Guide One
Pre-Med and Pre-Health Planning at JHU

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Guide One: Pre-Med and Pre-Health Planning at JHU

The guidelines presented in this document provide important details for Johns Hopkins University undergraduates or recent graduates; primarily those who intend to apply to allopathic (MD), physician-scientist (MD/PhD), osteopathic (DO) and dental (DDS, DMD) schools. The academic policies and suggestions in this document, however, primarily apply to incoming students from the Class of 2019. There are some subtleties and differences for returning students in the Class of 2016, 2015, and 2014.

Details of the support provided for applicants to other health professions schools, including veterinary medicine, nursing, optometry, pharmacy, etc., are covered in separate Guides available on the Pre-Professional website: http://web.jhu.edu/prepro/health/Health.professions.guides

Reference in this Guide to “Medical School” refers to applicants to allopathic (MD), academic medicine (MD/PhD), osteopathic (DO), and dental (DDS, DMD) school. In addition, each of the medical options in this guide has separate websites on the Pre-Professional website with important information. They can be accessed as follows:

- Allopathic Medical School: http://web.jhu.edu/prepro/health/allopathic.html
- Osteopathic Medical School: http://web.jhu.edu/prepro/health/osteopathic.html
- Dental School: http://web.jhu.edu/prepro/health/predental.html
- MD/PhD Programs: http://web.jhu.edu/prepro/health/md_phd.html

Topics Covered in Guide One

- What are health professions schools looking for?
- Personal Competencies!
- How should I approach my premedical planning?
- What is the most common path for JHU students?
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What are health professions schools looking for?

★ **Academic Achievement and Aptitude** – Medical schools look for evidence that you can handle the challenges of a rigorous science curriculum. They review your cumulative GPA, BCPM (Biology, Chemistry, Physics, Math) GPA, and MCAT score. They also look for trends in your academic performance.

★ **Academic Breadth and Diversity of Interests** – This is reflected in course selection, and the depth and scope of your academic interests.

★ **Medically-Related Experience** – Medical schools place a strong emphasis on your clinical exposure to medicine and patient care, including time spent shadowing, working in clinics, and other patient-centered settings. Engaging in direct patient interaction (i.e., transporting patients, serving as a medical translator, etc.) will greatly enhance your experience.

★ **Community and Public Service** – Good doctors are altruistic (that is, they are always ready to put their patients’ needs first). Good doctors also have a strong sense of service, of wanting to help people feel better, making health care work better, and, in many cases, giving back to their communities. Medical schools value engagement in community service as a way to demonstrate respect toward others with very different life circumstances, empathy, and cultural sensitivity.

★ **Research and Independent Investigation** – Research is investigative in nature. It is conducted to learn facts, acquire new knowledge and draw conclusions. Medical schools like to see investment in and contributions to research, whether basic science or clinical. Independent investigation also occurs outside of the sciences and is very valued by admissions committees.

★ **Individuality and Passion** – There are numerous ways applicants demonstrate their individuality, the diversity of their interests, and the individual passions that have shaped their lives. Medical schools look for demonstration of substantive and long-term investment in activities that distinguish an applicant, particularly those that include creativity, leadership, and exploration.

★ **Strong Letters of Recommendation** – Letters of recommendation are a critical element in the health professions application process. Your goal is to have 4-6 letters of recommendation by the time you apply to medical school because schools value the perspectives of people who have observed your work and can speak to your abilities and personality. As a freshman, you do not need to worry about collecting letters of recommendation just yet, but you should begin developing rapport with your professors, attending office hours, and letting them get to know you.
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**Personal Competencies!**

Demonstration of personal competencies through your experiences is critical to your success as an applicant. As you think about a future application to health professions school and entering your Hopkins experience, consider how you would rate yourself in these competencies areas:

- **Integrity and Ethics**: Behaves in an honest and ethical manner; adheres to ethical principles and follows rules and procedures; resists peer pressure to engage in unethical behavior and encourages others to behave in honest and ethical ways.

- **Reliability and Dependability**: Consistently fulfills obligations in a timely and satisfactory manner; takes responsibility for personal actions and performance.

- **Service Orientation**: Demonstrates a desire to help others and sensitivity to others’ needs and feelings; demonstrates a desire to alleviate others’ distress.

- **Social, Interpersonal and Teamwork Skills**: Demonstrates an awareness of others’ needs, goals, feelings, and the ways that social and behavioral cues affect peoples’ interactions and behaviors; adjusts behaviors appropriately in response to these cues; treats others with respect and demonstrates a respect for diverse populations.

- **Desire to Learn**: Sets goals for continuous self-improvement and for learning new concepts and skills; assesses own strengths and weaknesses; solicits and responds appropriately to feedback.

- **Resilience and Adaptability**: Demonstrates tolerance of stressful or changing environments or situations and adapts effectively to them; is persistent, even under difficult situations; recovers from setbacks.

- **Cultural Competence**: Demonstrates knowledge of social and cultural factors that affect interactions and behaviors; shows an appreciation and respect for multiple dimensions of diversity; recognizes and acts on the obligation to inform one’s own judgment; engages diverse and competing perspectives as a resource for learning, citizenship, and work; recognizes and appropriately addresses bias in themselves and others; interacts effectively with people from diverse backgrounds.

- **Oral Communication**: Effectively conveys information to others using spoken words and sentences; listens effectively; recognizes potential communication barriers and adjust approach or clarifies information as needed.

**What do D.O. Schools Look for?**

Osteopathic (D.O.) schools are also looking for students who are motivated to pursue a career in osteopathic medicine and,

- Have knowledge of osteopathic medicine
- Embrace principles of osteopathic medicine
- Have shadowed an osteopathic physician

For a full listing of “Core Competencies” for entering medical students, go to: [https://www.aamc.org/initiatives/admissionsinitiative/competencies/](https://www.aamc.org/initiatives/admissionsinitiative/competencies/)
How should I approach my premedical planning?

Prior to the mid-1990’s, the typical career plan of physicians was to proceed directly from college graduation to medical school. Since it was the accepted path, the average age of first-year medical students was 22. This is no longer the case, however.

Today, the average age of first-year medical students is approximately 24—because medical schools welcome the maturity, expanded, and more diverse experiences that are reflected in these slightly-older applicants.

For some students, it makes sense to apply “early” following the junior year—and, certainly, if this applies to you, we will fully support in this decision. Given trends in premedical education and our commitment at Johns Hopkins that our applicants be as prepared and qualified as possible, we advise the majority of applicants to take a “bridge” year. Here are the reasons:

1. This plan allows the entire four-year undergraduate record of both academics and co-curricular experiences to be reflected in your medical school application and therefore enhances your candidacy. In essence, this timeline allows you to reach your full potential.

2. The optimal time to take the MCAT is August or September following the junior year, when the test will not conflict with coursework or detract from relevant co-curricular experience.

3. Students taking “gap/bridge” years rarely have a problem finding meaningful “bridge” experiences, whether that be employment, service opportunities, and/or other educational experiences.

4. Applicants have full access to advising services throughout their medical school application process regardless of their timeline.

5. It is critical to apply when you are at your strongest. Taking a “bridge” year will allow your senior year accomplishments (e.g. grades, research, thesis/senior project, volunteering) to factor into your application.
What is the most common path for JHU students?

Over two-thirds of students applying to medical school from Johns Hopkins take at least one “bridge” year following graduation. This path is reflected below:

**Freshmen Year**

- Get to know your academic advisor; attend Freshmen First-Time Small Group Meetings; have a follow up meeting with a pre-health advisor; seek out resources to assist with your adjustment and promote your academic success
- Attend preregistration “Town Hall Meetings for Pre-Med Students” in November and April
- Consider pursuing a volunteer experience or research opportunity
- Consider summer medically-related opportunities, research or volunteering

**Sophomore Year**

- If you have not done so, meet with a premed advisor in the Pre-Professional Office
- Consider seeking out meaningful public service in the Baltimore community
- Pursue meaningful public service, summer paid/volunteer medically related experience
- Consider participation in a Medical Tutorial, new or continued research, and/or medically-related clinical experience

**Junior Year**

- Consult with Pre-Professional Office to clarify pre-medical course requirements, decide academic pathways for optimal preparation, and timing of the MCAT
- Pursue meaningful public service, summer paid/volunteer medically related experience
- Consider applying to the Intersession Surgical Rotations program or other Pre-Prof. intersession offering
- Open up your “veCollect” account to electronically store letters of recommendation

**Senior Year**

- Continue contact with an advisor in the Pre-Professional Office
- Consider applying to the Intersession Surgical Rotations program
- Attend Applicant Kick-Off Session in November and all applicant workshops
- Prepare and submit the Health Professions Committee Application (HPCA) in spring semester
- Attend application and personal statement workshops and prepare to apply
- Secure research, public service, or other one-year commitment for “bridge” year

**Summer Following Graduation**

- Continue contact with an advisor in the Pre-Professional Office
- Complete medical school application(s) and secondary applications

**Bridge Year**

- Engage in research, public service, or other one-year commitment for the “bridge” year
- Continue contact with an advisor in the Pre-Professional Office
- Attend medical school interviews
- Receive acceptances! (time to relax before your next journey begins!)
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Premedical academic planning: What courses do I take?

In addition to the courses you must pursue to complete degree and university requirements, as a premed student you are advised to take the courses necessary in preparation for the MCAT as well as work to fulfill the admission requirements of the majority of medical/dental schools in the U.S. As noted, it is simply not possible for you to cover every pre-medical requirement for U.S. medical schools.

In order to prepare you a) for the academic rigors of medical or dental school, b) to meet the requirements of the vast majority of medical and dental schools in the U.S., and c) for the MCAT, we recommend that you pursue the following coursework (or the equivalent of):

- 2 courses in general (inorganic) chemistry with associated labs (see guidelines for “How to decide what chemistry course to take and when”)

- 2 courses in organic chemistry with associated lab (at JHU there is a single 3-credit Organic Chemistry lab)

- 2 courses in biology with associated labs (either at the introductory or at the advanced level; see guidelines for “How to decide what biology course to take and when”)

- 1 course in biochemistry (no associated lab necessary unless the lab is required for your major or serves as one of the two designated “2 courses in biology with associated labs” as stated above)

- 2 courses in general physics with associated labs (AP Physics may substitute – in that case, an advanced physics course is strongly recommended); Calculus I and II are co-requisites for General Physics I & II at JHU)

- 2 courses in mathematics (a course in calculus and an introductory-level course in statistics is recommended)

- 2 courses that emphasize English and/or writing (see “The English Requirement” section of this Guide)

PLUS...

★ 2 courses that emphasize social and behavioral sciences principles (Note: there are numerous introductory courses in psychology, sociology, and related disciplines that will provide a foundation for the MCAT).

**Examples of courses providing a foundational background in psychology:**
- 200.101 Introduction to Psychology
- 200.141 Foundations of Brain, Behavior, and Cognition

**Examples of courses providing a foundational background in sociology:**
- 230.101 Introduction to Sociology
- 230.341 Sociology of Health and Illness
- 661.317 The Culture of the Medical Profession

**IMPORTANT – PLEASE READ**

It is important to show interests beyond the sciences, as medical schools want to see that applicants have diverse intellectual interests. In light of the content of many questions on the 2015 MCAT, JHU premeds are advised to consider enrolling in courses that emphasize ethics, philosophy, cross-cultural studies, and public health, regardless of the disciplines.
How do I decide what chemistry course to take and when?

JHU applicants to medical school are advised to take (a) two courses in general (inorganic) chemistry with associated labs and (b) two courses in organic chemistry with an associated 3-credit lab. It is very important you are taking the right chemistry course for you! Here are the chemistry course options (and combinations) for the first year by course number (follow by course # in the table below):

- 030.101 Introductory Chemistry I with 030.105 Introductory. Chem. Lab I (fall semester)
- 030.102 Introductory Chemistry II with 030.106 Introductory. Chem. Lab II (spring semester)
- 030.103 Applied Chemical Equilibrium (fall or spring semester)
- 030.204 Chemical Structure and Bonding (spring semester)
- 030.205 Organic Chemistry I (fall semester)
- 030.206 Organic Chemistry II (spring semester)

The easiest guidelines to follow are based on whether or not you took AP chemistry and, if so, your score. Consider the following guidelines based on whether you received a AP 5 or an AP 4 in Chemistry:

<table>
<thead>
<tr>
<th>IF YOU EARNED AP 5 (or earned a 6 or 7 on IB HL Chemistry)</th>
<th>★ May take 103 in the fall or the spring (a great preparation for 205; will lose 4 AP/IB credits)</th>
<th>★ This is an option for some AP 5 students</th>
</tr>
</thead>
<tbody>
<tr>
<td>★ You will receive 8 credits!</td>
<td>★ May take 204 (offered spring only; will not lose any AP/IB credits)</td>
<td>★ This is an option for AP 5 students with strong interests in chemistry</td>
</tr>
<tr>
<td></td>
<td>★ May go directly into 205 (will not lose any AP/IB credits; there is a special section [#3] that is specifically for first year students!</td>
<td>★ Students should review this option with their advisors</td>
</tr>
</tbody>
</table>

| IF YOU EARNED AP 4 ★ You will receive 4 credits!          | ★ May take 103 (will keep all 4 AP or IB credits)                               | ★ This is recommended for most AP 4 students |
|                                                            | ★ May to proceed to 204 (an option for AP 5 students with strength and strong interests in chemistry) | ★ May take 101/105 and proceed to 102/106 (will lose all 4 AP or IB credits) |
|                                                            | ★ This is recommended for cautious AP 4 students                               | ★ This is recommended for AP 4 students |
|                                                            | ★ May take only 204 (rarely recommended!)                                    | ★ May take only 204 (rarely recommended!) |

Note: Be sure to consult with your academic advisor if you have questions regarding the best placement for you in chemistry upon entering Johns Hopkins.
How do I decide what biology course to take and when?

As it relates to an eventual application to medical school, it is recommended that you take a minimum of two biology courses with lab, regardless of whether at the introductory level or an upper-level from the Department of Biology, the Department of Biophysics, or the Department of Biomedical Engineering. The first consideration in selecting where to begin with biology coursework is your AP status:

**IF YOU ARE IN THE SCHOOL OF ARTS AND SCIENCES:**

Here are the two most common progressions of students into biology coursework based on AP status.

If you earned a 5 on AP Biology (or, for International Baccalaureate students, a 6 or 7 in IB HL Biology) you will receive 6 credits, an equivalent of “2 courses in biology with associated labs”. Note,

- Your “2 courses in biology with associated labs” will likely be covered by higher-level courses in a combination of Genetics, Cell Biology, and/or Biochemistry.

- Your “two associated labs” will typically be a Biochemistry Lab (or Protein Engineering Biochemistry lab) and either Genetics Lab or Cell Biology Lab.

- Some students are advised to begin biology coursework with General Biology II and General Biology II lab in the spring of the first year. Discuss this option with your academic advisor and/or the Director of Undergraduate Studies in the Department of Biology.

If you earned a 4 or lower on AP Biology (or did not take the AP test) you will not receive AP Biology credit and most of you will need to take two semesters of biology with associated labs.

**IF YOU ARE IN THE SCHOOL OF ENGINEERING:**

- Biomedical Engineering students pursue their biology coursework in the School of Engineering, through the Systems Bioengineering I & II sequence and associated labs.

- Premed students in other engineering majors enroll in higher-level courses, typically a combination of Genetics, Cell Biology, and/or Biochemistry.
Some Caveats

• The majority of premedical students take Biochemistry offered through the Department of Biology. This is a fall semester course and is taken after the completion of the Organic Chemistry sequence. For most students, this is the fall of junior year.

• General Biology I and II have separate sections for freshmen (02) and non-freshmen (01). It is possible to take General Biology I and II after your freshman year if you choose, but you will have to enroll in section 01.

Freshmen Seminars

Freshmen seminars, in biology and other topics, are a great option regardless of AP credit or major. These courses allow for the intense examination of a topic in a small course setting, permitting extensive interactions with an instructor and a handful of other students. The Freshmen Seminar courses that are specific to biology are:

- 020.104 From Genes to DNA and Back
- 020.106 Tuberculosis
- 020.111 The 'Nobels' in Medicine and Chemistry

Courses Emphasizing Research in a Lab Setting

For first term freshmen students desiring a research experience in a lab course setting, there are some great opportunities. The Department of Biology offers:

- 020.135 Project Lab: Phage Hunting (open to all students)
- 020.243 Proteins, Genetics and Human Disease (includes lab components; this course is open only to freshmen with a 5 on AP Biology)

In addition, the Department of Biophysics offers:

- 250.253 Protein Engineering and Biochemistry Lab

THIKING AHEAD TO THE MCAT

The vast majority of Johns Hopkins students take the MCAT during the summer following the junior year. This is because most students take Biochemistry, a critical course in preparation for the MCAT, during the junior year as well as completing other non-science coursework critical to MCAT preparation (e.g., statistics, courses that emphasize social and behavioral sciences principles). Furthermore, it is beneficial to your planning to take the MCAT during the summer prior to applying to medical school.

Your Hopkins education will inevitably provide you a very strong background in Scientific and Reasoning Skills, including a) knowledge of scientific concepts and principles, b) scientific reasoning and evidence-based problem solving, c) reasoning about the design and execution of research, and d) data-based and statistical reasoning. It is also stressed that you pursue exposure to ethics, philosophy, cross-cultural studies, and public health content, gleaned from reading widely across many disciplines.
Premedical course planning: Caveats to consider…

1. **AP and IB Credit**: Policies regarding AP and IB credit are not consistent. Regardless of whether a medical school “accepts” AP or IB credit, applicants must complete coursework in each of the required sciences. 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. Medical schools want to see a college-level course in that area. It is perfectly acceptable to decline your AP or IB credit in an area if you feel more comfortable reviewing the material and strengthening your skills and background. Furthermore, college-level coursework in that area will provide reinforcement in preparation for the MCAT.

2. **Biochemistry**. A background in biochemistry is essential for MCAT preparation and is increasingly a requirement at medical schools. Most JHU students take Biochemistry with the exception of:
   - **Biomedical Engineering majors** and those students in the Biomaterials Track in the Materials Science and Engineering major take Molecules and Cells (580.221),
   - Students in certain majors (Biophysics and Chemistry, for example, take a separate Biochemistry sequence (250.315 and 030.315),
   - Public Health Studies majors may choose to take one or both of the graduate level Biochemistry courses offered through Johns Hopkins School of Public Health (taking both is strongly recommended for MCAT preparation).

3. **Genetics**. Genetics is neither a formal premedical requirement nor necessary in preparation for the MCAT. However, Genetics, like Biochemistry and Statistics, is increasingly considered an important background course in preparation for medical school curricula.

4. **Cell Biology**. Students in the Chemistry and Biomolecular Engineering major take a different Cell Biology course in their home department (Cell Biology for Engineers, 540.307).

5. **Math/Statistics**. Calculus I&II are co-requisites to the physics sequence at Johns Hopkins but are generally not listed as premedical requirements at most U.S. medical schools. All JHU premeds are advised to take through Calculus I and an introductory-level course in statistics (see list of recommended courses in this Guide) in preparation for the MCAT and as a requirement of most medical schools.

6. **Humanities and Social Sciences**. It is important to show interests beyond the sciences, as medical schools want to see that applicants have diverse intellectual interests. In light of the content of many questions on the new MCAT, JHU premeds are advised to consider enrolling in courses that emphasize ethics, philosophy, cross-cultural studies, and public health, regardless of the disciplines.

7. **Letter Grade**. With the exception of the first “covered grades” semester, all pre-medical requirements must be taken for a letter grade and, for the majority of medical schools, that letter grade must be a “C” or better (see section on “Retaking Courses”). **Do not take any suggested premed courses or requirements pass-fail (S/U).**
IMPORTANT – PLEASE READ

In considering the recommendations in premed course planning, you must remember that requirements can vary among medical schools as can AP credit policies. It is simply not possible for you to meet every pre-medical requirement for every medical or dental school in the U.S. What is most important in premedical planning is to consider the coursework and academic background necessary to gain a solid academic foundation for medical school and the academic background necessary to perform well on the MCAT.

Choosing a major

So, what should you major in at Hopkins? One of the biggest myths is that you have to 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 fields are accepted into medical school. It is important that you choose a major which reflects your strongest academic interests rather than one that 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, Public Health Studies, Writing Seminars, or something else entirely, all students who apply to medical school must complete specific prerequisites.

It is often "convenient" to major in certain science majors because many of the premed requirements are included within, so it requires less time to complete both. However, medical schools also like to accept students who have broad interests and have pursued a non-traditional major. So do not be deterred if you are passionate in the humanities (see the new major below!). Medical schools welcome applicants who major in and outside of the sciences!

A new in interdisciplinary humanities-based major

A new major, **Medicine, Science and the Humanities**, is being introduced this fall that will be an attractive option for premedical students with broad interests in the humanities and social science disciplines. This is an interdisciplinary, humanities-based major using a cultural and historical context to explore scientific inquiry and the roots of medicine. If you are interested, enroll in an introductory-level course your first year (Fall 2015: AS.145.101, Death and Dying in Art, Literature, and Philosophy)
Covered grades

Per University policy, “the letter grades earned by students in their first semester at the university are not reported on the transcript. Each course that was passed with a grade of C- or above is assigned the letter “S” (for Satisfactory) in place of a grade. These courses can be used to satisfy requirements for the major, for distribution, and for the writing requirement. Letter grades below C- are assigned “U” or “UCR”. Covered grades that earn a D or D+ will be covered with a “UCR” (Unsatisfactory with credit) and F grades will be covered with a "U" (Unsatisfactory without credit). First-semester courses that receive “UCR” grades and credits may be used to meet distribution requirements. First-semester premed requirements with a “U” or “UCR”, however, must be retaken. The vast majority of medical and dental schools respect and accept our covered grades policy.

In the rare circumstance that a medical or dental school requests that a freshman year first semester grade (or grades) be uncovered, Johns Hopkins must receive an official letter from a program or organization that states the student is precluded from consideration or whose candidacy is critically harmed because of the covered grade semester.

The English/Writing Requirement

As stated by the AAMC (https://www.aamc.org/students/applying/requirements), “medical school admission requirements vary from school to school” and “one year of English” is a common requirement. The interpretation of the English/Writing Requirement, however, has become even more variable and liberal in interpretation. Given the current emphasis on assessing “competencies” and “writing and analysis,” it is apparent that a range of courses from varied departments and disciplines will meet the “spirit” of this requirement. Ultimately, however, it is to the discretion of a medical or dental school to determine whether a particular course meets their English and writing composition requirement. It is your responsibility as an applicant to be familiar with the English requirement for each medical school to which you will apply.

After assessing the medical school admissions landscape and given Johns Hopkins University-wide writing intensive requirement that all students must fulfill, we recommend the following:

• At least one introductory level “writing intensive” course from the English and/or Writing Seminars departments. Although any introductory level course is acceptable, we recommend Expository Writing as one of your two courses to address the medical school “English Requirement.”

• For the second course, we recommend a Hopkins class that will fulfill the writing intensive requirement in any Humanities or Social Science discipline.

Note!
All pre-medical requirements must be taken for a letter grade (with the exception of your first-semester covered grades).
What about taking premed courses in the summer?

As a general rule, the academic program at Johns Hopkins is designed for students to be able to complete degree requirements during the academic year. For a premed, this means that the summers can be dedicated to pursuits that contribute to one’s background and experiences, regardless of whether they are medically-related or community service. Most important, the summer is a time to seek out meaningful activities that will enhance your overall undergraduate experience.

In some circumstances, taking a summer course or two may make sense given your academic planning and unique circumstances. A good example is study abroad, when it can make sense to take half or whole of a science sequence to keep on track for completing your science major. If you are planning to take a premedical requirement in the summer, consider the following advice:

- It is preferable to take all of your premedical science courses at Johns Hopkins
- Do not be in a rush to complete premedical requirements; most students span the courses over three or four years
- You are advised to take no more than two premedical science courses over your summers as an undergraduate
- Avoid taking coursework in consecutive summers
- Although it is preferable to take a summer science course at Johns Hopkins, medical schools accept summer courses taken at other colleges or universities
- If you need summer coursework taken at another institution to count for your major or graduation requirements, the courses must be approved (Check procedures outlined by the Offices of Academic Advising/Engineering Advising)
- Avoid taking premedical science courses at community colleges
- Avoid any competing commitments, whether it be part-time research or work, when taking fast moving and intensive summer coursework
- Use the summer months to work in your community, do research, study abroad, or other meaningful activities

If you have questions about these options, consult your advisors!!

Study Abroad…Is it possible for premeds?

It most certainly is! Study abroad offers you an opportunity to broaden your undergraduate experience. Students who study abroad gain maturity, self-knowledge, and appreciation of cultural differences among people. If you are preparing for a career in the medical and health professions, you will gain important experience from living and studying internationally. As you consider your plans, it is important to establish a set of priorities and to remain flexible. Some of the more popular programs that would appeal to pre-health students include:
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- Kings College London, England
- Denmark International Studies, Copenhagen
- University College London, England
- SIT-Public Heath, Latin America & Africa
- Scotland: University of Edinburgh, University of Glasgow & St. Andrews University
- Australia: University of Sydney, University of Melbourne & University of Queensland
- JHU’s St. Anne’s Oxford Pre-Medical program: a study abroad program where JHU students can fulfill pre-health/biology requirements
- UConn Summer Neuroscience in Salamanca, Spain
- CUPA Paris (non-English speaking): direct enrollment at Paris universities and Grand Ecoles, including Université Pierre et Marie Curie and École Normale Supérieure
- Boston University’s credit-bearing internships in International Public Health, Health & Human Services, with locations in Switzerland, France, Spain, Great Britain & Australia

Of course, there are many additional programs and universities that may be of interest to a pre-health student. For more information on planning an international experience, first consult an advisor in the Office of Study Abroad. Then don’t hesitate to come by the Pre-Prof Office. For more information, visit the Pre-Prof Study Abroad site: http://web.jhu.edu/study_abroad/index.html

Academic Planning Suggestions

★ Medical and dental schools value breadth when looking at a student’s academic background. Many medical schools require or strongly recommend coursework in areas including psychology, foreign languages, and the humanities. You are encouraged to pursue courses that will demonstrate your intellectual breadth and your interests outside of the sciences.

★ You need to be careful to not get over-involved outside of the classroom. You do not want to be in a position where out-of-class activities pull you away from the time necessary to excel academically. Even though grades are covered for the first semester, you need to develop strong study habits from the very beginning.

★ Move beyond an obsession with “perfect” grades. Successful applicants combine strong academics and research with experiences outside of the classroom that will “set them apart” as candidates. Typically, these experiences involve a demonstrated commitment to serving others and an understanding of the human dimension of medicine.
Transfer Students

Incoming transfer students to Johns Hopkins from two or four year colleges/universities who are interested in pursuing medical school must carefully seek out advice as early as possible in their academic program. Here is some relevant advice:

- **Plan for a “bridge” year.** It is important that you have accumulated a record of academic achievement while at Johns Hopkins and have invested yourself in an offering of the diverse shadowing, volunteer, and research opportunities afforded JHU pre-health students.
- **Work closely with your advisor in the Office of Academic Advising** to carefully select science courses for your first semester. Be very careful to not overload science courses and labs.
- **Set up a meeting with a Pre-Professional advisor your first semester** to discuss the sequencing of remaining premedical requirements, getting involved in medically related experiences and volunteering, and the timing of your application.
- **If it is necessary to take summer courses,** take them at Johns Hopkins to build a strong foundation of coursework from this institution.

Student Conduct Responsibility

According to the Undergraduate Student Code at Johns Hopkins, “Acceptance of membership in the University community carries with it an obligation on the part of each individual to respect the rights of others, to protect the university as a forum for the free expression of ideas, and to obey the law." This expectation extends well beyond the campus to your professional pursuits. The following document must be reviewed and signed by all Johns Hopkins applicants to medical school:

A high standard of academic honesty, social conduct, and personal integrity is expected from all applicants to medical and health professions school. Specifically, the American Medical College Application Service (AMCAS) requires you to answer “yes” or “no” to the following “Institutional Action” question:

"Were you ever the recipient of any institutional action by any college or medical school for unacceptable academic performance or conduct violation even though such action may not have interrupted your enrollment or required you to withdraw?"

Further, it states:

“You must answer ‘Yes’ even if the action does not appear on or has been deleted from your official transcripts due to institutional policy or personal petition."

AMCAS does not limit “institutional action” to only those performance or conduct violations on file in the Office of the Dean of Students. You must realize that medical schools expect applicants to answer this question truthfully and to be completely forthcoming. Johns Hopkins University advises students to report any disciplinary action taken against them, whether reportable by the University or not. It is a matter
of your personal conscience, however, whether or not you answer this question truthfully. In making this decision, you should realize that a single, isolated, relatively minor situation will rarely keep an applicant from being considered for admission. In fact, honest and mature handling of this issue makes a very strong statement about your character and integrity.

Medical schools understand that students can learn from a past, isolated mistake, and emerge stronger as a result. What is important in the eyes of medical school deans is a student’s ability to demonstrate reflection, personal growth, and, foremost, personal integrity in dealing with the situation. Qualities such as trustworthiness and forthrightness are essential for individuals entrusted to take care of patients and to serve society.

**Academic Assistance -- at a glance!**

Pre-health students need to have the strongest possible study techniques and time management skills. Since students enter Hopkins with varying levels of these skills, we strongly encourage you to take advantage of an array of available support services.

The Office of Academic Advising (on the third floor in Garland Hall adjacent to the Pre-Professional Office) coordinates a number of free programs open to all students in the School of Arts & Sciences and in the School of Engineering.
Guide One: Pre-Med and Pre-Health Planning at JHU

**Pilot Learning**

PILOT learning stands for peer-led team learning. It is a fabulous science support resource. Participants are organized into study teams consisting of 6-10 members who meet weekly to work problems together. A trained student leader acts as captain and facilitates the meetings. PILOT aims to actively teach and demonstrate how collaborative learning uses contributions from individuals to benefit a group. For more info contact the Office of Academic Advising at 410-516-8216 or go to: [http://www.jhu.edu/academic-assistance/pilot.html](http://www.jhu.edu/academic-assistance/pilot.html).

**Small Group Tutoring at The Learning Den**

Small group tutoring is available for many science, math, and engineering courses at The Learning Den. There is no fee to take advantage of this service. Groups consist of one group tutor and no more than six students from the same course and instructor. During these group sessions, students are able to ask questions and receive assistance with topics covered in class. To learn more about this service, contact tutoring@jhu.edu or call the Office of Academic Advising at 410-516-8216.

**The Study Consulting Program**

The Study Consulting Program is designed to assist undergraduate students who are interested in meeting the challenges of college life and excelling academically. Participating students are matched with a study consultant (a trained senior or graduate student) to work one-on-one to develop strategies and techniques for success. Areas addressed through the program include, but are not limited to:

- Time management/procrastination
- Writing papers
- Note taking skills
- Test taking skills
- Heavy reading load strategies

**Math Help Room**

The Math Department offers tutoring for math courses each semester on Monday through Thursday from 9:00 am-9:00 pm and Fridays 9:00 pm - 5:00 pm. Complete schedule information can be found on the Math Department’s webpage: [www.mathematics.jhu.edu/new/HelpRoomScheduleFall11.pdf](http://www.mathematics.jhu.edu/new/HelpRoomScheduleFall11.pdf)

**Chemistry Help Room**

The Chemistry Department offers free assistance for Introduction to Chemistry I (030.101). Help sessions for the lecture run Monday through Friday from 6:30 pm-8:00 pm. Times and locations for the Chemistry lab help sessions can be found on your course syllabus.

**Writing Center**

The Writing Center offers assistance to students at any stage of the writing process. For more information, visit their website at [http://krieger.jhu.edu/writingcenter/](http://krieger.jhu.edu/writingcenter/).

Each of these resources are available throughout the academic year and are *provided free of charge*. We strongly encourage you to meet with your professors, attend their office hours, and reach out to your teaching assistants if you have questions or are struggling with your studies. Your academic advisor and advisors in the Pre-Prof. Office are also ready to meet with and support you.
Closing from your pre-health advisors

Navigating your way through academic requirements at Johns Hopkins is, in itself, a challenge that takes careful planning and great patience. If you are pursuing pre-medical or pre-dental requirements, the academic planning process requires precision, adaptability, and flexibility. Your academic path is unique to you! Most of all, we encourage you to seek input from your advisors to make sense of your situation and to devise a plan that is appropriate for your emerging academic and professional goals. On the following page is a preliminary list of action items to consider as you embark on your first year.

ADVISORS IN PRE-PROFESSIONAL PROGRAMS AND ADVISING

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Office of Pre-Professional Programs and Advising
Johns Hopkins University, Garland Hall, Suite 300
3400 N. Charles Street, Baltimore, MD 21218
410-516-4140; Website: http://web.jhu.edu/prepro
Freshman Pre-Med and Pre-Health Planning Checklist

- You will automatically be sign up for the Pre-Health Listserv if you indicated so through the admissions process. If you are not receiving emails sent to “jhu.gradyear2019health”, add yourself to the listserv by visiting: http://web.jhu.edu/prepro/signup.html.

- Attend a First Time Freshman Group Meeting. You must first attend this small group meeting before you can schedule an individual advising appointment. Following this group meeting, don’t hesitate to schedule an Appointment by visiting the Pre-Professional homepage.

- Explore Volunteer and Community Service Opportunities: http://web.jhu.edu/prepro/health/volunteer.html

- Explore Research Opportunities that are right for you: http://web.jhu.edu/prepro/health/research.html

- Consider Studying Abroad. Find out how to incorporate study abroad into your academic planning: http://web.jhu.edu/prepro/health/study_abroad.html

- Consider Other Health Professions before committing too early to a single one: http://web.jhu.edu/prepro/health/other.html

- Work to develop strong Science Study Skills sooner rather than later. Be aware that the study habits that worked well for you in your high schools year may not necessarily earn strong grades in college. This is our comprehensive list of articles and resources: http://web.jhu.edu/prepro/health/study_skills.html

- Attend Programs and Events (announced in the eProf-Newsletter sent to the listserv).

- Look out for relevant Shadowing Opportunities, Internships, Preceptorships, and Employment in the Health Opportunities Newsletter.

- Join us on Facebook and Twitter. To do so visit the Pre-Professional homepage and click the icon that appears on this page.

Have a great year ahead!