



Office of
**Pre-Professional
Programs & Advising**

MCAT COMING APRIL 2015 2015

The First Year of New MCAT

Tips from Johns Hopkins Students

This report presents a compilation of results from a December 2015 survey of Johns Hopkins MCAT examinees, administered to those who scored at the 90th percentile or higher during the inaugural year of the new exam. The data and insights presented are not meant to be comprehensive or reflect strategies that apply across all examinees. We do believe, however, that future examinees will likely find tips and recommendations in this report to be useful and applicable in planning and preparing for an upcoming administration of the exam.

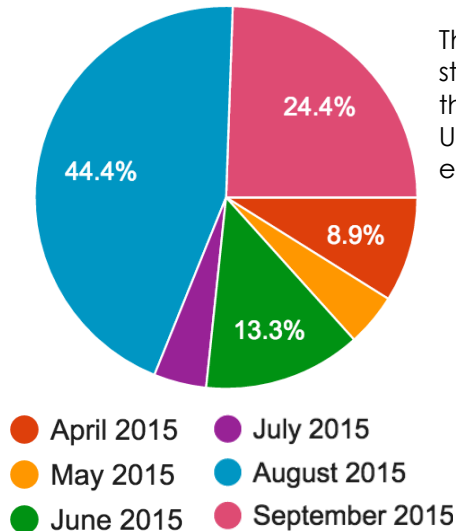
We wish you the best on your upcoming MCAT!



David Verrier, Ph.D., Director, and Alyssa Perozich '16, Intern
Office of Pre-Professional Programs and Advising, <http://studentaffairs.jhu.edu/preprofadvising/>

Test Date

When should I take the MCAT?



This diagram illustrates the months in which high-scoring JHU students took the MCAT during the 2015 testing year (remember that the new test began with April 2015 administrations). Ultimately, the best time for you to take the MCAT will depend entirely on your unique circumstances. Questions to think about:

- Have you completed all of the courses covered on the test?
- Do you have enough time to study with your semester schedule?
- Do you have summer plans that will prevent sufficient preparation?
- When do you study best?

April. With an April test date, it is possible to have your MCAT completed by finals and get your scores back before June 1, which gives you time if you need to retake. However, it requires intensive studying around classes and forces you to test in the middle of the semester.

May. By taking the test in May, the information from classes you've recently taken is fresh in your mind. While you get an extra month to study during the semester, you must also manage MCAT prep with studying for finals.

June. Waiting until June to take the test allows for a few weeks of focused study once the semester concludes. However, it may be difficult to continue intensive studying right after finals. Plus, a June test date may leave you with less time to submit your application early and may restrict you to one attempt.

July. A July test gives you over a month to completely focus on the test without classes, but still leaves enough time to enjoy the summer. However, a July test does require part of the prep to be done during the semester (for most) and will likely cause you to apply late in the cycle.

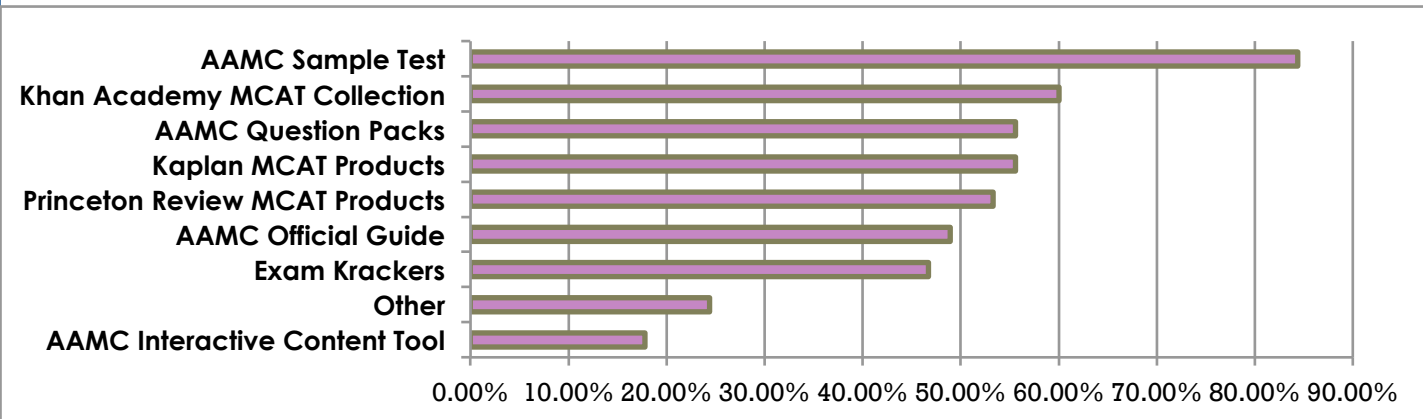
August. An August test date allows for a few of months of focused study without requiring much preparation during the semester. The major cons are that it will not allow you to apply that cycle (unless it is a retake), will involve studying during the entire summer, and will require extreme dedication because of the time limit. Fortunately, it will not prevent you from doing other activities.

September. By waiting until September, the entire summer can be used to prepare, leaving you with more wiggle room for engaging in other activities. Unfortunately, the test will coincide with the beginning of the new semester, making the couple of weeks leading up to the exam tough. That said, you will have the entire year to retake if needed.

*No administration of the new MCAT in January 2015.

Test Prep Resources

Which materials did successful students use?



AAMC Resources. Though opinions varied on the difficulty of the AAMC materials (official guide & sample test) compared to the real exam, all found these resources useful and highly recommend every future test taker to try them out. The questions found in these resources accurately reflect the structure and style of questions you will see on test day and are most representative of the actual MCAT. The question packs were helpful to some for reviewing content, but others found them overly difficult and unlike the questions on the new test.

Khan Academy. Most students found Khan Academy's videos to be very helpful, especially for bio/biochem and psych/soc, but recommend watching them a double speed. Students frequently used these videos for quick review, when they had trouble understanding a certain topic, or to fill in gaps. The practice passages and questions were useful for some students, while others found their dissimilarity to the real MCAT to reduce their effectiveness.

Kaplan. Students highly recommend Kaplan materials, but state that the books were often overly thorough and unnecessarily detailed. The books come with many practice tests and the flash cards were great for quick review, but students did not find the tests to be similar to the actual MCAT (in terms of passage and question structure).

Exam Crackers. Students who used these materials agreed that they were very helpful for both studying and practice. The books were much more concise than those from other test prep companies, yet were comprehensive enough to cover all necessary MCAT topics. Some students, however, supplemented these books with others and then used EK materials to focus their studying on the most important things.

Princeton Review. Similar to Kaplan, the Princeton Review books were very large, thorough, and comprehensive, but were sometimes overly detailed and not as focused on the most important points. Compared to Kaplan, these books were found to be even more verbose, though the practice tests were viewed as harder. Some found the difficulty of the tests to be helpful, while others thought they were somewhat demoralizing and ineffective in preparing for the structure and difficulty of the real MCAT.

Best Practice Exams

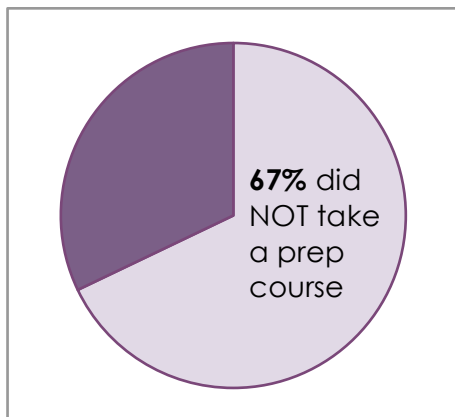
In order of most representative of the actual exam:

1. **AAMC Sample Test/Official Guide**
2. **Exam Crackers***
3. **Next Step***
4. **Kaplan***
5. **Princeton Review***

*Viewed as harder than actual MCAT

MCAT Courses

Should I take an MCAT prep course?



Only a third of students who scored well on the new MCAT took a prep course, debunking the myth that students need a course to be successful on the new exam. That said, students who did take a course found them to be useful in the following ways:

- ❖ Helpful if unsure how to begin studying
- ❖ Provide structure and force you to study
- ❖ Can teach effective test-taking strategies
- ❖ Provide professional help for improving weaknesses

Are they necessary?

Unless you need extensive help with test strategies or have trouble sticking to a study schedule, a prep course may be a waste of time and money. Whether you take a course or not, you will still be required to spend extensive amounts of time outside of class studying, so it's important to consider whether you can fit one in your schedule.

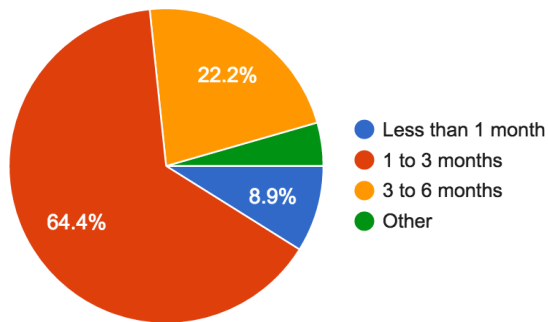
Princeton Review. Feelings about this course ranged from “okay” to “very disappointed”. Though the instructors were great and an in-depth content review was provided, students claim that content was missed and the class was not sufficient. The course was often slow-paced, did not follow the AAMC syllabus very well, and students found it difficult to find time outside of class to fit in independent review and practice. Most agreed that it was a waste of time more often than not.

Kaplan. While students liked the materials used in this course (online videos, practice exams, question bank quizzes), the course itself was too slow-paced and largely unnecessary. Additionally, the course required content review to be done entirely outside of class and instead focused primarily on test taking strategies.

JHU Odyssey. Students liked that the course was condensed into one month, which enabled them to do individualized review and practice on their own. Others felt like it had limited impact on their test performance but offered good practice problems. There were inconsistencies between teachers and the methods of teaching weren't particularly useful or engaging.

Studying

How many months will I need to study?



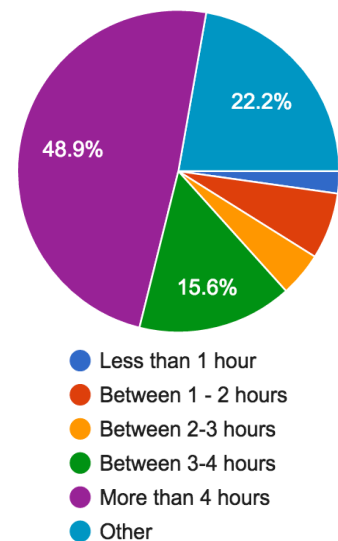
Answer: depends on when you plan take it.

The vast majority of successful students studied for at least two months, though over 85% took their MCAT during the summer. If you are planning to prepare and take the test between January and May, students recommend 4-6 months of dedicated study, but say that you can get away with 2-3 months during the summer.

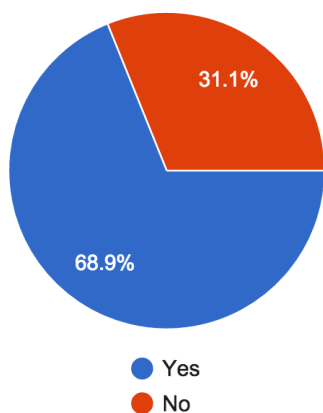
How many hours per day should I study?

Answer: As many as reasonably fits into your schedule!

While nearly three-quarters of high-scoring students studied for at least 5 hours per day, this widely varied, depended on the day of the week, and was impacted by test date, work schedule, travel, etc. All students, however, recommend studying as much as you can, as early as possible. If studying during the semester, you must dedicate time to MCAT even if swamped with exams and other obligations. If you only have a couple of months to study, you will be required to study more hours per day (students did as many as 6-12 hours during the summer). Find a study schedule that allows you to get in as much review and practice as possible, but that keeps you from burning out before your test.



Can I do well AND be involved with other activities?



Answer: In most cases, yes.

Over 75% of students did *something* while preparing for the MCAT, which could be: classes, work, volunteering, research, shadowing, traveling, etc. but most recommend avoiding major commitments. Many students found success in allocating certain times each day or in dedicating certain days of the week entirely to MCAT prep and staying consistent with that schedule. When done this way, the majority of students should be able to manage MCAT prep effectively with participation in other activities (especially in the summer). The situation may differ for students studying during the school year, where most time outside of studying MCAT will be spent on class work and obligatory extracurricular activities. No matter when you choose to test, students highly recommend focusing solely on MCAT in the few weeks leading up to test day (at the very least).

Section Breakdown

Chemical and Physical Foundations of Biological Systems

Don't neglect formulas, but don't focus on them too much. You will likely have to pull out some formulas on the exam, so make sure you are doing problems to help you practice them and secure them in your mind. Students do point out that, often, it is the relationship between variables that is most important. Some students suggest writing down a few of the key and most frequently used formulas on your scratch paper when practicing and during the actual test.

Practice. Compared to the others, practice problems are proportionally more useful for this section. Though reviewing is absolutely essential, it is unlikely students will score highly without completing a significant amount of practice questions, which are necessary to learn to apply concepts and equations to different situations and how to use them in conjunction.

Find the basic concept within each passage. You will rarely have the background to fully understand the passages presented. This section likes bombarding you with details to overwhelm you and eat up your time. What is important to realize is that every seemingly crazy topic/passage they throw at you can be boiled down to a basic chemistry/physics concept. Realize you are not supposed to know every complicated topic, look through the passage and find key words that are familiar to you, and then recall basic concepts of chemistry and physics related to those topics.

Move fast. The passages are long. Don't get caught up in the details, which are generally not important. A full understanding of experiments they present is unnecessary as well.

Biological and Biochemical Foundations of Living Systems

Take the necessary classes. Students who had not taken relevant courses, especially general biology and biochemistry (and to a lesser extent, cell biology and genetics) experienced greater stress and were forced to dedicate much more of their preparation to learning the material for the first time.

Know your biochemistry. Biochemistry and experimental methods are extremely important and heavily emphasized on the test. This will also prove useful in the Chemical and Physical Foundations section, which also includes a significant amount of biochemistry.

Don't get caught up in the details. There is a lot of information to study, but it helps to boil down all of the information into the core concepts. This is especially important because you will often be asked extrapolate these larger ideas to new areas.

Review. Students agree that reviewing material is likely the most useful way to prepare for this section. That said, be careful about bringing in advanced biology knowledge. When given a passage, answer questions based on what the passage specifically says and use your basic biology background to understand the reasoning behind it.

Consider reading scientific papers. A good portion of the section involves reading short, complex abstracts and then interpreting confusing data, so students suggest honing those skills by reading complex and scientific research.

Critical Analysis and Reasoning Skills

Don't waste time too much time reviewing "material". This is the section where reviewing material is the least useful. Students say that it is through deliberate and thoughtful practice that improvement is made.

Try doing some outside reading. If you are having difficulty in this section, some students found it helpful to read articles, OpEd pages, or chapters from non-science books to improve stamina and, when followed by summarizing what was read, to hone critical reading skills.

Find a strategy that works for you. Test prep resources will offer a variety of, often, conflicting strategies on how to tackle this section, but spending too much time trying to learn a foreign method can be counterproductive. Try out multiple strategies, but work towards finding one that works for you and helps you improve both accuracy and time management.

Analyze where you went wrong. Completing many, many practice passages is instrumental, but is ultimately of little use if you are not reviewing your incorrect answers afterwards and figuring out where you went wrong.

Practice on the computer. Most books will be filled with practice passages, but practicing on paper is not the best way to replicate the real exam. Students also found the highlighting and cross-out tools to be very useful, but say that they take some time and practice to get used to.

Always time yourself. While it may be okay to work through passages untimed initially, this can be very harmful long-term. Timed practice passages are absolutely key for improving speed and efficiency in this section.

Do the "easy" passages first. Many students suggest tackling the easiest passages first and saving the hardest passages and questions for last. This is especially useful if you run out of time and have to select answers blindly.

Psychological, Social, and Biological Foundations of Behavior

Psychology/Sociology courses not necessary. That said, some found a previous psychology course to be helpful and said that most of what they saw on the MCAT was covered in the course offered by JHU. The same was not found for sociology courses.

Memorize key concepts and buzzwords. Though there are a lot of common sense-type questions, you will be asked detailed questions that require knowledge of key people, concepts, models, and theories.

Khan Academy. Students who used their videos and/or practice resources found them to be extremely valuable in preparing for this section. They found it particularly useful for substituting information not taught in their psychology and sociology courses.

Use "What's on the MCAT 2015 Exam?" For the most part, students will be very successful studying a MCAT prep book cover to cover. However, no one book covers all of the necessary topics, so some students suggest supplementing studying by researching any missed topics listed on this AAMC resource.

Rely on common sense and logic. No matter how well you prepare, you will encounter questions on topics you've never seen before. Don't freak out – just skip, come back later, and make your best guess.

Final Recommendations

PRACTICE

FOCUS ON YOUR WEAKNESSES

SPREAD IT OUT

Question 1 of 19 Full Length Exam 1 - Chem/Phys Periodic Table Time Remaining: 01:31:27

Passage 2 (Questions 6-9)

Iron and other metals are necessary for many aspects of life. Iron, in particular, plays an important role in transporting oxygen from the lungs to other tissues by being part of the hemoglobin complex. Iron(II) sulfate is occasionally used to treat iron deficiencies. The production of iron(II) sulfate is as follows:

$$\text{Fe} + \text{H}_2\text{SO}_4 \rightarrow \text{FeSO}_4 + \text{H}_2$$

Reaction 1

Elemental metals like iron are introduced into the human body through the diet. A biochemistry teacher wishes to set up a demonstration of a redox reaction that can happen in the human body when elemental metal is ingested. Students are provided with the material necessary to set up the apparatus shown below in Figure 1.

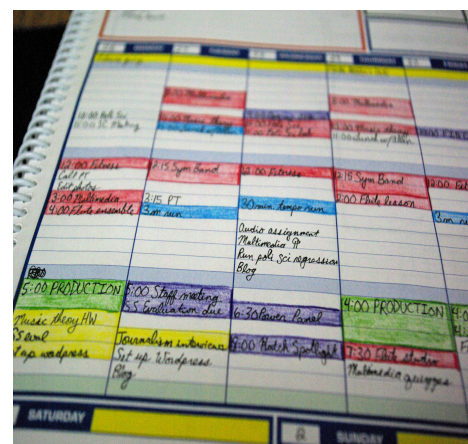
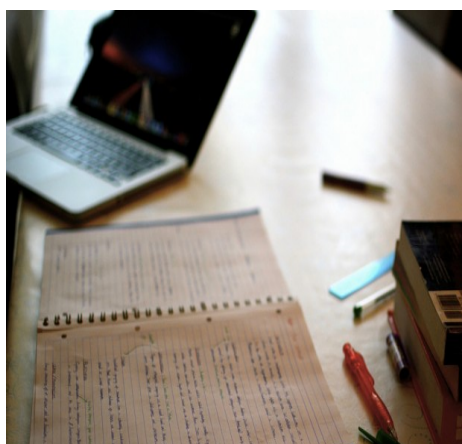
Figure 1. Experimental setup

Experiment 1

Students were provided with 0.1 M hydrochloric acid to simulate the environment in the human stomach and a choice of various metals. The metals offered to the students, along with their reduction potentials, are listed below in Table 1.

Metal	E°
Zinc	-0.76
Copper	0.34
Iron	0.44

KAPLAN TEST PREP



- ❖ Students agree that practice passages and completing frequent practice exams were the best preparation.
- ❖ Many students found that practice helped to guide content review and gave them a better idea of what might be emphasized.
- ❖ Students recommend taking **at least 5 full practice exams** to build up endurance and suggest taking them from a variety of companies.
- ❖ Most students took practice tests sparingly in the beginning, and then increased their frequency as test date neared to improve stamina and pacing.
- ❖ Students found practice to be most helpful for CARS, then chem/phys, bio/biochem, and finally, psych/soc.

- ❖ One of the reasons practice tests are so important is that they can help identify weaknesses – Remember, scoring highly in one section will not make up for a poor score in another.
- ❖ Focus and spend the most time on your weakest areas, but don't neglect the sections with which you are more comfortable.
- ❖ For many, taking notes while reading tough material helps to both learn the content and serves as a good resource for reviewing later on.
- ❖ Make sure you are going through and analyzing incorrect answers. You will not learn from your mistakes and improve if you don't put time into learning where you went wrong.

- ❖ Start early and plan ahead – you want to dedicate yourself to studying far in advance.
- ❖ Make a schedule and stick with it, so that you aren't forced to cram in the weeks leading up to the exam.
- ❖ Use the AAMC MCAT Topic Guidelines to guide studying and to stay on track.
- ❖ Some found success changing strategies every few weeks or every month – most students did the majority of the content review towards the beginning and slowly added in more and more practice.
- ❖ Schedule time to relax in order to reduce stress and prevent burn out, but make sure you really buckle down at least three weeks before test day.