

MCAT Preparation

BASIC LOGISTICS

The Medical College Admission Test (MCAT) is a computer-based exam offered at testing centers in the US, Canada, and select international sites. Testing time is about 6.25 hours, and the test day with breaks is about 7.5 hours. The exam costs \$310; registration dates and deadlines are available on the AAMC website: <https://www.aamc.org/students/applying/mcat/>. Register early for the best rates and choices in test location.

TIMING

It's best to take the exam after you have studied the requisite content adequately and taken enough practice exams to feel comfortable with the timing and format of the exam. Most Princeton students take the MCAT in the summer between junior and senior year, and apply to medical school the summer after senior year to matriculate with one "glide" or "gap" year between undergraduate and medical school. Consult with an adviser to discuss a timeline that will work for you.

CONTENT

The MCAT is divided into four sections. Certain **scientific inquiry and reasoning skills** are applied in three sections, and ten distinct **foundational concepts** are tested. They are listed below in the order in which you will encounter them on test day.

Section I: Chemical & Physical Foundations of Biological Systems	Section II: Critical Analysis & Reasoning Skills	Section III: Biological & Biochemical Foundations of Living Systems	Section IV: Psychological, Social & Biological Foundations of Behavior
59 questions 10 passages with questions 15 discrete questions	53 questions 9 passages	59 questions 10 passages with questions 15 discrete questions	59 questions 10 passages with questions 15 discrete questions
95 minutes	90 minutes	95 minutes	95 minutes
Foundational Concepts 4-5	Reading passages from various disciplines; no specific subject study required.	Foundational Concepts 1-3	Foundational Concepts 6- 10
33% Gen Chem 15% Organic Chem 25% Biochem 25% Physics 2% Biology		65% Biology 25% Biochemistry 10% Chemistry	60% Psychology 30% Sociology 10% Biology
Scientific Inquiry and Reasoning Skills required for Sections I, III, IV Knowledge of Scientific Concepts and Principles Scientific Reasoning and Problem Solving Reasoning about the Design and Execution of Research Data-Based and Statistical Reasoning			

FOUNDATIONAL CONCEPTS & SCIENTIFIC INQUIRY AND REASONING SKILLS

MCAT content is meant to emphasize acquiring deep knowledge of science concepts, making connections between knowledge across disciplines, and applying **scientific knowledge with scientific inquiry and reasoning skills** (see above). The exam organizes requisite knowledge around ten **foundational concepts**:

1. Biomolecules have unique properties that determine how they contribute to the structure and function of cells, and how they participate in the processes necessary to maintain life.
2. Highly-organized assemblies of molecules, cells, and organs interact to carry out the functions of living organisms.
3. Complex systems of tissues and organs sense the internal and external environments of multicellular organisms, and through integrated functioning, maintain a stable internal environment within an ever-changing external environment.
4. Complex living organisms transport materials, sense their environment, process signals, and respond to changes using processes understood in terms of physical principles.
5. The principles that govern chemical interactions and reactions form the basis for a broader understanding of the molecular dynamics of living systems.
6. Biological, psychological, and socio-cultural factors influence the ways that individuals perceive, think about, and react to the world.
7. Biological, psychological, and socio-cultural factors influence behavior and behavior change.
8. Psychological, socio-cultural, and biological factors influence the way we think about ourselves and others.
9. Cultural and social differences influence well-being.
10. Social stratification and access to resources influence well-being.

Within each foundational concept, more specific content categories detail the topics and subtopics addressed. These are described in detail in the Official Guide to the MCAT Exam (available to borrow at HPA) and on the AAMC website: <https://students-residents.aamc.org/applying-medical-school/article/understand-mcat-exam/>

PREPARATION

- **Coursework:** The premedical pre-requisites (biology, general chemistry, organic chemistry and physics, biochemistry) will provide a solid scientific foundation. Various Psychology and Sociology courses will address concepts on the MCAT, but no single course is recommended. PSY 101 and SOC 101 will cover the broadest range of MCAT topics.
- **Supplemental Study Material:**
 - The AAMC is the official test administrator and their materials will most closely simulate the actual exam. Their materials include:
 - Video tutorials and practice questions created in partnership with Khan Academy: <https://www.khanacademy.org/test-prep/mcat?t=practice>
 - Full length exam and practice questions: <https://students-residents.aamc.org/applying-medical-school/article/online-practice-mcat-exam/>
 - Numerous test preparation companies will also vie for your business. As you compare your options, consider factors including: cost; duration; type of instruction (online, in person, group, individual); amount of personalized support; nature of prep books; access to question banks and practice tests; amount of focus on strategies vs. content.
 - It is possible to prep on your own without a structured test, but be sure to create your own study plan and structure so that you are putting in ample time to prepare, including content review and use of practice questions and full-length exams.
 - If we hear of free opportunities for practice through prep companies, we advertise them through *the Vitals* newsletter. We also offer copies of many companies' prep materials for comparison shopping or to borrow in the HPA Library.

SCORING

Each of the four sections is scored from a low of 118 to a high of 132. The scores are combined to create a total score that will range from 472-528. Scores are reported along with percentile ranks that reflect information about your score relative to the scores of other examinees – a total score of 500 will be at or near the 50th percentile rank. Nationally, the average total score for accepted applicants was in the 82nd percentile.