

Syracuse University

College of Arts & Sciences

Advising and Career Services

Medicine

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 are also 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.

The Premed Curriculum

Course	Course at Syracuse University***	Required for HPAC Sponsorship	Required for professional school*	Recommended
Two semesters Biology	BIO 121 and 123/124 (prereq: BIO 121) (BIO Majors may be exempt from 123/124)	Yes	Yes	
Two semesters Chemistry	CHE 106/107 and CHE 116/117 (prereq: CHE 106/107)	Yes	Yes	
Organic Chemistry with Lab	CHE 275/276 (CHE 116/CHE 117) and CHE 325/326 (prereq: CHE 275/276)	Yes	Yes	
Physics with Lab	PHY 101 and PHY 102 or PHY 211/221 and PHY 212/222	Yes	Yes	
Genetics	BIO 326	No	No	Yes
Cell Biology	BIO 327	No	No	Yes
Biochemistry	BIO 475 (prereq: CHE 325; BIO 326 and BIO 327 recommended)	No	Yes	
General Microbiology	BIO 409 (prereq: BIO 326 and BIO 327)	No	No	
Calculus	MAT 285 or MAT 286 (prereq: MAT 285)**	Yes	Yes	
Statistics	MAT 121 or MAT 221 or PSY 252	Yes	Yes	
Expository Writing	WRT 105 and WRT 205	Yes	Yes	
Social Sciences	examples: PSY 205; SOC 101, 102; ANT 111, 121, 462, 463; MAX 123, 132	No	No	Yes
Public Health coursework	examples: HTW 307, 309, 401, 415; ANT/HTW 463	No	No	Yes

*Individual schools vary; check requirements for schools to which you plan to apply (ex: not all schools require Biochemistry; math requirements vary; one year of Introductory Biology is not always required for those with many upper division Biology credits.)

**Precalculus is recommended first for those whose placement exam results do not include Calculus

*** SUNY ESF and transfer students may fulfill course requirements through courses with different titles but equivalent content

Social and Cultural Competence

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. Students are encouraged to take courses that explore social and cultural development for MCAT preparation.

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 research and understand contemporary issues related to medicine.

Entrance Exams and Applications

Medical College Admission Test® (MCAT®)

According to the AAMC, the MCAT is designed to assess, "problem solving, critical thinking, and knowledge of natural, behavioral, and social science concepts and principles prerequisite to the study of medicine." Scores are reported in four sections:

- Biological and Biochemical Foundations of Living Systems
- Chemical and Physical Foundations of Biological Systems
- Psychological, Social, and Biological Foundations of Behavior
- Critical Analysis and Reasoning Skills

Students should plan to take the MCAT by (at the latest) July of the year prior to their anticipated matriculation year. Preparation should begin at least six months in advance—and should consist of study, review and practice.

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.

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