



## Medical School Requirements

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Preparation for medical school involves, first and foremost, completion of certain required courses and taking the Medical College Admission Test (MCAT). After meeting these basic requirements, students with diverse records and backgrounds apply to medical school and are accepted. Although there is no "formula" or direct path that leads to acceptance, the most competitive applicants are well prepared in several areas.

### Major

You can major in any undergraduate degree area provided that you include required pre-medical prerequisites in your course of study and do well in them. In the past, successful applicants have majored in many non-science subjects such as economics, philosophy, and international relations, as well as the more common science majors such as physiology, biochemistry, and biological sciences. You should major in what interests you. Most students, however, do major in science since this ensures that there will be a great deal of overlap between courses required for their major and those required for medical school; it makes course planning easier. Those choosing non-science majors often make their choice for breadth and do very well in the applicant pool. Your major does not matter unless you have weak science grades.

### Allopathic or Osteopathic

Allopathic schools confer the M.D. on their graduates, and allopathic training is by far the most widely available and recognized type of medical training. Allopathic institutions in the United States, Puerto Rico, and Canada are accredited by the American Association of Medical Colleges, (AAMC). Teaching methodology varies among schools, however the "traditional" model consists of two years of basic science followed by clinical rotations. The "systems-based" program is organized around physiologic systems, such as the lung or kidney. The "case-based" model teaches through clinical vignettes. There are also schools offering hybrids of these approaches.

For more information on allopathic medical schools, consult the Medical School Admissions Requirements (MSAR), which is published by the AAMC. It is available at most bookstores or ordered online: <http://www.aamc.org/students/applying/msar.htm>

Osteopathic schools confer the D.O. on their graduates. Osteopathic institutions are accredited by the American Osteopathic Association (AOA). Osteopathy incorporates additional training in musculo-skeletal manipulation and takes a distinct "whole person" approach to consultation, diagnosis, and practice. Osteopathic programs differ from allopathic programs in two key ways. First, osteopathic medical schools require students to spend more time rotating in primary care areas, rather than medical subspecialties. The second difference is that most osteopathic medical schools do not have an affiliated teaching hospital; therefore, schools usually partner with a number of medical facilities and doctor's offices in the local community. However, it does preclude early exposure to research, cutting edge treatments, or instruction found in a traditional teaching hospital.

For more information on osteopathic medical schools, consult the College Information Book. It can be accessed online: <http://www.aacom.org/resources/bookstore/cib/Pages/default.aspx>

## Course Requirements

Specific course prerequisites vary somewhat for each medical school but the following courses will fulfill all that are generally required. Please see individual catalogs or an advisor for more specific information. For community college and transfer students, refer to assist.org.

One Year of Biology with lab	BIO 1/L – Contemporary Biology <b>and</b> BIO 2/L – Introduction to Molecular Biology
One Year of General Chemistry w/lab	CHEM 2 – General Chemistry I (includes lab) <b>and</b> CHEM 10 – General Chemistry II (includes lab)
One Year of Organic Chemistry	CHEM 8/L – Principles of Organic Chemistry with lab <b>and</b> CHEM 100 – Organic Synthesis and Mechanism <b>and</b> CHEM 100L – Organic Chemistry Lab
One Year of Calculus	MATH 21 – Calculus I for Physical Sciences and Engineering <b>and</b> MATH 22 – Calculus II for Physical Sciences and Engineering <b>or</b> MATH 11 – Calculus I for Biological Sciences <b>and</b> MATH 12 – Calculus II for Biological Sciences
One Year of Physics	PHYS 8 – Principles of Physics I <b>or</b> ICP 1B – Integrated Calculus and Physics: Physics <b>or</b> PHYS 18 – Principles of Physics I for Biological Sciences <b>and</b> PHYS 9 – Introductory Physics II <b>or</b> PHYS 19 – Introductory Physics II for Biological Sciences
One Year of English	WRI 10 – College Reading and Composition <b>and</b> WRI 116 – Science Writing in Natural Sciences <b>or</b> CORE 1 – The World at Home

All required courses must be taken for a grade, NOT on a Passed/Not Passed basis, if courses are repeated, BOTH grades go into your AMCAS\* GPA but AACOMAS\* only includes the higher grades (like UC Merced)

### Additional Courses

These courses are strongly recommended as they will assist in MCAT preparation and strengthen your application.

Some medical schools will require specific courses, like statistics or biochemistry. It is the students' responsibility to review required courses of the schools in which they are interested.

### The Medical College Admissions Test (MCAT)

The MCAT examination includes four sections: Physical Sciences, Verbal Reasoning, Biological Sciences, and a Writing Sample. The exam is entirely computer-administered

Upper Division Biological Science	BIO 101 – Biochemistry I BIO 110 – The Cell BIO 140 – Genetics BIO 141 – Evolution BIO 161 – Human Physiology
Statistics	MATH 18 – Statistical Analysis of Scientific Data <b>or</b> MATH 32 – Statistics <b>or</b> PSY 10 – Analysis of Psychological Data
Humanities and social sciences	PSY 1 - Introduction to Psychology <b>or</b> SOC 1 - Introduction to Sociology <b>or</b> PH 1 - Introduction to Public Health

and is offered 20-22 times a year.

Chemistry is included in both the Biological and Physical Sciences sections. You should take the MCAT at least one year before you plan to enter medical school--but earlier is better. At the earliest this will be in your third (junior) year but many take it in their 4th year or later. As a general guideline, you should take the MCAT when you are ready rather than at a pre-conceived time. You should have completed all general prerequisites and you may also want to complete courses in Genetics (BIS 140), Biochemistry (BIS 101) and Physiology (BIS 161) prior to taking the MCAT. Although no specific English courses will prepare you for the English half of the MCAT, we recommend that you complete your English courses prior to the MCAT and be sure that you have well-developed reading (speedy) and writing skills. Most science majors find the Verbal Reasoning section the most challenging on the MCAT and it is difficult to develop the skill you will need in a short period of time. Start now by reading a lot outside of science!

Never take the MCAT merely for practice! Most applicants prepare for the MCAT using commercial test preparation materials and practice exams, and we encourage you to take the MCAT when you are scoring at or above the scores you hope to get on the MCAT because scores rarely go up on test day. You should then plan to apply based on when you have competitive scores rather than when you graduate, although you will need to complete your bachelor's degree prior to matriculation into medical school. Please see an advisor to discuss the timing of this important examination as well as specific course preparation. Complete the online application to register for the MCAT.

### **Extracurricular Activities**

There is a wide range of experience possible in this area but it is very important for a competitive applicant to have extracurricular activities. Often, students must support themselves and work becomes their primary (but not only) extracurricular activity. Clinical experience (i.e. where you observe physicians treating patients) is expected and is considered critical because medical schools want to be certain that you have knowledge of the field and the job of a physician. Most applicants have research experience as well. Research or clinical experiences that you initiate or develop are particularly rewarding and are viewed very positively by admission committees. Community and campus service, participation in organized sports or arts, leadership, and well-developed personal interests are all important in the admission process.

### **Application Process**

Most allopathic medical schools belong to a centralized application service (AMCAS\*) that allows you to apply through one initial application online. You can apply to all but one of the osteopathic medical schools through a separate online application service (AACOMAS\*). All medical schools in Texas (MD and DO) are a part of a third application service (TMDSAS\*) found on the web. The Health Professions Advisor offers a workshop each year in late April or early May to explain the application process in detail. Applications are submitted approximately 12-15 months before enrolling in medical school.

"Secondaries" (or supplementary applications) are requests by AMCAS and AACOMAS schools for additional information and fees. Non-AMCAS schools (e.g. foreign medical schools) usually have a single application. The final stage of the application process is the personal interview. If a school offers you an interview it means they are seriously considering you.

At each stage of the application process, the Health Professions advisor is available to assist you through the use of printed material, workshops and individual advising. You can make an appointment to see the advisor by calling (209) 228-4309.

**Allopathic Medical Schools in California**  
Loma Linda University – School of Medicine

Stanford University – School of Medicine  
UC Davis - School of Medicine  
UC Irvine - School of Medicine  
UCLA - David Geffen School of Medicine  
UC Riverside - School of Medicine  
UC San Diego - School of Medicine  
UC San Francisco - School of Medicine  
University of Southern California – Keck School of Medicine

**Osteopathic Medical Schools in California**

Touro University – College of Osteopathic Medicine  
Western University of Health Sciences – College of Osteopathic Medicine of the Pacific

\*AMCAS - American Medical College Application Service (allopathic)

\*AACOMAS - American Association of Colleges of Osteopathic Medicine Application Service (osteopathic)

\*TMDSAS – Texas Medical and Dental Schools Application Service (allopathic and osteopathic in TX)