Medicine

Medicine as a Career

Few fields provide as much variety, opportunity, and satisfaction as the field of medicine. Doctors are responsible for the care of people, most commonly through the diagnosis and treatment of various illnesses and injuries. Primary care physicians are prepared to provide a wide range of medical services and specialists focus on a particular illness or body system. Doctors work in private practices, hospitals and/or community clinics. Opportunities are not limited to the practice of medicine. Many doctors also find themselves involved in research, administration and/or teaching.

Medical School

Graduates from medical school are awarded the Doctor of Medicine (MD) degree or the Doctor of Osteopathic Medicine (DO) degree depending on school attended. While the distinction between the two is becoming more obscure, the historical characteristics are reflected in the mission and curriculum of the medical school. In practice the MD and DO provide equivalent qualifications for the practice of medicine in the US today.

Medical schools train students to practice as primary care physicians and in more than 145 specialties and subspecialties approved by The American Board of Medical Specialties (ABMS). There are currently 133 medical schools in the US represented by the Association of American Medical Colleges (AAMC). Osteopathic medicine evolved from the practice of holistic medicine and focuses on the relationship between musculoskeletal system and the body’s function and innate ability for self-healing. Today students in colleges of osteopathic medicine are trained in all branches of modern medicine and also practice in a full scope of medical specialties. Colleges of osteopathic medicine train students in Osteopathic Manipulation Medicine.

Medical school training includes two years of education in the basic sciences and two years of clinical rotations. Students must progress through the three stage examination process which is either the United States Medical Licensing Examination (USMLE) or Comprehensive Osteopathic Medical Licensing Examination (COMLEX). After completing medical school graduates begin three to seven years of residency requirements, depending on specialty.

MD/PhD PROGRAMS

Applicants interested in emphasizing research as a counterpart to their clinical education may consider pursuing an MD/PhD program. There are more than 100 joint MD/PhD program across the US but since not every MD program offers the MD/PhD joint option, applicants need to check with individual programs. MD/PhD programs typically take eight years to complete. Customarily, during the first two years students complete course work. During years three through six they complete their PhD research, and in the last two years they complete their MD clinical clerkships.
MCAT 2015
Starting in 2015 the MCAT will transition to a new format. The new exam will include a Psychological, Social and Biological Foundations of Behavior section, and there will no longer be a writing sample. Some medical schools are adding prerequisites that reflect the changes, such as biochemistry and statistics. Check with individual schools to make sure to meet their prerequisites before applying.

The Premedical Curriculum

**Academic Prerequisites**
- General Biology and Labs (BIO 121 and 123/124)
- Genetics and Cell Biology (BIO 326, 327)
- Integrative Biology Lab (BIO 305)
- General Chemistry and Labs (CHE 106/107 and 116/117)
- Organic Chemistry and Labs (CHE 275/276 and 325,326)
- Biochemistry I (BCM 475)
- Physics and Labs (PHY 101 and 102 or PHY 211/221 and 212/222)
- Calculus I (MAT 285 or MAT 295)
- Statistics I (MAT 221)
- Expository Writing (WRT 105, 205)

**Additionally Recommended Courses**
- Biochemistry II (BCM 476)
- Microbiology/Immunology (BIO 409, 447)
- Anatomy/Physiology (BIO 216&217 or 316 and 317)
- Psychology (PSY 205, 315, 335, 336, 337, 382)
- Ethics and Bioethics (PHI 191, 593, 594)
- Epidemiology (HTW 401)
- Psychology &/or Sociology (PSY 205 and/or SOC 101)
- Public Health Ethics (HTW 415)
- Health Disparities/Vulnerable Populations (HTW 309)
- Culturally Competent Healthcare (HTW 307)
- Nutrition (NSD 225)
- First Aid and CPR (HEA 335, 336)
- Calculus 2 (MAT 286 or MAT 296)
- Statistics 2 (MAT 222 or PSY 252)

**Statistics/Calculus**
Since medical schools are starting to require statistics, students are encouraged to complete a statistics sequence in addition to calculus. Our office recommends that applicants take MAT 221/222, MAT 421 or PSY 252 in favor of 100-level introductory statistics courses. While PSY 252 is a statistics course mainly intended for psychology majors it still teaches statistical analysis.

**Social Science**
Medicine requires social intelligence. Physicians must know cultural and behavioral factors to treat patients. Students can develop appropriate competency in Anthropology, Philosophy, Psychology and Sociology. Psychology 205 and Sociology 101 are strong introductions to social study. Students are encouraged to take courses that explore social and cultural development for the 2015 MCAT.

**Non-academic Prerequisites**
Certain activities will familiarize students with the profession of medicine and improve one’s standing as an appropriate candidate. The non-exhaustive list includes: Clinical Experience, Research, Leadership, Community & Volunteer Service, Letters of Recommendation, a Personal Statement, and Interviewing Skills. It is also important to stay abreast of advances in science and technology as they relate to medicine.

**Entrance Exams and Applications**

**Medical College Admission Test® (MCAT®)**
Students should plan to take the MCAT by July of the year prior to their anticipated matriculation year. Preparation should begin early and should consist of both study/review and practice. It is recommended that students begin preparing at least six months prior to their anticipated test date.

**American Medical College Application Service® (AMCAS®) & American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS®)**
Students should plan to start their applications in May of the year prior to their anticipated matriculation. The admissions process to medical school is rolling, so it is advantageous to apply as early as possible.