Information for Pre-Medical Students

Physicians, both MDs and DOs, diagnose illness and prescribe and administer treatment for individuals suffering from injuries or disease. They obtain medical histories, perform physical examinations and perform and analyze diagnostic tests to make diagnoses. They also counsel their patients on healthy habits, including good nutrition, hygiene, and preventive health care. Physicians may work with a host of other health professionals, including nurses, physician's assistants, physical or occupational therapists, and public health care workers. In addition, they may give or receive information from dentists, podiatrists, optometrists and other health professionals.

There are two types of physicians, MD's or doctor of medicine, and DO's or doctor of osteopathic medicine. Students study allopathic medicine to become MD's, whereas DO students study osteopathic medicine, which emphasizes the body's musculoskeletal system, preventive medicine and practices a holistic approach to wellness. Both MD and DO physicians may specialize in a particular type of medicine, such as pediatrics, surgery, internal medicine, psychiatry or obstetrics and gynecology.

Students usually complete a baccalaureate degree before attending medical school, and may apply to medical school either during or after completion of their college degree. Most medical schools require certain science and math course prerequisites. The following are potential class schedules to allow you to complete your prerequisites in either 3 years (plan A) or four years (plan B), allowing you to apply to medical school after your junior year (plan A) or after your senior year (plan B).

**Plan A: Sample Pre-Medical Class Schedule**

**Year 1:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>Chem-110</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>Bio-110</td>
<td>General Biology I</td>
</tr>
<tr>
<td>Math-221</td>
<td>Calculus I</td>
</tr>
<tr>
<td>Chem-210</td>
<td>General Chemistry II</td>
</tr>
<tr>
<td>Bio-210</td>
<td>General Biology II</td>
</tr>
</tbody>
</table>

**Year 2:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem-310/312</td>
<td>Organic Chemistry I</td>
</tr>
<tr>
<td>Bio-300</td>
<td>Cell Biology</td>
</tr>
<tr>
<td>Chem-320/322</td>
<td>Organic Chemistry II</td>
</tr>
<tr>
<td>Bio-356</td>
<td>Genetics</td>
</tr>
</tbody>
</table>
Year 3:
Phys-110 University Physics I  Physics-210 University Physics II
Upper level biology course  Upper level biology course
Take MCAT, apply to medical school

Year 4:
Courses to complete major  Courses to complete major

Plan B: Sample Pre-Medical Class Schedule

Year 1:
Chem-110 General Chemistry I  Chem-210 General Chemistry II

Year 2:
Bio-110 General Biology I  Bio-210 General Biology II
Math-221 Calculus I

Year 3:
Bio-300 Cell Biology  Bio-356 Genetics

Year 4:
Phys-110 University Physics I  Physics-210 University Physics II
Upper level biology course  Upper level biology course
Take MCAT, apply to medical school

Note: Most medical schools also require two semesters of intensive writing, which may be satisfied by most Literature courses that require significant writing.

Academic Guidelines

Competition for admission to medical school is very intense, and admissions committees are able to chose among a large pool of qualified and talented applicants. The average cumulative GPA for applicants is approximately 3.5, while the GPA for matriculants is approximately 3.6. Therefore,
students whose academic records fall significantly below these averages should reconsider their plan to attend medical school, and speak with their pre-med advisor about alternative options.

**Non-Academic Guidelines**

Medical schools look for a number of qualitative factors in their applicants, such as compassion, excellent interpersonal skills, high leadership potential, clinical experience, good moral character and experience serving others. Successful applicants will likely have volunteered in one or more health care venues with patient contact, conducted independent research, volunteered in a service organization and/or participated in leadership positions. These experiences help develop the qualities that help make a physician successful and are highly desired by medical school admissions committees.

**The Application Process**

Applications for allopathic medical schools are submitted to AMCAS, the centralized, online American Medical School Application Service, whereas applications to osteopathic medical schools are submitted to ACOMAS, or the American Association of Colleges of Osteopathic Medicine Application Service. Both application services open to receive applications in early June. Many medical schools have rolling admissions, so applying early is best.

The application process actually begins before AMCAS and ACOMAS open, however. The PreMedical Evaluation Committee requires a number of documents be submitted to the applicants file at American University before the committee letter can be written. These documents include an autobiography written by the student, a personal statement that will be submitted to AMCAS/ACOMAS, an up-to-date resume, at least three letters of recommendation from professors and/or clinical mentors, and comments from two mock interviewers. This material will be used by the committee to write the applicant's committee letter that is submitted to medical schools with the secondary applications. The process of compiling these documents should begin in the January preceding the application to allow the student to submit their application in a timely fashion.

**Diversity in Medicine**

Most medical schools seek to recruit and admit a diverse class of students, including students from groups underrepresented in medicine. The AAMC encourages in particular African-American, Latino/a and Native American students to apply, as these groups constitute less than 12% of medical school graduates, but make up at least 25% of the general population. Students may find more information and support at [www.aspiringdocs.org](http://www.aspiringdocs.org), and may contact their premedical advisor or medical schools for more information.
Entrance Examination Requirement (MCAT)

The Medical College Admissions Test (MCAT) is required for application and admission to both allopathic and osteopathic medical schools. It is a standardized, computer-based exam that tests both critical thinking and writing skills, as well as general knowledge of the physical, chemical and biological sciences. It should be taken after all of the prerequisite classes have been completed. There are three sections, Physical Sciences, Verbal Reasoning, a Writing Sample, and Biological Sciences. Scores on the two science sections and the verbal reasoning section range from 1 to 15 (with 15 being the best), while the writing sample score ranges from J (low) to T (high). Preparation for the MCAT can be through self-study or by taking an MCAT test preparation course.

Interviews

Medical schools use the primary and secondary applications to select individuals who appear to be academically qualified to complete medical school, and who have the necessary experience to indicate that they have made a knowledgeable career choice. These individuals are then invited to the medical school campus for a personal interview. This is an opportunity for the admissions committee to determine whether the candidate would be a good fit for their school. It allows the school to get to know the applicant more completely, as a person rather than a bunch of numbers and facts. Candidates should spend time preparing for this important step in the selection process, and may contact either the Career Center or the premed advisor to set up practice interviews or for suggestions on how to prepare.

Criminal Background Checks

Medical schools are asking applicants whether they have a record of felonies and/or misdemeanors. Students should make careful decisions throughout their undergraduate years regarding alcohol and drug usage, as charges for possession can have other negative consequences for medical school application. Students who have been found to be dishonest on their applications are not admitted.

Adapted from Iowa Guides, Pre-Medical Guide