



Guide to Courses You Need for the MCAT

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Introduction

According to the AAMC, several courses are considered prerequisites for the MCAT. But which ones do you absolutely need to take, and which ones can you skip? How important is biochemistry? Do I need to take the laboratory components of the prerequisites before the MCAT? Are upper-level biology courses helpful?

Find out, as this guide takes you through the essentials for your course planning and MCAT preparation.

According to the AAMC, “Are there required courses or pre-requisites I need to take before taking the MCAT exam?”

All of the content on the MCAT is covered in introductory courses at most colleges and universities, including introductory biology, general chemistry, organic chemistry, physics, and first-semester psychology, sociology, and biochemistry. Research methods and statistics concepts on the exam are used in introductory science labs as well as introductory psychology and sociology courses. You are encouraged to reach out to the pre-health advisor at your institution who can help you determine the specific coursework you will need to meet your educational goals.”

So, yes, there are prerequisite courses for the MCAT. Before taking the exam, you should make sure to take as many of these courses as possible.

What are the actual prerequisite courses for the MCAT?

In preparation for the MCAT, pre-medical students should plan on taking the following courses:

- General Chemistry 1 and 2 (including laboratory)
- Organic Chemistry 1 and 2 (including laboratory)
- Physics 1 and 2 (including laboratory)
- General Biology 1 and 2 (including laboratory)
- Biochemistry
- Introduction to Psychology
- Introduction to Sociology

Organic Chemistry



All pre-medical students need to take General Chemistry 1. Most students will need to take General Chemistry 2. To determine whether or not you need to take General Chemistry 1 and 2, it's best to check with older pre-medical students at your institution. They can tell you whether or not General Chemistry 2 at your school is important for the MCAT. Another way you can check this to review the syllabus of your General Chemistry 1 course. You will want to make sure that it covers the following topics: atomic/electronic structure, chemical bonds, thermodynamics, intermolecular forces, kinetics, equilibrium, solutions chemistry, acids and bases, and electrochemistry. If the General Chemistry I class covers all but a couple of these topics, then General Chemistry I should be sufficient, and you can self-study the remaining topics on your own. If the General Chemistry I class covers only half to two-thirds of these topics, you should plan on taking General Chemistry 2.

Physics



All students need to take Physics 1 and 2 – without exception. Physics 1 will generally cover Newtonian Mechanics (kinematics, forces, work and energy, fluids and waves). Physics 2 will typically cover (electrostatics, electricity and magnetism, geometric optics, and quantum mechanics). These specific topics are sometimes distributed differently between Physics 1 and 2 in different institutions. However, two semesters are required to cover all of these topics to the depth tested on the MCAT.

At many college institutions, students can take Physics 1 and 2 in one of two forms: a non-calculus-based version for life science majors, and a calculus-based version for scientists and engineers. The non-calculus-based physics version is easier, so it's easier to get a higher grade. However, the calculus-based physics version prepares students for the MCAT better than the non-calculus-based physics version. In other words, there are pros and cons to both. You can decide what is best for you: Easier classes vs. better preparation for the MCAT.

General Biology



It is helpful to ask older pre-medical students at your school to determine if General Biology 1, 2, or both are helpful for the MCAT. At some schools, General Biology 1 and 2 both cover topics tested on the MCAT. At other schools, one semester of General Biology covers helpful topics and the other covers extraneous topics (e.g., plant biology) not tested on the exam.

While general biology courses will cover most of the topics tested on the MCAT, they typically only cover the basics. So, most students find that the MCAT covers a lot more details than they had to know for their college courses. Taking more advanced biology courses can help with this issue. Examples of some helpful advanced biology courses include physiology, cell biology, genetics, immunology, neurobiology, microbiology, molecular biology, cancer biology, developmental biology, and endocrinology.

Biochemistry

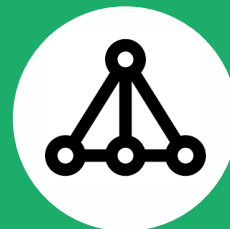


Biochemistry is a crucial class to take. To explain why, we've included more details on what's covered on the Chem/Phys and Bio/Biochem sections of the exam:

- Chem/Phys: 30% General Chemistry, 25% Biochemistry, 25% Physics, 15% Organic Chemistry, and 5% Biology
- Bio/Biochem: 65% Biology, 25% Biochemistry, 5% General Chemistry, 5% Organic Chemistry

You'll notice that Biology is the most tested natural science subject on the MCAT. After Biology, Biochemistry is the second most tested natural science subject on the exam. This means that there are more Biochemistry questions than questions on General Chemistry, Organic Chemistry, or Physics. So, if possible, try your best to take Biochemistry before you take the MCAT.

Introduction to Psychology and Introduction to Sociology



Psychology and Sociology are both helpful courses to take for the MCAT, but are not necessary. There are plenty of students who take the MCAT without taking either class who do well on the Psych/Soc section. This is because Psychology and Sociology are subjects that are fairly easy to self-study.



Common Questions About Courses Required for the MCAT

1. Is it necessary for me to take laboratory with the science courses?

Yes, laboratory courses are important for the MCAT. The exam includes many questions based on common laboratory techniques used in undergraduate laboratory courses.

2. If I took AP Chemistry or any other AP course, do I still need to take these classes in college?

AP courses can be helpful because they expose you to a lot of the content tested on the MCAT. Unfortunately, AP courses do not cover the concepts to the level of detail tested on the exam. Aside from psychology and sociology, plan on taking the college-level versions of the MCAT prerequisite courses.

3. Do I have to take all MCAT prerequisites before taking the MCAT?

It's helpful to take all the MCAT prerequisite courses before the MCAT, but this is not required. If you will not be able to take all of the MCAT prerequisite courses before the MCAT, consider this when putting together your MCAT study plan. Students who have taken all of the MCAT prerequisite courses will only have to review the content when they prepare for the exam. Students who have not taken all of the MCAT prerequisite courses will need to review all of the content AND self-study any of the topics they haven't learned before. While some subjects are easy to self-study (e.g., psychology and sociology), others can be more challenging (e.g., physics and biochemistry). We recommend you look for help when self-studying some of these more difficult subjects.



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