GUIDE ONE

Pre-Med and Pre-Health Planning at The Johns Hopkins University

WHAT ARE SCHOOLS LOOKING FOR?

PRE-MED PREREQUISITES

PLANNING REMINDERS

Office of Pre-Professional Programs and Advising
http://studentaffairs.jhu.edu/preprofadvising/
Introduction

This guide provides an introductory overview for those who intend to apply to allopathic (MD), physician-scientist (MD-PhD), osteopathic (DO), and dental (DDS, DMD) programs. The academic policies and recommendations in this document, however, primarily apply to incoming students from the Class of 2024. If you are not a freshman, please speak to a Pre-Professional Advisor if you have questions about your specific circumstances.

In this guide, “medical school” refers to allopathic (MD), physician-scientist (MD-PhD), osteopathic (DO), and dental (DDS, DMD) programs. In addition, each of these career options have dedicated web pages with important information on the Pre-Professional Office website:

- Allopathic Medical School
- MD-PhD Programs
- Osteopathic Medical School
- Dental School
Whether you are interested in pre-med, pre-dental, pre-vet, pre-nursing, or any other potential health career, it is important to follow general guidelines as you prepare for your future health professions school application.

**What are health professions schools looking for?**

**Individuality and Passion**
Health professions schools look for demonstration of substantive and long-term investment in activities that distinguish an applicant, particularly those that include creativity, leadership, and exploration.

**Clinical Experience**
Health professions schools place an emphasis on your clinical exposure to patient care, including time spent shadowing and volunteering or working in hospitals, clinics and other patient-centered areas. Engaging in direct patient interaction is imperative.

**Strong Letters of Evaluation (LOE)**
Begin developing rapport with professors, supervisors, research PIs, etc., early in your academic career. You will eventually collect LOEs from individuals who know you well and can speak enthusiastically about your abilities and skills.

**Diverse Interests**
Consider coursework that reflects the depth and scope of your academic interests. Also, engage in activities that are unique to you and will help make you a compelling applicant to health professions school.

**Research and Independent Investigation**
Most schools like to see investment in and contributions to research. Health professions schools value independent inquiry in any discipline.

**Academic Achievement**
Health professions schools review your cumulative GPA, BCPM GPA (Biology, Chemistry, Physics, Math), and MCAT, DAT, or GRE score. They also look for trends in academic performance and evidence of a challenging course load.

**What do health professions schools want from their future applicants?**
Since many of our pre-health students are interested in applying to medical school, the following information specifically pertains to pre-medical coursework. However, all health professions graduate programs follow similar academic guidelines. Students interested in professions other than medicine should make an appointment with the appropriate advisor per the Pre-Professional Advising website.

JHU does not have one standard set of classes that will help you fulfill course requirements for medical school. We recommend that JHU students consider the following **general guidelines** for completing pre-medical course requirements. Please consult with KSAS Academic Advising or WSE Undergraduate Advising if you have questions regarding the best courses to take as an undergraduate.

We **RECOMMEND** JHU students complete the following coursework (or the equivalent of):

<table>
<thead>
<tr>
<th>Course</th>
<th>Requirements</th>
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<tbody>
<tr>
<td>Chemistry</td>
<td>• 2 courses in general (inorganic) chemistry with associated labs</td>
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<tr>
<td></td>
<td>• 2 courses in organic chemistry with one associated lab (JHU offers one 3-credit organic chemistry lab)</td>
</tr>
<tr>
<td>Biology</td>
<td>• 2 courses in biology with associated labs</td>
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<tr>
<td>Biochemistry</td>
<td>• 1 course in biochemistry</td>
</tr>
<tr>
<td>Math</td>
<td>• 2 courses in mathematics</td>
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<tr>
<td></td>
<td>• 1 course in statistics</td>
</tr>
<tr>
<td>Physics</td>
<td>• 2 courses in general physics with associated labs (Calculus I and Calculus II are co-requisites for General Physics I and General Physics II at JHU)</td>
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<tr>
<td>English</td>
<td>• 2 courses that emphasize English and/or writing intensive coursework</td>
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<tr>
<td>Social Sciences</td>
<td>• 2 courses that emphasize social and behavioral science principles</td>
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<td></td>
<td>• Note: there are numerous introductory courses in psychology, sociology, and related disciplines that will provide a foundation for the MCAT.</td>
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1. **Varying requirements across medical schools.**
   Course requirements often vary among medical schools. Therefore, it is simply not possible for you to meet every pre-med requirement for every medical school in the U.S. What is most important is to consider the coursework and academic background necessary to best prepare for medical school and to perform well on the MCAT. You must research individual medical school requirements to ensure you have completed all prerequisite coursework.

2. **AP and IB Credit:** Policies regarding AP and IB credit are inconsistent across medical schools. Regardless of whether a medical school accepts AP or IB credit, applicants must complete additional coursework in that subject while in college.
   - If you have AP or IB credit for an introductory science sequence for medical school, **you are advised to take at least one additional course in that area.**
   - You will need two biology classes with labs, regardless of whether you have AP/IB biology credit.

   In general, it is acceptable to forfeit your AP or IB credit if you feel more comfortable reviewing the material and strengthening your knowledge in an introductory college course in preparation for the MCAT.

3. **Biochemistry.** A background in biochemistry is essential for MCAT preparation and is a requirement of medical schools. Most JHU students take Biochemistry from the Department of Biology. However, please check biochemistry course options with your WSE or KSAS academic advisor if you are majoring in Biomedical Engineering, Materials Science (Biomaterials track), Biophysics, Chemistry, or Public Health Studies.

4. **Genetics.** Although genetics is not required for the MCAT, it is considered an important foundational course in preparation for medical school curricula.

5. **Math/Statistics.** Calculus I and Calculus II are co-requisites to the physics sequence at Johns Hopkins. In addition to calculus, it is suggested you enroll in a statistics class in preparation for the MCAT and as a requirement for most medical schools.

6. **Humanities and Social Sciences.** It is important to demonstrate interests beyond the sciences, as medical schools want to see that applicants have diverse intellectual interests. In light of the content on the MCAT, pre-meds are advised to consider enrolling in courses that emphasize ethics, philosophy, cross-cultural studies, the arts, and public health.

7. **Letter Grades.** All pre-medical requirements must be taken for a letter grade and, for the majority of medical schools, you must earn a “C” or higher in those courses. **Do not take pre-med courses or requirements pass/fail (S/U).**

8. **Find balance.** Although you need a strong GPA to be admitted to medical school, trying to maintain a perfect GPA may prevent you from pursuing experiences outside of the classroom that will help set you apart from other medical school candidates. The key is to **find balance** between your academics and extra-curricular activities.

9. **Other Considerations.** Click [here](#) for our recommendations about prerequisite courses, summer science courses, online coursework, and taking courses “S/U” (pass/fail).
The English/writing requirement

Ultimately, it is at the discretion of a medical or dental school to determine whether a particular course meets their English requirement, and it is your responsibility to be familiar with the English requirement for each medical/dental school to which you will apply. However, we offer the following general guidelines for choosing classes to fulfill the requirement:

- At least one introductory level “writing intensive” course from the JHU English and/or Writing Seminars departments. Although any introductory level course is acceptable, we recommend *Expository Writing* as one of your two courses.

- A second humanities or social sciences class that fulfills the JHU writing intensive requirement.

Choosing a major

One of the biggest pre-med myths is that you must major in the sciences to get into medical school. **This is absolutely not true.** Each year, many JHU graduates majoring in humanities and social science subjects are accepted into medical school. It is important that you choose a major that reflects your genuine academic interests rather than a major you think “looks good” to medical schools. **Choose a major you are passionate about!** Whether that major is Anthropology, Biomedical Engineering, Molecular and Cellular Biology, Medicine, Science and the Humanities, Public Health Studies, Writing Seminars, or something else entirely, keep in mind all students who apply to medical school must complete their pre-medical prerequisites in addition to the requirements of their major.

**Double-majoring as a pre-med student will not increase your chances of medical school admission.** Far more important are the types of courses you have taken, the rigor of the courses, the number of credit hours you successfully managed per semester, and your academic performance. You may not want to detract from your overall academic performance by subjecting yourself to the demands of two majors.

In Closing

Navigating your way through academic requirements at Johns Hopkins is a challenge that takes careful planning and great patience. If you are pursuing a health professions career, the academic planning process requires adaptability and flexibility. We encourage you to seek input from your advisors to devise a plan that is appropriate for your emerging academic and professional goals.

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[http://studentaffairs.jhu.edu/preprofadvising/](http://studentaffairs.jhu.edu/preprofadvising/)
Attend a Pre-Health 101 meeting. All pre-health freshmen (and sophomores if they did not attend Pre-Health 101 in their freshman year) must attend one Pre-Health 101 meeting before scheduling their first individual advising appointment with a Pre-Professional advisor. Multiple Pre-Health 101 sessions are offered in both the fall and spring semesters, and the programs are promoted at the beginning of an academic semester.

Explore volunteer and community service opportunities.

Explore research opportunities. Think of research from the perspective of discovery, investigation, and inquiry. It can include anything from wet lab, bench research, clinical research, public health research, humanities research, etc.

Consider studying abroad, whether for Intersession, summer, or a semester.

Get to know your faculty, research principal investigators (PIs), supervisors, and other mentors; they will be good resources for your future letters of evaluation.

Work on developing strong study skills. Be aware that the study habits that worked well for you in high school may need to be honed or improved upon in college.

Attend relevant programs and events (announced through our listserv).

Review relevant shadowing opportunities, internships, and employment options in the weekly Pre-Health Opportunities Newsletter. (You will automatically receive this as part of the Pre-Health Listserv.)

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