

## **The University of Texas Medical School at Houston 2007-2009 Catalog Addendum**

From page 23 of the Medical School catalog:

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### **Books and Supplies**

During the first year, the cost of textbooks and supplies averages \$1,516 (excluding cost of computer). In the second, third and fourth years of the curriculum, the cost of books and supplies ranges from \$971 to \$2,933 each year.

### **Computer Requirement**

A laptop computer is required for entering students.

Specifications:

- It is imperative to have an Intel processor capable of running at least Microsoft Windows XP Professional because the clinical information system cannot be accessed with a browser other than Microsoft Internet Explorer 6 or greater.
- Students will have the option of having their laptops configured with the software needed for their medical education at the UTHSC-H Medical School.
- Apple computer are not supported by MSIT.

The minimum hardware requirements for student laptops:

- Intel Core2 Duo Processor
- 1 GB Ram
- 60 GM Hard Drive
- CD-RW/DVD-ROM Combo
- Sound Card
- 10/100 Network Interface Card
- Wireless Card (802.11b/g)
- Windows XP Professional/Vista (32-bit versions ONLY)
- 1 or more USB ports
- 3-year warranty

[http://med.uth.tmc.edu/msit/policy/students.html#Laptop\\_Requirements](http://med.uth.tmc.edu/msit/policy/students.html#Laptop_Requirements)

## **A Message from the Dean of the UT Medical School at Houston**

The four-year curriculum for medical students outlined in this catalog is the product of over 30 years of the Medical School's continual growth and development. To date, more than 4,000 physicians have graduated from the UT Medical School and each represents an important part of who we are. Please take a moment to review our comprehensive and innovative programs. From first-year course work that provides clinical exposure to second-year Problem-Based Learning case studies that integrate basic and clinical sciences, this Medical School is committed to continual innovations and training opportunities that keep pace with these times of rapid health care changes.

Our opening retreat and orientation program for new students set the stage for the four years and serves as an important statement that this is a student-friendly school, providing faculty resources and student-support programs designed around a philosophy that your medical education will be a lifelong endeavor. From our teaching hospitals, including Memorial Hermann – Texas Medical Center and Lyndon B. Johnson General Hospital, to community-based health centers and clinics throughout the Houston area, we continue to develop learning opportunities that few schools can match in scope and quality. Located in the Texas Medical Center, your education takes place in a medical city, not just a medical building. As we diversify in ambulatory care and address a new era of medical practice, our training opportunities are changing in response to your educational career needs.

We are mindful of our responsibility to expose our students to recent advances, both technological and intellectual, in medicine. We recognize and utilize computer simulation and resources as an important partner in the practice of medicine. With equal diligence, we encourage students to maintain their empathy, sensitivity, and commitment to ethical and compassionate care. We believe that “high-tech, high-touch” medicine is not a contradiction in terms, and our curriculum reflects this philosophy.

Please review the program outlined in our catalog. It is our goal to provide you a quality education that is both rigorous and rewarding, with your success and the health of our global community in mind.

Giuseppe N. Colasurdo, M.D.  
Dean and H. Wayne Hightower Distinguished Professor in the Medical Sciences

**The University of Texas Houston - Health Science Center  
2007-2009 Calendars**

**Medical, DDS, Dental Hygiene, Dental Postgrad and Graduate Programs**

**\*\*2007-2008 ACADEMIC YEAR\*\***

**Summer 2007**

Clinicals Begin	June 25, 2007 (MED Year 3) July 1, 2007 (MED Year 4, Dental Postgraduate, Graduate)
Classes End	August 17, 2007 (Dental Postgraduate, Graduate)

**Fall 2007**

Semester Begins	August 13, 2007 (DDS, Dental Hygiene) August 20, 2007 (MED 1 & 2, Dental Postgraduate, Graduate)
Classes End	November 30, 2007 (DDS, Dental Hygiene, Postgraduate, Graduate)
Exams	December 3-14, 2007 (DDS, Dental Hygiene) December 6-21, 2007 (MED Year 1) December 14-21, 2007 (MED Year 2)
Clinicals End	December 14, 2007 (MED Year 3) (DDS 3 & 4) December 21, 2007 (Dental Postgraduate, Graduate)
Blackboard Shutdown	December 27-30, 2007

**Spring 2008**

Clinicals Begin	January 2, 2008 (MED & DDS Years 3 & 4)
Semester Begins	January 7, 2008 (DDS, Dental Hygiene, DPGrad, MED Years 1-2)
Classes End	May 2, 2008, 2006 (Dental Postgraduate, Graduate, DDS, Dental Hygiene)
Exams	April 21 – May 16, 2008 (MED Year 2) May 5 – 16, 2008 (DDS, Dental Hygiene) May 7-23, 2008 (MED Years 1)

**The University of Texas Medical School at Houston**

Blackboard Shutdown	June 7-8, 2008
Clinicals End	May 16, 2008 (DDS 3 & 4) May 31, 2008 (MED Year-4) June 20, 2008 (MED Year 3) June 30, 2008 (Postgraduate, Graduate)
Spring Break	March 10 - 14, 2008
Summer 2008 (Medical Year 3 and 4 Clinicals)	
Clinicals Begin	June 30, 2008 (MED Year-3) July 1, 2008 (MED Year-4)
Summer 2008 ( Year 1 Dental Hygiene, DDS 1,2,3)	
Session Begins	June 2,, 2008
Classes End	July 25, 2008
Summer Term 2008 (Dental Postgraduate, Graduate)	
Session Begins	July 1, 2008
Classes End	August 22, 2008
<b>**2008-2009 ACADEMIC YEAR**</b>	
<b>Fall 2008</b>	
Semester Begins	August 18, 2008 (DDS, Dental Hygiene, MED 1 & 2)  August 25, 2008 (Postgraduate, Graduate)
Classes End	December 5, 2008 (DDS, Dental Hygiene, Postgraduate, Graduate)
Exams	December 8-19, 2008 (MED 1, DDS, Dental Hygiene) December 15-19, 2008 (MED 2)
Clinicals End	December 19, 2008 (MED Year 3, DDS 3 & 4)
Blackboard Shutdown	December 27-30, 2008
<b>Spring 2009</b>	
Clinicals Begin	January 2, 2009 (MED Year 4) January 5, 2009 (MED Year 3)

**The University of Texas Medical School at Houston**

Semester Begins	January 5, 2009 (DDS, Dental Hygiene, DPGrad, MED 1 & 2)
Classes End	May 1, 2009 (DDS, Dental Hygiene) May 8, 2009 (Dental Postgraduate, Graduate)
Exams	May 4-15, 2009 (DDS, Dental Hygiene) May 11-15, 2009 (MED Year 2) May 11-22,, 2009 (MED Year 1)
Clinicals End	May 15, 2009 (DDS 3 & 4) May 31, 2009 (MED Year 4) June 26, 2009 (MED-Year 3) June 30, 2009 (Postgraduate, Graduate)
Spring Break	March 9-13, 2009 (MED Years 1&2) March 16-20, 2009 (DDS, Dental Hygiene, Postgraduate, Graduate)
Blackboard Shutdown	June 7-8, 2009
Summer 2009 (Medical Year 3 and 4 Clinicals)	
Clinicals Begin	June 29, 2009 (MED Year 3) July 1, 2009 (MED Year 4)
Summer Term 2009 (DDS 1,2,3, Dental Hygiene Yr 1)	
Session Begins	June 1, , 2009
Classes End	July 24, 2009
Summer Term 2009 (Dental Postgraduate, Graduate)	
Session Begins	July 1, 2009
Classes End	August 21, 2009

## Administrative Officers

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Assistant Dean for Educational Programs

## Departments and Chairs

### **Anesthesiology**

James F. Arens, M.D.

### **Biochemistry and Molecular Biology**

Rodney E. Kellems, Ph.D.

### **Cardiothoracic and Vascular Surgery**

Hazim J. Safi, M.D.

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### **Internal Medicine**

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### **Neurobiology and Anatomy**

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James C. Grotta, M.D.

### **Neurosurgery**

Dong Kim, M.D.

### **Obstetrics, Gynecology and Reproductive Sciences**

Susan M. Ramin, M.D.

### **Ophthalmology and Visual Science**

Richard S. Ruiz, M.D.

### **Orthopaedic Surgery**

Kyle Dickson, M.D., M.B.A.

### **Otolaryngology, Head and Neck Surgery**

Richard J. Andrassy, M.D. (Interim)

### **Pathology and Laboratory Medicine**

Robert L. Hunter, Jr., M.D., Ph.D.

### **Pediatrics**

Guisepppe Colasurdo, M.D.

### **Physical Medicine and Rehabilitation**

William H. Donovan, M.D.

### **Psychiatry and Behavioral Sciences**

Pedro Ruiz, M.D. (Interim)

### **Surgery**

Richard J. Andrassy, M.D.

## **Introduction**

On Nov. 11, 1968, the Coordinating Board of the Texas College and University System approved the establishment of a new four-year public school of medicine in the Texas Medical Center in Houston. On June 13, 1969, the UT Medical School was created by act of the Legislature, and an appropriation for its initial cost became effective Sept. 1, 1969. Three considerations led to the organization of the school: local, regional, and national shortages of physicians; the extraordinary, but until then underutilized, resources for medical education in Houston and in the Texas Medical Center; and the large number of well-qualified candidates seeking entry to medical school.

A dean and supporting staff were appointed in the spring of 1970. Two years were then devoted to assembling faculty, resources, and equipment; designing a curriculum;

and organizing these various parts into an effective medical education team. During this period, the Medical School was accredited by the Association of American Medical Colleges (AAMC) Liaison Committee on Medical Education. The faculty grew rapidly, and effective instruction began, in both the basic sciences and clinical disciplines. New facilities were opened, major construction programs were initiated, and the renovation of Memorial Hermann Hospital was completed. In 1972, the Medical School, along with five other UT health programs, was incorporated into The University of Texas Health Science Center at Houston.

Now, more than 35 years later, the Medical School has achieved a position of excellence among the other fine institutions in the Texas Medical Center. It has remained fully accredited throughout this time and was re-accredited in 2004 for eight years.

## **Mission statement**

The mission of The University of Texas Medical School at Houston is to provide the highest quality of education and training of future physicians for the state of Texas, in harmony with the state's diverse population; to conduct the highest caliber of research in the biomedical and health sciences; and, to provide exemplary clinical services in relationship to our educational and discovery activities.

In pursuit of this mission, the Medical School:

- \* endeavors to select a group of caring, well-prepared, highly motivated, intellectually able and socially aware students from diverse cultural, ethnic, social, and economic backgrounds.
- \* offers them educational experiences: in the basic human biological and behavioral sciences that underlie modern medicine, in the cultural and social forces that shape its practice, and in the ethical responsibilities of physicians.
- \* provides training in cognitive, technical, and interpersonal skills necessary for practicing patient-centered medicine.
- \* emphasizes problem-solving and creates educational opportunities that involve the use of modern information resources and technology.
- \* encourages students, faculty, and staff to participate in outreach activities that benefit the wider community.

## **UT Medical School at Houston Principles of Education**

- \* The curriculum will provide students a general medical education with a breadth and depth of core knowledge, skills, and attributes necessary for residency training in any discipline or specialty, and for the life-long practice of medicine.
- \* The curriculum will be coordinated so that, when appropriate, courses and clerkships are seamlessly integrated.
- \* The curriculum and the faculty will establish an environment that fosters professionalism, humanism, altruism, ethical behavior, empathy, and compassion.
- \* The curriculum will explicitly define the core knowledge, skills, and attributes expected of medical students upon graduation.
- \* The curriculum will be informed by recognized educational research and theory, and by measured outcomes.

## Facilities

The nine-story Medical School building is connected to Memorial Hermann - Texas Medical Center. The building bridges Ross Sterling Avenue to form one continuous structure with the Hospital's Cullen, Jones, Robertson, and Hermann pavilions. A sky bridge provides a link with The University of Texas Health Science Center Professional Building, where the faculty conduct their clinical practices, and adjacent garages.

The Medical School building contains offices, teaching and research laboratories, classrooms, lecture halls, study areas, animal facilities, educational and biomedical communications support areas, student lounges, a recreational center, and administrative suites. In early 2005, the John Freeman Building (the original Medical School building), was demolished to make room for a new six-story 208,500 gross square-foot research building. The top two floors will be devoted to a state-of-the-art vivarium, and the first four floors will be dedicated to research. This new building will be connected to the Medical School building at several levels.

### Affiliated Hospitals

Memorial Hermann-Texas Medical Center, a partner in the Memorial Hermann Healthcare System, is the primary teaching hospital of the UT Medical School in the Texas Medical Center (TMC). Founded in 1925, this large metropolitan hospital, licensed for 815 beds, has a long-standing record of distinction in postgraduate teaching. It offers a broad range of inpatient services with special units for coronary and intensive care, newborn intensive care, treatment of burns, kidney disease and transplantation, advanced diagnostic facilities, a

clinical research center, and emergency services. The hospital serves as the center of inpatient clinical activity for the Medical School's full-time faculty who work closely with part-time faculty and volunteer physicians. The hospital, which has been completely renovated, includes Memorial Hermann Children's Hospital, the Texas Kidney Institute, the President Bush Center for Cardiovascular Health, and the Jesse H. and Mary Gibbs Jones Medical Surgical Center. Medical students develop much of their inpatient clinical experience in this outstanding facility.

In 1997, Hermann Hospital merged with the Memorial Healthcare System to become the Memorial Hermann Healthcare System, the largest not-for-profit hospital system in Houston. The Memorial Hermann Healthcare System has 3,155 licensed beds in 9 acute care hospitals three long-term acute hospitals, and a retirement/nursing center.

The Lyndon B. Johnson (LBJ) General Hospital, owned and operated by the Harris County Hospital District, is the second primary teaching facility for the Medical School. This 332-bed hospital opened in 1989 and is a full-service general hospital with easy access for the indigent patients it serves. Health-care services for the hospital district are provided by Affiliated Medical Services, a nonprofit organization composed of UT faculty, which staffs LBJ, and Baylor College of Medicine, which staffs Ben Taub General Hospital.

The University of Texas M. D. Anderson Cancer Center, located in the Texas Medical Center, is widely regarded as one of the world's foremost centers for

cancer care, research, education, and prevention. Since its opening in 1944, M. D. Anderson has treated more than 700,000 persons with cancer and allied diseases in its inpatient and outpatient services. The institution also houses a large clinical and basic science research program devoted to the investigation of the biology of cancer and includes active units in biochemistry, biological response modifiers, biophysics, molecular biology, pathology, pharmacology, cell biology, and cancer prevention. M. D. Anderson Cancer Center participates in a wide range of training programs involving more than 4,100 students annually in the sciences and health professions. In addition, inpatient facilities were completed in 1976 and an expanded ambulatory care center was dedicated in 1987. Three new buildings have recently opened: the Cancer Prevention Building, the Ambulatory Clinic Building, and the Basic Sciences Research Building. The M. D. Anderson Cancer Center has 512 beds and will treat more than 74,000 people this year.

The UT Harris County Psychiatric Center (HCPC), which opened in 1986, is a 222-bed public acute care psychiatric hospital that delivers a comprehensive program of psychiatric and clinical social services to more than 5,000 patients annually. The center plays an important role as a teaching facility for medical and nursing schools across Texas and Louisiana. Operated by The University of Texas Health Science Center at Houston, the facility is jointly supported by the State of Texas and Harris County under the auspices of the Texas Department of State Health Services and the Mental Health and Mental Retardation Authority of Harris County, respectively. The Medi-

cal School's Department of Psychiatry and Behavioral Sciences provides the administrative leadership and medical services for the center.

CHRISTUS St. Joseph Hospital is a 792-bed general hospital four miles north of the Medical School in downtown Houston. This hospital is the site of several programs for student rotations, overseen by UT faculty, including surgery, neurology, and obstetrics and gynecology.

St. Luke's Episcopal Hospital is a 946-bed community teaching hospital and tertiary referral center located nearby in the Texas Medical Center. Student rotations from the Medical School take place in neurology and internal medicine. St. Luke's is also home to the Texas Heart Institute, where The University of Texas Health Science Center at Houston has several ongoing research and educational collaborations.

### **Outpatient Clinical Facilities**

Ambulatory care is provided at the UT-Houston Physician Offices, located primarily in The University of Texas Health Science Center Professional Building across the street as well as at several satellite locations; six community health centers operated by the Harris County Hospital District; seven WIC (Women, Infants and Children) clinics; plus several other clinical outreach programs located throughout the greater Houston community

The UT Mental Sciences Institute (MSI), which is part of the Department of Psychiatry and Behavioral Sciences, is located in the TMC and is dedicated to education and clinical care in psychiatry. MSI also serves as a facility for clini-

cal research activities.

### **Library Resources**

The Houston Academy of Medicine/Texas Medical Center (HAM-TMC) Library serves as the accredited library for most Texas Medical Center institutions and is the primary library resource for The University of Texas Medical School at Houston.

Currently, the library contains 76,500 square feet of space and holds over 362,220 volumes, including books and journal volumes. Additionally, the library has subscriptions to over 100 electronic databases and over 4,400 electronic journals. Over 50 public access computers are available to library users. These computers have Internet access, as well as software products for word processing, spreadsheets, database development, and preparation of public presentations. The library also offers classes in basic HTML, Endnote, Internet for medical research, navigating full-text journals, OVID, PowerPoint, PubMed, and Reference Manager.

Since 1991, the library has served as the Regional Medical Library for the National Network of Libraries of Medicine, South Central Region, with responsibility for the library needs of health professionals in the five-state region of Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. So designated by the National Library of Medicine, there are only eight Regional Medical Libraries in the nation.

### **Learning Resource Center (LRC)**

The Learning Resource Center (LRC) supports the teaching and learning functions of the Medical School. The staff works closely with the faculty and the

students to promote utilization of innovative teaching and learning strategies in support of the Medical School's educational programs. The LRC is housed in a state-of-the-art facility with over 10,000 square feet of dedicated space, which includes seating for more than 200 in 150 individualized study carrels and five group study rooms. There are six conference rooms as part of the Medical School's Problem Based Learning curriculum.

The LRC has over 75 networked computer stations, more than 200 Internet connections, and wireless networking capability. A range of audiovisual devices and a collection of over 3,500 instructional media include required and recommended texts, reserve and reference materials, slide sets, videotapes, and computer programs.

The LRC's circulation desk is open from 7 a.m. to 10 p.m., while the study areas are accessible 24 hours, seven days a week.

## M.D. Admissions

The Admissions Committee has the responsibility of recommending individuals from an increasingly large number of applicants who have the intellectual ability and motivation for service, making them most suitable for the study and practice of medicine. Particular interest is taken in candidates with a broad educational background. The committee emphasizes attempting to fill the needs of Texas for primary and rural care practitioners as well as those who will practice in other shortage areas or among needy populations. To the extent provided by applicable law, no person shall be excluded from participation in, denied the benefits of, or be subject to discrimination under, any program or activity sponsored or conducted by The University of Texas System or any of its institutions, on the basis of race, color, national origin, religion, sex, age, veteran status, sexual orientation, or disability, in accordance with The University of Texas System Board of Regents Rules and Regulations, Series 10701.

### Admission Requirements

Students should plan college course work with an emphasis on obtaining a broad education. Knowledge is an end in itself. It is important that evidence of scholarly interest and achievement in some branch of academic endeavor be demonstrated. The study of medicine is based upon science, so the medical student must be a capable student of science. While science majors are very appropriate, a liberal arts education is also an excellent basis for a medical career.

Accordingly, applicants may have majored in such areas as classics, languages, history, English literature, music, or philosophy, provided specific scientific requirements are fulfilled. All applicants are expected to be well educated and able to demonstrate the intellectual interests associated with entry into a learned profession.

Students must complete at least 90 undergraduate credit hours at a United States or Canadian university. The specific pre-medical credits listed be-

low must be taken at a United States or Canadian university. Although the minimum requirement for admission is 90 undergraduate semester hours at a United States or Canadian university, preference is given to students who obtain a baccalaureate degree prior to admission to medical school.

While the academic requirement is for 90 hours of college coursework, a completed degree is strongly recommended. Graduate courses do not satisfy these premedical requirements.

Requirements for Medical School Applicants for TMDAS Schools:

English 6 semester hours

Biology 14 (12 plus 2 laboratory) semester hours One year may be completed by advanced placement. The other year must be completed in residence at a college and must include formal laboratory work. Biology courses must be as required for science majors.

Mathematics 3 semester hours of college calculus or statistics. These courses should be given by the mathematics department.

Physics 8 semester hours (6 plus 2 laboratory), Physics courses must be as required for science majors must include laboratory experience.

Chemistry 12 semester hours (6 plus 2 lab) one year of general chemistry and one year of organic chemistry as required for science majors and must include the corresponding laboratory experience.

The Medical and Dental Schools of The University of Texas System are authorized by the Texas Legislature to accept only a limited number of non-residents for enrollment in an entering class. Non-resident students should have outstanding qualifications.

The Medical College Admissions Test is required and is an important part of the application. The new format MCAT is administered many times each year, and details of the dates and places of administration can be found at the AAMC website.

Information on the MCAT may be obtained from college premedical advisers or by writing to:

The American College Testing Program  
P. O. Box 414  
Iowa City, Iowa 52240

### Admissions Criteria

The UT Medical School, in conformity with the purpose assigned it by the Texas Legislature and its mission statement,

selects the best qualified students for its entering class who demonstrate a potential to become competent and caring physicians and who will serve the identified needs of the State of Texas. To that end, the Admissions Committee considers the totality of each application and gives importance to the factors enumerated below.

#### 1. Intellectual capacity

Each student who is accepted must have the intellectual ability to successfully complete medical school and master the essentials of the practice of medicine.

- \* undergraduate and graduate record
- \* standardized test scores
- \* academic awards and honors (e.g. Phi Beta Kappa, National Merit, etc.)
- \* research accomplishments
- \* degree of difficulty of undergraduate program
- \* pre-professional evaluations, personal interview

#### 2. Interpersonal and Communication Skills

The practice of medicine demands a high level of interpersonal skills and a compassionate attitude. The ability to communicate well is essential for these qualities.

- \* community or charitable service
- \* recognition for humanitarian service
- \* extracurricular activities and organizations
- \* leadership positions
- \* employment history
- \* cultural competency
- \* articulate and organized communication

- tion, both oral and written
- \* standardized test scores in verbal abilities
  - \* written MCAT score
  - \* statements made on the application or in the personal interview

### 3. Breadth and Depth of Pre-medical Educational Experience

The modern practice of medicine requires a strong scientific background and also an ability to understand the complex non-scientific problems facing physicians and patients, e.g. ethical or socioeconomic problems. The bare completion of the pre-medical requirements is a base on which to build further knowledge and prepare physicians for a lifetime of study so that they will remain the best possible practitioners of medicine.

- \* undergraduate core curriculum or course selection
- \* participation in the intellectual life of the university
- \* involvement in discipline organizations and clubs
- \* extent and variety of reading
- \* papers written or published
- \* knowledge displayed at the interview
- \* enrollment in an honors program in college
- \* pre-professional evaluations

### 4. Potential for Service to the State of Texas

A state medical school must, as a primary concern, produce practitioners who will serve the people of that state.

- \* the applicant's goals for the future
- \* size and location of hometown
- \* residency in a Health Professions

### Shortage Area in Texas

- \* potential for future provision of health services to underserved areas
- \* potential for future provision of medical specialties in short supply
- \* language skills appropriate to the Health Profession Shortage Areas in Texas

### 5. Motivation

A physician must be prepared for a lifetime of intense service to her or his patients. This requires a high level of selfless motivation and commitment.

- \* success in overcoming adverse economic or educational conditions
- \* employment history occurring simultaneously with undergraduate academic preparation
- \* participation in activities requiring time management skills
- \* varsity athletics, campus symphony, and other time-intensive accomplishments
- \* improvement in the undergraduate record
- \* veteran status and military experience
- \* experience in health-related activities

### 6. Integrity

Because of the public trust given to members of the medical profession, a physician must have qualities of integrity beyond reproach.

- \* pre-professional evaluations
- \* any academic integrity violation
- \* commission of a crime
- \* any other relevant background relating either positively or negatively to applicant's standard of integrity
- \* honorable discharge or discharge under honorable conditions

#### 7. Ethical Standards

A candidate must demonstrate a professional demeanor and behavior and must perform in an ethical manner in all dealings with peers, faculty, staff, and patients.

#### 8. Technical Standards

All individuals, without exception, who apply for admission to the UT Medical School at Houston must be able to perform specific essential functions. Essential functions are the basic activities that a student must be able to perform to complete the generalist medical school curriculum. An applicant who cannot perform the medical school's essential functions will not be considered for admission. A candidate for the MD degree at the UT Medical School must be able to perform these essential functions:

##### Observation

- \* accurately observe demonstrations
- \* accurately observe patients close up and at a distance
- \* observe to gather patient data (affect, gait, appearance, posture, etc.)
- \* use visual, auditory, olfactory and somatic senses to gather information

##### Communication

- \* communicate orally and in writing with patients and members of the health-care team
- \* read and comprehend written material

##### Psychomotor Skills

- \* sufficient motor function to obtain data from patients
- \* use tactile, auditory, and visual maneuvers
- \* execute motor movements to provide general care and emergency treatment

##### Intellectual And Cognitive Abilities

- \* measure, calculate, reason, analyze, synthesize, integrate and apply information
- \* comprehend three-dimensional relationships
- \* understand the spatial relationships of structures

##### Behavioral And Social Attributes

- \* emotional health to fully use intellectual abilities
- \* exercise good judgment
- \* promptly complete all responsibilities attendant to the diagnosis and care of patients
- \* developing mature, sensitive, and effective relationships with patients
- \* tolerate physically taxing workloads
- \* function effectively under stress
- \* adapt to changing environments
- \* display flexibility
- \* learn to function in the face of many patients
- \* show compassion, integrity, concern for others, interpersonal skills, interest, and motivation

##### Chronic Conditions

A candidate must not possess any chronic or recurrent illnesses, including but not limited to, infectious, psychiatric or substance abuse problems that can interfere with patient care or safety and are not compatible with medical practice or training.

For more information on the Technical Standards, contact:

##### Office of Admissions

The University of Texas Medical School  
at Houston 6431 Fannin  
Houston, Texas 77030

## Application Procedure

Application for admission to The UT Medical School is made through the Texas Medical and Dental Schools Application Service (TMDSAS). Applications for entry are accepted between May 1 and Nov. 1 of the preceding year. Early application is encouraged and is of advantage to applicants. Students are encouraged to apply as early as possible. Applicants should contact the Texas Medical and Dental Schools Application Service for the most current information. Application information is available from The Texas Medical and Dental Schools Application Service's Web site: [www.utsystem.edu/tmdsas](http://www.utsystem.edu/tmdsas)

Questions may be directed to:  
Texas Medical and Dental Schools  
Application Service  
702 Colorado, #6.400  
Austin, Texas 78701  
Telephone 512-499-4785

A non-refundable filing fee is required to accompany completed application forms when they are submitted to the Texas Medical and Dental Schools Application Service. For Texas residents, the cost of submitting an application is \$55 for one school and \$10 for each additional school to which application is made. For non-residents, the cost of submitting an application is \$100 for one school and \$10 for each additional school to which application is made. These fees are subject to change.

After applications have been processed by the application service, they are forwarded to the UT Medical School, where they are reviewed and evaluated.

Applicants who give evidence of being well-qualified candidates for admission are invited to Houston for personal interviews on a specified date. The invitation for interview is for the specified date only. All applicants are welcome to visit the UT Medical School at anytime, but formal interviews must, of necessity, be arranged by, and are at the initiative of, the Office of Admissions.

Following each interview, applicants may rank their medical school preferences via the Texas Medical and Dental Schools Application Service's Web site. Final preference decisions must be made prior to Jan. 15 (subject to change). The Admissions Committee evaluates each applicant and sends a list of applicants to the Central Application Service for matching with the applicant's medical school preferences. The schools may make early offers of acceptance beginning October 15 for MD/PhD candidates and November 15 for Texas residents.

After the match date, admitted applicants are required to indicate their acceptance decision in writing within two weeks of notification. An applicant who later decides to accept a position in another institution should give prompt notice in writing of withdrawal from the UT Medical School.

The Medical School is cognizant of the procedures recommended by the Association of American Medical Colleges.

Entering medical students will be expected to consent to and pay for a criminal background check by an entity designated by the Medical School.

### **“Academic Fresh Start” Statute**

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

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

## M.D. Student Development

### Evaluation and Promotion

The evaluation of student performance helps students achieve their maximum potential and provides information on how well institutional educational goals are being met.

The official policies for evaluation of academic performance, promotion, grade grievance, and academic dismissal are contained in the UT Medical School Policy and Guidelines for Evaluation and Promotion of Medical Students on the Medical School student handbook Web site, [http://www.med.uth.tmc.edu/P&G\\_Eval\\_&\\_Promos\\_Med\\_Students.htm](http://www.med.uth.tmc.edu/P&G_Eval_&_Promos_Med_Students.htm). Hard copies are available in the Office of Student Affairs.

Examinations serve to inform faculty about a student's grasp of course material and provide an indication of when academic help or remedial work is appropriate. Medical students are awarded the following grades on the basis of their academic performance: Honors, High Pass, Pass, Marginal Performance, or Fail. Grades and other information relative to a student's academic performance are transmitted to the Student Evaluation and Promotion Committee which, based upon an overall consideration of the student's grades, demonstrated knowledge, clinical performance, and suitability to practice medicine, decides whether a student should be promoted, continued with remedial work assigned, or dismissed. Any student whose record indicates that he/she is not qualified to continue the study of medicine will be dismissed.

Students can be referred for evaluation and counseling for academic or personal concerns through the Office of Student Affairs.

### Conduct and Discipline

Students are responsible for knowing and observing University regulations concerning student conduct and discipline as set forth in the UTHSC-H Handbook of Operating Procedures Section 6.03 and the Rules and Regulations of The University of Texas System Board of Regents, Series 50101. A reference copy of the Rules and Regulations is available in the Dean's Office and the HAM-TMC Library.

For information regarding student academic and behavioral issues, contact:

Margaret C. McNeese, M.D.  
Associate Dean for  
Admissions and Student Affairs  
The University of Texas Medical School  
at Houston  
6431 Fannin, Suite G400  
Houston, Texas 77030

### Basic and Clinical Science Research Program for Medical Students

Basic science and clinical research are essential components of the overall mission of the Medical School. The Medical School offers a Summer Research Program, which provides an intensive, hands-on, 10-week research experience for medical students during the summer after their first year. The program fosters development of scientific reasoning and other research skills.

Students work closely with faculty mentors of their choice in ongoing research projects organized individually for each student. At the end of the research project, students write an abstract on the research – on which they are first-

author. These abstracts are published and posted on the program's Web site. In addition, the students develop a research poster which is presented at the annual Medical School Research Forum and Webber Prize Competition held in late October.

Students also may participate in research at any time during their education (both during the summer and as an elective(s) during the regular academic year).

Short-term NIH training stipend support is available for a limited number of medical students, and other sources of financial support also are available.

Contact: Gary Rosenfeld, Ph.D.  
Program Director, 713-500-7435  
e-mail: Gary.C.Rosenfeld@uth.tmc.edu

## M.D. Expenses

### Tuition

Beginning 2007-09, the annual resident tuition is \$9,775; annual non-resident tuition \$2,2875. The tuition amount includes designated tuition that is used for annual capital renewal, deferred maintenance, and bond retirement for the construction of new buildings.

Tuition will be pro-rated for students who are enrolled for less than a full course load or time period. Tuition for each academic year is due at the time of registration. Tuition and fees are subject to change according to the actions of the Texas State Legislature or the Board of Regents and may become effective when enacted.

Attendance during any part of an academic year will require payment of full tuition, subject to the refund provisions below.

Payment of tuition and fees may be made through the following alternatives:

1. full payment of tuition and fees in advance of the beginning of the academic year,
2. one-fourth payment of tuition and fees in advance of the beginning of the academic year, one-fourth prior to the ninth week of classes, one-fourth payment when classes resume following the Christmas recess, and one-fourth prior to the ninth week following the resumption of classes after the Christmas recess. A \$15 installment payment fee will be assessed for students utilizing payment alternative (one-time

fee, per year). 2. A late payment fee of \$15 (in addition to the \$15 handling fee described in the previous sentence) will apply to a delinquent initial payment. A \$10 charge will be assessed for any subsequent delinquent installment payment.

A student who fails to make full payment of tuition and fees, including any incidental fees, by the due date may be prohibited from registering for classes until full payment is made. A student who fails to make payment prior to the end of the academic year may be denied credit for the work done during the academic year. University records may be adjusted to reflect the failure of the student to have properly enrolled for that year. The University will not release the grades, degree or official transcript of any student who fails to pay tuition and fees owed to the University.

For specific information, contact:  
Office of the Registrar  
The University of Texas Health Science Center at Houston  
7000 Fannin, Suite 2250  
P.O. Box 20036  
Houston, Texas 77225

Or call: 713-500-3361  
Or email: registrar@uth.tmc.edu

In general, residence in Texas for tuition purposes for an individual over 18 years of age is established if the individual has been gainfully employed within the state for a 12-month period immediately preceding registration in an institution of higher education. An individual who

registers in the University before having resided in Texas for 12 months will be classified as a nonresident. An individual who has come to the state primarily for the purpose of education will be classified as a nonresident. For a specific listing of what constitutes a resident vs. nonresident, see the Registrar's Web site, <http://registrar.uth.tmc.edu/>.

Texas law provides for the waiver of tuition and/or fees for students under certain conditions, such as veterans, deaf and blind students, students in foster or other residential care, educational aides, and high school graduates on Aid to Families with Dependent Children (AFDC).

Although classified as a nonresident, students falling within certain categories may be given the privilege of paying resident tuition. These categories include:

1. employment of a student as a teaching or research assistant in a state institution of higher education at least half-time in a degree-related position;
2. employment of a spouse or parent in a state institution of higher education in a faculty position, which is at least half-time on a regular monthly salary basis.
3. student who holds a competitive academic scholarship of at least \$1,000 for the academic year and which is awarded by a scholarship committee officially recognized by UTHSC-H. Specific details about all categories that give the privilege of paying resident tuition are available

in the UTHSC-H Registrar's Office.

### Fees and Charges

Computer Fee	\$140
Pager Fee – Year 3 & 4 (Annual)	120
Graduation Fee*	60
Information Technology Fee	60
Health Insurance***	1,119
Installment Use Fee	15
Laboratory Fee Year 1 & 2 (Annual)	35
Late Registration/Late Payment Fee	15
Library Resource Fee	100
Malpractice Insurance (Annual)	25
Microscope Fee Year 1 & 2 (Annual)	60
Student Services Fee (Annual)**	323.90 – 431.85
Technical Skills Fee	250
Transcript Fee per Transcript	5

\*A graduation fee of \$60 payable at registration for the final academic term is required of all students. This fee does not include regalia rental.

\*\*The Student Services Fee, required of all students, provides for student activities, outpatient care by UTHSC-H Health Services, student counseling, a shuttle service, and recreational facilities. Optional family coverage is available. The fee varies depending on which academic year of medical school the student is enrolled.

\*\*\*Health insurance is required of all health science center students. If students have a health insurance policy, they may provide proof of comparable insurance to Auxiliary Enterprises no later than the 12th class to have this charge waived. Details on the insurance plan are with the Auxiliary Enterprise Office.

Through reciprocal agreements, students at other components of The University of Texas System, as well as graduate students from Rice University, Baylor College of Medicine, Texas Woman's University, and the University of Houston, may take graduate courses for credit at UTHSC-H, subject to the approval of the instructor. In addition, UTHSC-H graduate students may take courses for credit at any of the above institutions. Mechanism for payment of tuition or registration fees vary according to the individual institution. Consult with that Registrar's Office for specific details.

### Refund of Tuition and Fees

1. Refunds of tuition and mandatory fees shall be made to students withdrawing from the institution during either the first half or second half of the academic year according to the following withdrawal schedule:
  - a. prior to first class day from which a 100% \$15 matriculation fee shall be assessed
  - b. during the first 5-class days-80%
  - c. during second 5-class days-70%
  - d. during third 5-class days-50%
  - e. during fourth 5-class day-25%
  - f. after fourth 5-class days-None

The first half of the academic year begins with the commencement of classes at the beginning of the academic year and ends with the Christmas recess. The second half of the academic year begins when classes resume following

the Christmas recess. Refunds for students withdrawing in the fall will be calculated to allow 100 percent refund for the spring period provided the student does not return for the spring period.

2. Refund of tuition and fees paid by a sponsor, donor, or scholarship will be made to the payer rather than directly to the withdrawing student.
3. The University shall terminate student services and privileges, such as health services, library privileges, and facilities usage, when a student withdraws from the institution.

All policies regarding the payment or refunding of tuition, fees, and charges are approved by the Board of Regents of The University of Texas System and comply with applicable state statutes. If a person desires clarification of any matter relating to payment or refund of such charges, he or she should contact the Office of the Registrar.

### Refund Under Installment Payment Plans

Dropping courses or withdrawing from the University does not relieve a student of the responsibility for unpaid financial obligations to the University. Students enrolled in an installment payment plan will be required to continue making payments until the non-refundable portion of their accounts is paid in full. Refunds or credits are based on the percentage of tuition and fees charged, not on the percentage of tuition and fees paid. Contact the Registrar's Office for more information.

## **UTHSC-H Tuition and Fees**

### **Payment Policy**

1. Payment of tuition and fees is due no later than the end of the registration period.
2. A late fee (\$15) is charged to students who pay after the last day of regular registration.
3. Students whose checks are returned for insufficient funds will be charged a \$25 fee and will be given one week to make a cash payment. If no cash payment is made during this interim, the Registrar will recommend to the Dean that the student be dropped from enrollment.
4. Students who have fees billed to a sponsor are financially responsible for any fees determined to be uncollectable by the Accounting Office from that sponsor. Furthermore, extended delays in collection of receivables from sponsors will require the student to make the uncollected payment. Student payments will be refunded upon receipt of payment from the sponsor.

### **Student Health Insurance**

Health insurance is required of all UT System health components. Students will be assessed the health insurance fee offered by the University but may have this insurance waived if they provide proof of comparable insurance to the Office of Auxiliary Enterprises by the 12th class day of the year.

## **Student Health Services**

The UT Medical School Health Services is located in The University of Texas Health Science Center Professional Building, Suite 1010. Students are seen on a walk-in basis Monday-Friday, 8:30 a.m. - 4:30 p.m. The clinic provides wellness and full-service health care for medical school students. For more details, see the General Information section.

### **Books and Supplies**

A laptop computer is required for entering students. Students are advised not to purchase a computer until they receive detailed specifications. For the specifications, see the computer link here <http://www.med.uth.tmc.edu/admissions/new%20students.htm> During the first year, the cost of textbooks and supplies averages \$1,516 (excluding cost of computer). In the second, third and fourth years of the curriculum, the cost of books and supplies ranges from \$971 to \$2,933 each year.

### **Disability Insurance**

The Medical School encourages students to consider whether or not they wish to purchase disability insurance. The Office of Student Affairs has information regarding available plans.

### **Malpractice Insurance**

Students are required to show evidence of student liability insurance when enrolled in field experience courses that utilize off-campus facilities, if such fa-

cilities require the insurance. Basic coverage is included for \$25 a year and is part of required fees.

### **Student Financial Aid**

A student subject to selective service registration will be required to file a statement that the student has registered or is exempt from selective service registration in order to be eligible to receive financial assistance funded by State revenue.

The University of Texas Medical School at Houston has limited loan and scholarship funds. These funds may be available based on proven financial need and/or academic excellence.

Enrolled or enrolling students can obtain application forms and complete information from:

Office of Student Financial Aid  
University of Texas Health Science  
Center at Houston  
P.O. Box 20036  
Houston, Texas 77225

### **Transcripts**

A student may obtain a transcript of their University of Texas Health Science Center at Houston record by:

1. making an online request via UTLINK,
2. submitting a Transcript Request Form in the Office of the Registrar
3. sending a letter signed by the student and accompanied with payment. Letters must include the student's name, Social Security number, date of birth, date of

attendance at UT, degree conferred, and addressed to which the transcript should be mailed.

There is a \$5 charge per transcript. No transcripts will be issued showing only a portion of the student's academic record.

Students who owe debts to UTHSC-H may have their official transcripts withheld until the debts are paid.

For information, see <http://registrar.uth.tmc.edu/>.

### **Name Change**

The student's full, legal name will be used on all permanent academic records. The purpose of this policy is to effect a consistent use of the full, legal name on:

1. the permanent academic records;
2. certifications; and,
3. diplomas

The full, legal name will be initially obtained via the application for admission. The student is responsible for notifying the Registrar's Office of any name change after admission.

### **Address and Phone Changes**

Students are required to keep their current address and phone numbers on file with the Registrar's Office. They may make changes in their contact information via UTLINK, by visiting the Registrar's Office, or by contacting the Medical School Office of Student Affairs.

## Ethics

The UT Medical School at Houston recognizes that in addition to intellectual capability and expert technical skills and knowledge, a good physician must have a solid and unassailable foundation and commitment to ethical behavior and principles. Patients and society at large expect and deserve no less. These principles are embedded in the life of the Medical School and its faculty.

Because these principles are so important to the Medical School, students are asked to make the same explicit commitment to them. The following are specific examples of how these principles are incorporated into Medical School life.

### Ethical Pledge

Incoming students are asked to agree to and sign the following ethical pledge following their acceptance to the UT Medical School.

- \* I acknowledge and accept the privileges and responsibilities given to me as a physician-in-training and dedicate myself to provide care to those in need.
- \* I will approach all aspects of my education with honesty and integrity, embracing opportunities to learn from patients, teachers, and colleagues.
- \* I will always maintain the highest standards of professional conduct.
- \* I will certify only that which I have personally verified, and I will neither receive nor give unauthorized assistance on examinations.
- \* I will value the knowledge of wisdom of the physicians who have preceded me.
- \* I will recognize my weaknesses and strengths and strive to develop those qualities that will earn the respect of my patients, my colleagues, my family, and myself.
- \* I will respect the humanity, rights, and decisions of all patients and will attend to them with compassion and without bias.
- \* I will maintain patient confidentiality and be tactful in my words and actions.
- \* I will value the diversity of patients' experiences, cultures, and beliefs because it enhances my ability to care for them and enriches my education.
- \* I will not forget that there is an art to medicine as well as a science and that warmth, sympathy, and understanding are integral to patient care.
- \* I will strive to earn the trust my patients place in me and the respect that society places upon my profession.
- \* I recognize the privileges afforded to me as a physician-in-training and promise not to abuse them.
- \* Even as a student I have a responsibility to improve the standard of health in my community, to increase access to care for the underserved, and to advance medical knowledge.
- \* As I accept these new responsibilities, I will not forget the importance of my own health and well-being. I will continue to value my relations with those who have supported me in the

past and those who will share in my future.

- \* Knowing my own limitations and those of medicine, I commit myself to a lifelong journey of learning how to cure, relieve pain, and comfort with humility and compassion.
- \* I make these promises solemnly, freely, and upon my honor.

Ultimate jurisdiction lies with the Student Evaluation and Promotions Committee or the associate dean for student affairs, depending on the nature of the alleged infraction. A summary of the cases considered by SCAIP and their final outcomes is made available to the student body as needed.

## White Coat Ceremony

Shortly after matriculation, first-year students participate in a White Coat Ceremony, where they don white coats for the first time, recite the Hippocratic Oath and re-affirm the Ethical Pledge by signing their names in a book which is kept in the Office of Student Affairs.

This oath is sworn to at the White Coat Ceremony and at Commencement.

## SCAIP

The Student Committee for Academic Integrity and Professionalism (SCAIP) was formed in 2000 to serve as an advisory board to the associate dean for student affairs on matters of integrity and professionalism and to promote an awareness of these issues among the student body and the faculty. The committee is composed of four representatives per class, two elected by the class and two appointed by the associate dean for student affairs. If a student is accused of academic dishonesty or unprofessional behavior, a voluntary adhoc subcommittee, chosen at random from the student body, may be convened to discuss the allegations and make recommendations to the associate dean about any penalty or other course of action.

## M.D. Academic Organization

The Medical School educational program is of four year's duration. The first two years are primarily focused on basic sciences, and the second two years are primarily focused on the clinical sciences. The first two academic years are each divided into two semesters, with three months of vacation provided between the first and second years. During the first two academic years, the student becomes familiar with the basic and applied biomedical sciences. During the second year, Problem-Based Learning is introduced to help the student understand basic science mechanisms in the context of clinical presentations.

The student progresses from a study of the fundamentals of molecular and cellular biology and normal morphology of the human body to the abnormal structure and function of the various organ systems. Concurrently, the techniques of interviewing, history-taking, and performance of physical and mental-status examinations are introduced along with appropriate behavioral, societal, and ethical issues.

Clinical clerkships in the major clinical disciplines begin in the third year for a 12-month sequence. During the fourth year, there are additional required clerkships and five elective periods. After consultation with faculty advisers, each student develops an educational sequence for the fourth year that relates to his or her career goals and postgraduate educational plans. Seniors may take electives at any approved medical school elective program in the United States or abroad.

During medical school, the student is required to take two of the three examinations necessary for medical licensure: USMLE Step 1 is taken after completion of the basic science courses, and USMLE Step 2 is taken during the fourth year.

The Curriculum Committee is the committee charged with approval, management, and evaluation of all aspects of the Medical School curriculum.

## Curriculum

The basic four-year program outlined below is required for the M.D. degree. Variations and adjustments may be made as the Curriculum Committee deems necessary.

### Basic Sciences

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#### First Academic Year

Required Courses:

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##### *Fall Semester/18 weeks*

Biochemistry  
 Clinical Applications (cont'd in spring)  
 Developmental Anatomy  
 Gross Anatomy  
 Histology  
 Intro. to Clinical Medicine (cont'd in spring)

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##### *Spring Semester/19 weeks*

Clinical Applications  
 Immunology  
 Microbiology  
 Neuroscience  
 Physiology  
 Intro. to Clinical Medicine

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#### Second Academic Year

Required Courses:

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##### *Fall Semester/18 weeks*

Behavioral Sciences  
 Ethics  
 Genetics  
 Fundamentals of Clinical Medicine  
 Integrative Clinical Experience/Problem-Based Learning  
 Pathology

Pharmacology  
 Physical Diagnosis

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##### *Spring Semester/19 weeks*

Behavioral Sciences  
 Ethics  
 Fundamentals of Clinical Medicine  
 Integrative Clinical Experience/Problem-Based Learning  
 Pathology  
 Pharmacology  
 Physical Diagnosis  
 Reproductive Biology  
 Technical Skills

### Clinical Sciences

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#### Third Academic Year

Begins in the first week of July/48 weeks. During this time there are four weeks of vacation and two 24-week rotation periods consisting of the following:

Required Clerkships	Number	of
	Weeks	Weeks

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Internal Medicine	8	
Medicine Fundamentals	4	
Obstetrics & Gynecology	6	
Neurology	4	
Pediatrics	8	
Psychiatry	6	
Surgery	8	
Family Practice	4	
Comprehensive Clinical Competency Exam (CCCE)		

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#### Fourth Academic Year

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*Begins in July/11 months*

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Required Clerkships	Number of Months
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**The University of Texas Medical School at Houston**

Critical Care Selective	1
Advanced Patient Care Selective	1
Ambulatory Medicine Selective	1

Transition to Residency Month	1
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Required Elective Program: Students take a minimum of five one-month electives	5
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Two months are available for vacation or additional electives	2
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Jurisprudence  
ACLS

The Medical School's elective and preceptorship programs in the fourth year permit students to seek clinical opportunities away from Houston, at their own expense, ranging from family practice in rural communities to experiences in the most sophisticated settings requiring advanced technology. International clinical and research electives also are available. The School is fortunate regarding the wealth of clinical opportunities available to its students.

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The fourth-year elective catalog is available online at <http://med.uth.tmc.edu>.

## M.D. Curriculum Goals and Objectives

### Educational Goals and Objectives for The University of Texas Medical School at Houston Goals

- (a) Students should acquire a KNOWLEDGE AND UNDERSTANDING of health and its promotion; of disease and its prevention and management; and, of psychosocial factors that influence a patient's well-being, in order to provide competent and humane medical care to individuals, families, and the larger society. Furthermore, students should be able to use their knowledge and understanding appropriately in the care of patients. Students should have an opportunity to participate in scholarly activities including research.
- (b) Students should acquire and become proficient in basic clinical SKILLS, such as the ability to obtain a patient's history, to perform a comprehensive physical and mental status examination, to interpret the findings, and to demonstrate competence in the performance of basic technical procedures. Students should appreciate the appropriate use of technologies in assisting in diagnosis and management.
- (c) Students should acquire and demonstrate ATTITUDES that foster patient-centered care and support the highest standards of the medical profession.

students will have demonstrated knowledge and understanding of:

- (a) the sciences basic to the practice of medicine;
- (b) the most common diseases in terms of processes and presentation;
- (c) the environmental, social and cultural determinants of disease;
- (d) the principles of disease prevention and health promotion;
- (e) the principles of therapy including the management of acute illness, the care of the chronically ill, the amelioration of suffering, the relief of pain, and the care of the dying;
- (f) the basic principles of epidemiology and population health, and how to apply these principles to the individual patient;
- (g) the basic principles of genetics and how they apply to common chronic diseases;
- (h) outcomes that are important to the patient;
- (i) ethical, legal and spiritual issues relevant to the practice of medicine; and,
- (j) the organization, financing, and delivery of health care both in the hospital and in the community.

### Educational Objectives

- 1. Knowledge Objectives  
At the conclusion of Medical School,

#### 2. Skills Objectives

Students must have acquired and demonstrated proficiency in their ability to:

- (a) communicate both with patients and their relatives, and with other professionals involved in the patient's care;
- (b) obtain and record a comprehensive history;
- (c) correctly perform a complete physical examination, and mental status examination;
- (d) accurately interpret the findings obtained from the history, the physical examination, and other diagnostic procedures;
- (e) construct a provisional assessment of the patient's problems and formulate with the patient a plan for investigation and management;
- (f) perform basic clinical procedures;
- (g) find and critically evaluate the best information for diagnosis and treatment; and,
- (h) demonstrate the ability to work effectively as a member of a medical team.

### 3. Attitudinal Objectives

Students will have acquired and will behave in a manner that reflects attitudes of patient-centered care that are consistent with the highest standards of the medical profession, including:

- (a) respect for patients and colleagues that encompasses diversity of background, belief systems, language and culture;
- (b) recognition of patients' rights, in-

cluding confidentiality and informed consent;

- (c) approaches to learning that are based on curiosity and the exploration of knowledge that will continue throughout life;
- (d) recognition of the moral and ethical responsibilities involved in patient care; and,
- (e) recognition of the need to ensure that the highest possible quality of patient care must always be provided; and,
- (f) recognition of the skills of various team members.

### 4. Core Competencies

The Medical School has developed a list of core competencies which all students should demonstrate prior to graduating with the M.D. degree. The competencies are grouped under the following:

- (a) patient care;
- (b) basic clinical procedures;
- (c) medical knowledge;
- (d) interpretation of medical data;
- (e) interpersonal and communication skills; and
- (f) professionalism.

### Pre-Entry Program

The Pre-Entry Program is an intensive five-week program offered to a subset of students prior to the fall matricula-

tion of the first year. The program includes a one-week course in the fundamental concepts of biomedical sciences followed by courses in anatomy, biochemistry, and physiology/neuroscience taught by faculty members in the Medical School. The noncredit program is designed to assist students prepare for the academic rigors of the medical school curriculum. Invitations to the program are sent to students who might benefit. Students may also request consideration for participation in this program. A Peer Tutoring Service is available to all students at no charge.

For information about the Medical School's academic program, call 713-500-5140, e-mail: [Patricia.Butler@uth.tmc.edu](mailto:Patricia.Butler@uth.tmc.edu), or write:

Patricia M. Butler, M.D.  
Associate Dean for Educational Programs  
The University of Texas Medical School at Houston  
6431 Fannin, JLL 304  
Houston, Texas 77030

Visit our Web site:  
<http://www.med.uth.tmc.edu/EdProg/ep/index.htm>

For information about scheduling electives, contact:  
The Office of Student Affairs  
713-500-5160 or  
e-mail: [elective@dean.med.uth.tmc.edu](mailto:elective@dean.med.uth.tmc.edu)

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## Joint Programs

### M.D./Ph.D. Program

The UT Medical School, the UT Graduate School of Biomedical Sciences, and the UT M. D. Anderson Cancer Center participate in a combined program leading to both the M.D. and Ph.D. degrees. This program is sponsored and supported by the health science center and the UT M. D. Anderson Cancer Center for the most qualified candidates. Failure to timely meet either the M.D. or Ph.D. program requirements will result in dismissal from both programs. The program is administered by an M.D./Ph.D. Committee and involves the participation of faculty members from both institutions. The requirements established for the program meet the general requirements of both degrees in a flexible program of approximately seven years duration.

Students must meet the admissions re-

quirements of both the Medical School and the Graduate School of Biomedical Sciences to qualify for admission to the M.D./Ph.D. program. The program is restricted in size and provides stipend support for the most qualified candidates. For information, visit our Web site at [www.uth.tmc.edu/schools/gsbbs/mdphd](http://www.uth.tmc.edu/schools/gsbbs/mdphd)

Those interested in the M.D./Ph.D. Program should inquire through the Admissions Office of the Medical School. Application for admission to the MD/PhD Program may be made by submitting an application online through the American Medical College Application Service (AMCAS) and a mandatory secondary application online through the Texas Medical and Dental Schools Application Service (TMDSAS). Applications will not be reviewed until after the TMD-SAS application has been received and

processed. You may also contact the M.D./Ph.D. Program coordinator, Doris Thornton at 713-500-7511 or by e-mail at: Doris.E.Thornton@uth.tmc.edu

### **M.D./M.P.H. Program**

The UT Medical School and the UT School of Public Health conduct a combined service/learning program leading to an M.D. degree and a Master of Public Health in Sciences degree. This program is sponsored and supported by the UT Medical School. The requirements established for the program meet the general requirements of both degrees. The curricula are integrated along a five-year path to support student career objectives. Allowing for completion of the basic sciences and the first clinical year, students generally enroll in the M.P.H. year after the third year of medical school. They return to the Medical School to complete the final year of required medical school clerkships, courses, electives, and the M.P.H. degree thesis during the fifth year.

Failure to meet either the M.D. or M.P.H. program requirements will result in dismissal from both programs.

Students must meet the admission requirements of both schools to qualify for admission to the M.D./M.P.H. Program. Acceptance to the SPH is accomplished by applying during the regular application cycle to the SPH in the winter prior to intended enrollment in the fall at the SPH. Up to 5 students each year may be selected for this pathway, and all are eligible for a tuition and partial living expenses scholarship for the year they are taking classes at the SPH. Those interested in the program should

inquire through the Medical School Admissions Office or, after enrollment, through the Medical School Office of Educational Programs.

### **M.D./O.M.S. Program**

Both a 4-year and 6-year Advanced Education Program in Oral and Maxillofacial Surgery is offered through the Medical School. Each program prepares practitioners to treat diseases, injuries, and defects involving both the functional and aesthetic aspects of the hard and soft tissues of the oral and maxillofacial region. The basic prerequisites for both 4 and 6-year programs are a DDS or DMD degree from an accredited dental school and National Dental Boards Parts I & II.

The 6-year program adopts a similar schedule to the 4-year program, with the primary difference consisting of requirements for obtaining the MD degree. The first year is spent with the oral and maxillofacial surgery department. In the second, third, and fourth years, residents are enrolled in medical school, completing years two, three, and four of the medical school curriculum. During the fourth year of medical school, 8 months are provided for the fulfillment of requirements related to the oral and maxillofacial surgery residency, such as rotations on the oral and maxillofacial surgery and anesthesia services. The fifth year of the residency is a surgical internship year which also includes a 5 month rotation in oral and maxillofacial surgery. In the sixth year, the resident serves as a chief resident with rotations to five different hospitals. Upon satisfactory completion of the 6-year program, residents receive a certificate in oral & maxillofacial surgery and a M.D.

## Graduate Medical Education

The learning process encompasses more than a student's four years in medical school. All graduates will continue to expand their knowledge and refine their skills by seeking further supervised medical training.

Graduate Medical Education programs provide physicians the opportunity to prepare for practice in a medical specialty. Residency and fellowship programs focus on the development of clinical skills and professional competencies.

The Medical School conducts its residency and fellowship training programs at hospitals and clinics affiliated with The University of Texas Medical School at Houston. The GME program offers carefully organized and evaluated instruction in the various disciplines of medicine. These accredited programs are recognized toward fulfillment of the requirements of the respective specialty boards. The Medical School programs participate in the National Residency Matching Program. Information and applications for residency or fellowship programs are available from the program directors listed in the American Medical Association (AMA) Directory of Residency Training Programs and the Fellowship and Residency Interactive Electronic Data (FRIEDA) program.

Sub-specialty residency programs are open to application by physicians who have completed their general residency training.

The Medical School offers residency programs in the following disciplines: Anesthesiology, Dermatology, Emergency

Medicine, Family Medicine, Internal Medicine, Medical Genetics, Neurology, Obstetrics and Gynecology, Occupational Medicine, Ophthalmology, Otolaryngology, Orthopaedics, Pathology, Pediatrics, Plastic Surgery, Psychiatry, Child Psychiatry, Diagnostic Radiology, General Surgery, Colon and Rectal Surgery, Urology, Oral Surgery, Internal Medicine/Pediatrics, and Physical Medicine and Rehabilitation. A Transitional Year Program also is offered.

For information on residency and fellowship programs at The University of Texas Medical School at Houston, contact:

The Office of Graduate Medical Education  
The University of Texas Medical School at Houston  
6431 Fannin, Suite JJL 310  
Houston, Texas 77030  
Web site: <http://med.uth.tmc.edu/administration/gme/index.html>

## Continuing Medical Education

Through a collaborative partnership with The University of Texas Medical Branch at Galveston, the Office of Continuing Medical Education (CME) offers traditional CME conferences, seminars, Grand Rounds, postgraduate courses, enduring materials, and other learning opportunities for physicians in Texas, and throughout the United States.

CME programs are available on various subjects, range in length from one hour to several days, and are offered throughout the year. The programs are sponsored by various Medical School departments and divisions as well as by community hospitals and managed-care organizations.

**The University of Texas Medical School at Houston**

The joint UTMB-UT-H CME program is fully accredited by the Accreditation Council for Continuing Medical Education. For further information, call 713-500-5249, or visit [www.UTcme.net](http://www.UTcme.net).

Office of Continuing Medical Education  
The University of Texas Medical School  
at Houston  
6431 Fannin, Suite JIL 435  
Houston, Texas 77030

## Master of Science in Clinical Research Degree Program

The Master of Science in Clinical Research Degree Program has been offered at the UT Medical School since the fall of 2002. This MS degree program is designed as a focused, flexible, and affordable program to train clinical investigators in designing and conducting patient-oriented research of exemplary quality. The curriculum accommodates clinicians' busy schedules; the courses are concentrated on Wednesdays after noon. The degree can be completed in 2-4 years depending on the amount of time a student devotes to the program. For updated information about this program, see <http://ped1.med.uth.tmc.edu/neo/center-masters.htm>.

### M.S. Admission Requirements

This program is expected to appeal primarily to MDs at the fellow and faculty levels as well as to other clinicians who have not had previous formal training in clinical research. The rapid pace of the curriculum assumes a working knowledge of clinical medicine and excellent scholastic aptitude.

All applicants are required to be engaged in or preparing to conduct clinical research and meet one of the following two types (a or b) of academic criteria:

a) Advanced degree in health-related field:

- (1) M.D. or D.O.
- (2) Ph.D. in a related field
- (3) D.D.S. or D.M.D.
- (4) R.Ph. or Pharm.D.

b) Bachelor's or master's degree and experience in a health-related field with a G.P.A. of > 3.0 and previous work experience in a health-related field, such as nursing, psychology, dietetics, etc.

### Application and Admission Procedures

Completed applications, including letters of reference and transcripts, must be received by:

June 15 for fall semester  
Oct. 15 for spring semester

Applications should be submitted online to the Office of the Registrar <http://registrar.uth.tmc.edu/Admissions/appformslist.htm>. The following are required:

a) A completed application form with a curriculum vitae. Each applicant will be required to summarize his/her career goals, describe how the Master's Program will support these goals, and propose a timeline for completion of the program.

b) Letters of reference from at least two individuals who are qualified to evaluate the applicant's academic or professional performance, as well as ability and motivation to complete the program. If an applicant will be employed or in a training program while enrolled in the program, a letter of support/recommendation will be required from the applicant's supervisor to verify the supervisor's commitment to provide the applicant with adequate "protected" time to complete the program. Letters should be on official letterhead.

c) Official transcripts covering all pe-

riods of post-secondary enrollment in accredited institutions of higher education. Applicants should request the institution to send official (original) transcripts directly to the Office of the Registrar. Graduates of Texas colleges and universities should request that transcripts be sent in electronic format. Copies of official transcripts sent by the applicant are not considered. Transcripts must include both grades and credit hours.

d) Applicants who are nationals of countries where English is not the parent language are required to submit scores from the Test of English as Foreign Language (TOEFL). See application form for current requirements and exceptions.

e) A \$30 non-refundable application fee.

Direct telephone inquiries about the program to:  
Center for Clinical Research and Evidence-Based Medicine  
The University of Texas Houston Medical School  
713-500-6708

Address application inquiries to:  
Office of the Registrar  
The University of Texas Health Science Center at Houston  
PO. Box 20036  
Houston, Texas 77225-0036  
713-500-3361

Once an application has been submitted, the applicant will receive a PIN number from the Office of the Registrar. Once the PIN number is received, the status of the application, transcripts, and letters of reference can be checked online

at <http://utlink.uth.tmc.edu>.

## Factors Considered in Admissions Decisions

The Admissions Committee of the MS in Clinical Research Degree Program will review all completed applications. The committee considers the following factors in evaluating applicants for admission:

- \* Previous research experience and accomplishments, enrollment in laboratory and research-based courses, and involvement in research projects and publications;
- \* Expressed commitment to a career involving biomedical research;
- \* Grade point average;
- \* Career goals;
- \* Previous graduate-level study;
- \* Work experience in a health-related field;
- \* Honors and awards for academic achievement;
- \* Other factors that may be considered by the Admissions Committee include:
  - \* Success in overcoming socio-economic and educational disadvantages;
  - \* Multilingual proficiency;
  - \* Non-academic responsibilities, such as employment and child-rearing;
  - \* Involvement in community activities; and
  - \* Race and ethnicity.

Preference will be given to candidates who have regularly attended the Clinical Research Curriculum and have an established committed departmental mentor. Plans for departmental mentoring must be established prior to enrollment

to the program. Candidates from institutions outside of UT will be considered for admission if arrangements can be made for appropriate departmental and methodologic mentorship from the applicant's own clinical/academic institution.

### Enrollment Status

A student is considered officially enrolled if tuition and fees are paid by the due date listed on the schedule of classes.

- \* Program Student: a student admitted to an academic program who is following a set curriculum and pursuing a degree without an interruption of more than one year in enrollment.
- \* Non-degree Student: a student who is admitted to the school for one or more courses but not admitted to a degree program.

Enrollment as a non-degree student does not in any way entitle a student to admission to a degree program. A non-degree student is allowed to register only with the permission of the course instructor.

### Degree Requirements

a) Satisfactory completion of the Clinical Research Curriculum courses (a two-year curriculum composed of a weekly lecture series and homework exercises). In addition to the 9-12 credit hours for the Clinical Research Curriculum (see below), each student will be required to complete an additional 24-27 credit hours (including practica and a thesis) for a total of 36 credit hours.

b) Satisfactory completion of at least

three of these practica:

Institutional Review Board  
Clinical Research Center  
Scientific Presentation  
Scientific Writing

c) Satisfactory completion of a research thesis project or projects that collectively demonstrate competence in each of these areas:

To critically review clinical research literature

To postulate a sound new research question

To design a clinical research study to address this question using the most unbiased feasible design

To properly analyze clinical research data

To appropriately interpret clinical research findings

d) Effective fall 2004, an overall cumulative grade point average of 3.0 (B) is required.

e) Effective fall 2004, a GPA of 3.0 (B) must also be achieved for the core Clinical Research courses (the courses offered at the Medical School for the MS in Clinical Research Degree Program or courses deemed to be equivalent by the student's advisers). (For students enrolled in the program before fall 2004, the B average requirement will apply only to courses completed after the change has taken effect.)

f) Effective spring 2005, students must

be enrolled for at least 1 credit hour during the semester in which they complete the degree requirements.

g) Beginning with students admitted to the program in spring 2005, at least 3 thesis credit hours will be required. (A maximum of 6 thesis credit hours can be applied to the 36 credit hour requirement for the degree.)

### **Clinical Research Curriculum Topics**

Introduction to Epidemiology Research  
Clinical Trial Design  
Health Services Research  
Seminars in Clinical Research  
Use of Computers in Clinical Research  
Scientific Writing  
Biostatistics for Clinical Investigators  
Literature Appraisal  
Ethical Aspects of Clinical Research  
Introduction to Translational Research  
Clinical Research Design Workshop

### **Additional Coursework for Master's Degree**

The curriculum for the Master's Program consists of two tracks — a Patient-Based Clinical Research Track and a Translational Research Track. In either track, the specific courses (usually 4-5) chosen by an individual student will depend on his/her previous training and course work and current career goals. Most students in the Translational Research Track will take advanced courses in molecular biology and/or genetics; most students in the Patient-Based Clinical Research Track will take advanced courses in health care economics and health care policy and practice.

### **Required Advanced Courses for Master's Program**

Advanced Epidemiology  
Advanced Biostatistics for Clinical Investigators  
Elective Advanced Courses for Master's Program  
Using Research to Inform Health Care Policy and Practice  
Advanced Clinical Research Design  
Developmental Biology  
Molecular and Cellular Approaches to Human Genetics  
Genetics and Human Disease  
Eukaryotic Gene Expression  
Cancer Biology

### **Transfer Students**

A student may be given up to 18 hours of credit for formal coursework completed previously in a comparable program. Students who transfer into the program must meet the same overall degree requirements as students who undergo all of their training at UT.

### **Petitioning for Course Equivalency**

A student who wishes to receive credit for courses taken outside the MS in Clinical Research Degree Program at UT may submit a Petition for Equivalency form (available in MSB 2.106). This includes the Clinical Research Curriculum courses as well as courses taken at other institutions that are similar in content to courses offered for the MS in Clinical Research Program. The student must complete the form and obtain the approval of his/her program adviser. For courses taken outside the UT Medical

School, the student must supply the required documentation about course goals and requirements for approval of credit hours by the Curriculum Committee.

### **Advisory Committee**

Each student in the program will work jointly with two different advisors—a program advisor/mentor who provides methodological expertise and a departmental advisor/mentor from his/her own basic or clinical science department or institution who provides expertise in the participant's specific area of clinical research. For fellows and other trainees, the training program director will also serve as a member of the advisory committee. At the end of each semester, the student will be scheduled to meet with his/her advisory committee to review academic progress, course selection, and thesis development.

## M.S. Tuition and Fees

### Tuition

Beginning 2005-2006, resident tuition will be \$92 per semester credit hour with a minimum charge of \$120 per semester. The non-resident tuition will be \$328 per semester credit hour. Tuition and fees are subject to change according to the actions of the Texas Legislature or the Board of Regents and are effective when enacted.

### Texas Residence Requirements

In general, for tuition purposes, Texas residence for an independent individual over 18 years of age is established if the individual has been gainfully employed within the state for a 12-month period immediately preceding registration to the university, own real property or a business in Texas. An individual who registers in an institution of higher education before having resided in Texas for 12 months will be classified as a non-resident. An individual who has come to the state primarily for the purpose of education will be classified as a non-resident.

Although classified as non-residents, students falling within certain categories may be given the privilege of paying resident tuition. These categories include: a) employment of a student as a teaching or research assistant in a state institution of higher education at least half-time in a degree-related position; b) employment of the student or student's spouse or parent in a state institution of higher education in a faculty position (instructor level or above), which is at least half-time on a regular monthly salary basis; c) holding a competitive

scholarship of at least \$1,000 for the academic year awarded by a scholarship committee officially recognized by UT Health Science Center. Specific details about all categories that may afford the privilege of paying resident tuition are available in the Registrar's Office. Students also may consult the Texas Education Code and the "Rules and Regulations for Determining Residence Status" published by the Texas Higher Education Coordinating Board.

### Enrollment in Affiliated Institutions

Through reciprocal agreements, graduate students at other components of The University of Texas Health Science Center at Houston, as well as graduate students from Rice University, Baylor College of Medicine, Texas Woman's University, and the University of Houston may take graduate courses for credit in the MS in Clinical Research Program at the Medical School, subject to approval of the instructor. In addition, full-time students (taking at least 9 credit hours) at the Medical School may take courses for credit at any of the above institutions. The mechanism for payment of the tuition or registration fees varies according to the individual institution. Consult with the Registrar's Office for specific details.

### Student Services Fees

The student services fees, required of all students, are assessed per semester credit hour with a maximum charge of \$138.54 per semester. The fee provides for student activities, outpatient care by Medical School Health Services, rec-

reational facilities, counseling services, and shuttle bus services. A graduation fee of \$40, payable at registration for the final academic semester, is required of all students. The information technology access fee is \$20 per semester.

### **Tuition and Fees Payment Policy**

Tuition for each semester is due at the time of registration. Payment of tuition and fees may be paid through the following alternatives: a) full payment of tuition and fees in advance of the beginning of the semester, or b) one-half payment of tuition and fees in advance of the beginning of the semester, one-fourth payment prior to the start of the sixth class week, and one-fourth payment prior to the start of the eleventh class week. A \$15 installment payment fee will be assessed each semester as student utilizes payment alternative b. A late payment fee of \$15 will be applicable to initial payments. A \$10 charge will be assessed for any subsequent delinquent installment payment.

Mail-in tuition and fees payments received for less than the actual amount due will be returned to the student. Students who have checks returned for insufficient funds will be charged a \$25 fee and will be given one week to make a cash payment. If no cash payment is made during this period, the registrar will recommend to the dean that the student be barred from readmission. Students who have fees billed to a sponsor are financially responsible for any fees determined by the Accounting Office to be uncollectible from that sponsor.

A student who fails to make full payment of tuition and fees to the university when the payments are due, including any late fees assessed, is subject to one or more of the following actions at the university's option:

- a) bar against readmission to the institution,
- b) withholding of grades, degree, and official transcript, and,
- c) all penalties and actions authorized by law.

### **Refund of Tuition and Fees**

Refunds shall be made of applicable tuition and fees collected for courses from which the student withdraws within the first 12 days, provided the student remains enrolled at the institution. Refunds of tuition and mandatory fees shall be made to students withdrawing completely from the institution according to the following schedule:

- a) prior to first class day – 100% (after \$15 matriculation fee assessed)
- b) during the first week – 80%
- c) during the second week – 70%
- d) during the third week – 50%
- e) during the fourth week – 25%
- f) after the fourth week – none

All policies regarding the payment or refunding of tuition, fees, and charges are approved by the Board of Regents of The University of Texas System and comply with applicable state statutes.

If a person desires clarification of any matter relating to payment or refund of such charges, he or she should contact the Office of the Registrar.

Dropping courses or withdrawing from the university does not relieve a student of the responsibility for unpaid financial obligations to the university. Students enrolled in an installment payment plan will be required to continue making payments until the non-refundable portion of their accounts are paid in full. Refunds or credits are based on the percentage of tuition and fees charged, not on the percentage of tuition and fees paid. Contact the Registrar's Office for more information.

### **Student Health Insurance**

Students are required to carry health insurance, including hospitalization coverage. The fee for health insurance coverage will be waived at registration for students who provide proof of comparable existing health insurance coverage.

## M.S. Grading, Conduct and Satisfactory Progress Policies

### Grades

Core courses in the MS in Clinical Research Degree Program will be graded A, B, C, or F. An 'F' in a required course requires repetition of that course (or a course deemed equivalent by the student's advisers). Practica and thesis credit hours are graded pass (P) or fail (F). An incomplete (I) grade may be assigned at the discretion of the instructor when the course requirements have not been satisfied by the end of the semester. An incomplete grade will remain on the transcript until a final grade is assigned by the instructor. If an incomplete is not changed by the end of the following semester, it will be converted to an 'F.'

Criteria upon which grades are based are provided at the beginning of each course. Students may withdraw from a course through the last class day of the term. When a student withdraws from a course, a Withdrawn Passing (WP) or Withdrawn Failing (WF) grade will be recorded depending on the student's standing at the time of withdrawal. This WP or WF grade will remain on the transcript even if the course is repeated and passed.

### Academic Conflict Resolution

Individual faculty members retain primary responsibility for grading and evaluations. The faculty member's judgment is final unless compelling evidence suggests discrimination, differential treatment, or a mistake. In attempting to resolve any student grievance regarding academic matters, it is the obligation of the student first to make a serious ef-

fort to resolve the matter with the faculty member with whom the grievance originated. If the student and faculty member cannot resolve the matter, the student should consult the academic grievance procedure described on the Current Student Web site under Academic Guidelines (Grade Grievance Policy).

### Satisfactory Academic Progress

The faculty of the Medical School is responsible for identifying students who are having academic difficulty and determining whether the deficiency can be remediated or if the student should be dismissed. Satisfactory academic progress is defined for each student by following the degree plan for that student. Each student's Advisory Committee will review the student's course work to assist him or her in achieving the maximum potential and in assessing progress toward academic goals. Satisfactory progress will be evaluated on an individual basis but will generally require successfully completing at least 5-8 credit hours per year. Students are expected to complete the program within 6 years, unless extraordinary circumstances warrant an extension. Overall consideration of performance will be used by the Advisory Committee to determine which students have progressed satisfactorily and which students should be placed on academic probation.

### Academic Probation and Dismissal

A student will be placed on academic probation by the program director fol-

lowing the completion of the semester in which any of the following occur:

- 1) a second grade of F or WF is earned,
- 2) the student fails to meet with his or her Advisory Committee within a 12-month period, or
- 3) the student fails to make satisfactory progress toward the degree (see above).

Once on probation, the student will be re-evaluated at least each semester by his or her Advisory Committee. A student placed on probation for failing grades will be taken off probation when he or she has passed at least two courses and has passed the same or an equivalent course for any required courses that were failed. The student will be given one year to satisfy these requirements or up to two years if the failed required course is offered only biennially. A student placed on probation for failing to make satisfactory progress and/or meet with his or her Advisory Committee will be taken off probation when he or she successfully completes at least 8 credit hours over the next year. If the academic probation is not removed within the stated remediation time period, the student will be dismissed by the program director.

If the student wishes to request a reconsideration of the dismissal, a written request to the dean, with a copy sent to the chairman of the Student Evaluations and Promotions Committee, must be submitted within five working days of receipt of the dismissal letter. The Student Evaluations and Promotions Committee will review the request and

render its recommendation in writing to the dean. The student will be notified in writing of the dean's decision within five working days of the committee's recommendation. The determination of the dean is final and is not subject to further appeal. Students can be referred for evaluation and counseling for academic or personal concerns through the Office of Student Affairs.

### **Conduct and Discipline**

Students are expected to maintain the highest standards of professional conduct and approach their education with honesty and integrity. Students are responsible for becoming familiar with and observing university regulations concerning student conduct and discipline as set forth in the Rules and Regulations of The University of Texas System Board of Regents Series 50101. A reference copy of the Rules and Regulation is available at <http://www.utsystem.edu/bor/rules> and in the Deans' Office and the HAM-TMC Library.

For information regarding student academic and behavioral issues, contact:

Margaret C. McNeese, M.D.  
Associate Dean of Admissions and Student Affairs  
The University of Texas Medical School at Houston  
6431 Fannin G.400  
Houston, TX 77030  
713-500-5159

### **Long-Term Absences**

Students who are unable to maintain active status (at least 5-8 credit hours per year) may request a long-term absence of up to one year. If the absence lasts for more than one year, re-instatement

will be considered at the discretion of the Admissions Committee. Program students may request a change in enrollment status to non-degree student. Re-instatement in the degree program

will be considered at the discretion of the Admissions Committee. Non-degree status will expire after a two-year period of no activity in the program.

## Courses for Clinical Research Curriculum

The following courses are offered as part of a two-year curriculum that is open to all clinical researchers in the Texas Medical Center. Students in the MS in Clinical Research Degree program receive 9-12 hours of formal credit for these courses using the Petition for Course Equivalency described above. Call 713-500-6708 to register for these courses.

**Course Name:** Intro to Epidemiology Research  
**Instructor:** Molony

**Course Description:** This course provides a basis for an understanding of the concepts and methodological skills necessary for designing and interpreting observational studies. These include validity (random error, bias and confounding), measures of disease occurrence and impact, measures of association, reliability and generalizability, causal inference, and critically reviewing evidence.

**Prerequisite:** None (above admission requirements for MS in Clinical Research Program)

**Schedule:** This course is given from 5:00-6:30pm each Wednesday evening for 10 weeks (1.0 credit hours).

**Course Name:** Clinical Trial Design  
**Instructor:** Tyson

**Course Description:** This course pre-

pares the student to design and analyze randomized trials of medical interventions. Covered topics include basic study design, recruitment, randomization, masking, data collection and quality control, participant adherence, sample size considerations, data monitoring and analysis, and meta-analysis.

**Prerequisite:** None (above admission requirements for MS in Clinical Research Program)

**Schedule:** This course is given from 5:00-6:30pm each Wednesday evening for 10 weeks (1.0 credit hours).

**Course Name:** Health Services Research  
**Instructor:** Thomas

**Course Description:** This course begins with an overview of healthcare financing, access to care, quality of care, and health policy. Subsequent classes will focus on: conceptualization of healthcare quality (including the classic "structure, process, and outcome" framework) and safety; quality of care measurements; risk adjustment; and introductions to survey research and qualitative research.

**Prerequisite:** None (above admission requirements for MS in Clinical Research Program)

**Schedule:** This course is given from 5:00-6:30pm each Wednesday evening

for 8 weeks (1.0 credit hours).

**Course Number:** CLRS 5006

**Course Name:** Clinical Research Design Workshop

**Instructor:** Kennedy, Tyson

**Course Description:** In this problem-based course, each student is expected to build a clinical research proposal in his/her field of interest. Each week, students are asked to present the appropriate parts of their protocols to facilitate the discussion of successive stages in study design. This course is run in small group sessions (6-14 students per group) to facilitate active participation and interaction.

**Prerequisite:** Consent of instructor

**Schedule:** This course is given from 5-6:30p.m. each Wednesday evening for 13 weeks (1 credit hour).

**Course Number:** CLRS 5007

**Course Name:** Use of Computers in Clinical Research

**Instructor:** Lasky

**Course Description:** This is a hands-on laboratory course. Each student is expected to complete computer-based projects that demonstrate skills searching databases, managing data, and analyzing data sets. Software packages used in the course include Internet-based searching programs, and PC-based spreadsheet, database, and statistics software packages.

**Prerequisite:** None (above admission requirements for MS in Clinical Research Program)

**Schedule:** Students schedule the computer modules according to their sched-

ules and the availability of the course instructors. More in-depth classroom courses are offered for specific applications when there is sufficient interest and availability of instructors (1-3 credit hours).

**Course Number:** CLRS 5008

**Course Name:** Scientific Writing

**Instructor:** Goode

**Course Description:** This course covers the essential goals of scientific writing and presentation: clarity, succinctness, and consistency as they apply to specific areas of scientific writing. Detailed specific recommendations will be given for abstract, manuscript, and grant preparation.

**Prerequisite:** None (above admission requirements for MS in Clinical Research Program)

**Schedule:** This course is given from 5-6:30p.m. each Wednesday evening for 8 weeks (0.5 credit hour).

**Course Number:** CLRS 5009

**Course Name:** Biostatistics for Clinical Investigators

**Instructor:** Kennedy, Lasky

**Course Description:** This course begins with an overview of descriptive statistics and provides students with the tools to perform univariate analyses using parametric and non-parametric methods for paired and unpaired designs. Emphasis is placed on choosing appropriate tests, evaluating assumptions for the tests, understanding the limitations of statistical tests, and appropriate interpretation of test results. Survival analysis and multiple re-

gression techniques are introduced to familiarize the student with the availability and limitations of these tests.

**Prerequisite:** None (above admission requirements for MS in Clinical Research Program)

**Schedule:** This course is given from 5-6:30p.m. each Wednesday evening for 15 weeks (1.5 credit hours).

**Course Number:** CLRS 5011

**Course Name:** Literature Appraisal

**Instructor:** Kennedy

**Course Description:** In this course, the students will be expected to learn rules of evidence and demonstrate critical evaluation of the medical literature. Students will have an opportunity to demonstrate these concepts and skills by appraising the evidence in various areas of clinical research. This critical appraisal of existing evidence will be used to determine fruitful areas for new investigation. This course is run in small group sessions (6-10 students per group) to facilitate active participation and interaction.

**Prerequisite:** None (above admission requirements for MS in Clinical Research Program)

**Schedule:** This course is given from 5-6:30p.m. each Wednesday evening for 10 weeks (1 credit hour).

**Course Number:** CLRS 5012

**Course Name:** Ethical Aspects of Clinical Research

**Instructor:** Tyson

**Course Description:** This course introduces the fundamental ethical principles of autonomy, beneficence,

nonmaleficence, and justice and applies these principles to clinical research involving human subjects. The use of unproven therapies, the use of placebos, the consent process, institutional review board submission and review processes, conflict of interests, and the costs of clinical research are covered.

**Prerequisite:** None (above admission requirements for MS in Clinical Research Program)

**Schedule:** This course is given from 5-6:30p.m. each Wednesday evening for 6 weeks (0.5 credit hour).

**Course Number:** CLRS 5013

**Course Name:** Introduction to

Translational Research

**Instructor:** Buja

**Course Description:** This course is an overview of the clinical research that bridges basic science and patient-based research. Topics include pharmaceutical research, genetic research, gene therapy, and genomics.

**Prerequisite:** None (above admission requirements for MS in Clinical Research Program)

**Schedule:** This course is given from 5-6:30p.m. each Wednesday evening for 7 weeks (0.5 credit hour).

**Course Number:** CLRS 5014

**Course Name:** Seminars in Clinical Research

**Instructor:** Kennedy

**Course Description:** In this course, each student prepares, presents, and defends a clinical research protocol in his/her field of interest. Students are encouraged to critique the pro-

posals presented by other students and to participate as a group in problem solving. Enrollment in this course is limited (10-16 students) to facilitate active participation and interaction.

**Prerequisite:** Consent of instructor

**Schedule:** This course is given from 4-5:00p.m. each Tuesday for 25 weeks (1 credit hour).

### Courses for MS in Clinical Research Degree Program

The following advanced courses are offered as part of the MS in Clinical Research Degree Program.

**Course Number:** CLRS 5003

**Course Name:** Advanced Epidemiology  
**Instructor:** Miller

**Prerequisite:** Clinical Epidemiology or Consent of instructor

**Course Description:** This course covers the analysis of complex observational studies with emphasis on the identification of interaction and control of confounding variables. Other topics include the use of matching, selection of appropriate control groups, and identification of potential sources of bias. A problem-based approach is used in which students are asked to solve design and analysis problems using existing data sets.

**Schedule:** This course is given from 1-4:30 p.m. each Wednesday for 17 weeks in the spring (4 credit hours).

**Course Number:** CLRS 5010

**Course Name:** Advanced Biostatistics for Clinical Investigators  
**Instructor:** Lasky

**Course Description:** This course will focus on the mechanics of applying biostatistical techniques in a research setting. Emphasis will be placed on assumption testing and techniques of model fitting. Students will be expected to critically evaluate, develop, and execute analysis plans using descriptive analysis and regression techniques.

**Prerequisite:** Biostatistics for Clinical Investigators or consent of instructor

**Schedule:** This course is given from 1-4:30 p.m. each Wednesday for 17 weeks in the spring (4 credit hours).

**Course Number:** CLRS 5015

**Course Name:** Using Research to Inform Health Care Policy and Practice  
**Instructor:** Kennedy, Molony

**Course Description:** In this course, the students apply rules of evidence and health services research to clinical practice, practice guidelines, and health care policy. Decision analysis and methods for quantifying benefit, risk, and cost will be used to evaluate health care interventions at the individual patient and population levels. This critical appraisal will be used to launch discussions of mechanisms to bridge the gap between clinical research evidence and health services delivery and health policy.

**Prerequisite:** Consent of instructor

**Schedule:** This course is given from 1-4:30 p.m. each Wednesday for 16 weeks in the fall (4 credit hours).

**Course Number:** CLRS 5017

**Course Name:** Advanced Clinical Research Study Design

**Instructor:** Tyson, Thomas, , Miller

**Course Description:** This course will build on design concepts for observational and interventional studies that were introduced in the prerequisite courses. Topics will include the use of matching and restriction to minimize bias in observational studies, consideration of analytic strategies (eg. correlated samples, use of propensity scores) in study design, survey research methods, the relationship between quality improvement and clinical research, adaptive randomization, alternatives for consent for research, factorial designs, cluster randomization, using patient values to select important study outcomes, weighing benefits and harms, approaches to stopping rules, and enhancing feasibility of clinical trials.

**Prerequisite:** Introduction to Epidemiology, Research, Clinical Trial Design, and either Advanced Epidemiology or Advanced Biostatistics (or permission of instructor)

**Schedule:** This course is given from 1-4:30 p.m. each Wednesday for 16 weeks in the fall (4 credit hours).