri, Ramesh, M.D.**, 1996, Kakatiya Medical College, Clinical Associate Professor, Internal Medicine

**Lyn, Heidi A., M.D.**, 1994, Baylor College of Medicine, Assistant Professor, OB/GYN

### **M/N/O**

**Naylor, Anthony D.**, 1967, Middlesex Hospital Medical School, Assistant Professor, Radiology

**Ortega, Deborah A., M.D.**, 1992, University of Texas Medical Branch at Galveston, Academic Assistant Professor, Anesthesiology

### **P/Q/R**

**Palladino, Humberto, M.D.**, 2000, Universidad Favaloro, Fac De Cien Med, Clinical Assistant Professor, Surgery

**Rhodes, Miller F., M.D.**, 1973, Meharry Medical College, Clinical Assistant Professor, Surgery

**Rivera, Manuel, M.D.**, 1971, Universidad Autonoma de Guadalajara, Clinical Professor, Internal Medicine



**S/T/U**

**Spencer, Susan E., M.D.**, 1988, Baylor College of Medicine, Clinical Assistant Professor, Emergency Medicine

