



# MCAT Preparation

The medical school standardized exam

## The Basics

- **Who takes it?** Students applying to allopathic (MD) and osteopathic (DO) medical programs. Some postbac programs and podiatric medical (DPM) programs also require an MCAT score.
- **What is it?** A 6.25-hour, computer-based test that's divided into four sections (described below).
- **When to take it?**
  - Only after adequate preparation via coursework, content review, and practice exams.
  - Within three calendar years of planned matriculation; e.g., an MCAT taken in 2026 will be valid for matriculation at most schools through the Fall of 2029.
  - See below for some [pros and cons](#) of different MCAT dates.
- **Where to take it?** Designated testing centers in the US, Canada, and select international sites.
- **Why take it?** To provide insight into your academic preparation within the [holistic review](#) of your candidacy.
- **How to register?**
  - The exam [costs \\$345](#) during regular registration.
  - Students with financial need should apply for the [AAMC Fee Assistance Program](#) 2-3 weeks prior to desired registration.
  - [Register online](#) in October for January-June test dates and in February for July-September test dates. Dates fill up quickly, so register ASAP once registration opens to ensure that you have a seat (although there's a lot of add/drop activity over time).

## The Content of the MCAT

MCAT content emphasizes deep knowledge of science concepts, connecting knowledge across disciplines, and applying scientific knowledge with scientific inquiry and reasoning skills. It's organized 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 “[What’s on the MCAT Exam](#)” on the AAMC website.

## The Structure of the MCAT

The MCAT is divided into [four sections](#). Scientific inquiry and reasoning skills are applied in three sections, and ten foundational concepts are tested. Sections are listed 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 (CARS)	Section III: Biological & Biochemical Foundations of Living Systems	Section IV: Psychological, Social & Biological Foundations of Behavior
59 total questions 10 passages with questions 15 discrete questions	53 total questions 9 passages with questions	59 total questions 10 passages with questions 15 discrete questions	59 total questions 10 passages with questions 15 discrete questions
95 minutes	90 minutes	95 minutes	95 minutes
Foundational Concepts 4-5	Reading passages from humanities and social sciences; no subject-specific knowledge required.	Foundational Concepts 1-3	Foundational Concepts 6-10
45% General & Organic Chemistry 25% Biochemistry 25% Physics 5% Biology		65% Biology 25% Biochemistry 10% Chemistry	65% Psychology 30% Sociology 5% Biology
<div><div><div>Scientific Inquiry and Reasoning Skills required for Sections I, III, and IV</div><div>Knowledge of Scientific Concepts and Principles</div><div>Reasoning about the Design and Execution of Research</div></div><div><div>Scientific Reasoning and Problem Solving</div><div>Data-Based and Statistical Reasoning</div></div></div>			

## How to Prepare for the MCAT

- **Coursework:** The premedical prerequisites (biology, general chemistry, organic chemistry, physics, biochemistry) will provide a solid scientific foundation. Psychology, Anthropology, and Sociology courses will address concepts on the MCAT, but no specific, single course is recommended.
- **Content Review:**
  - The AAMC is the official test administrator, and their materials will most closely simulate the actual exam. They offer [numerous free resources](#) and [others for a fee](#).
  - Numerous test preparation companies will vie for your business. Compare factors including cost, duration, type of instruction (online, in person, group, individual), the amount of personalized support, nature of prep books, access to question banks and practice tests; and the amount of focus on strategies vs. content.
  - Many companies’ prep materials are available for comparison shopping or to borrow in the HPA Library.
  - Most Princeton examinees prepare by creating a structured study plan with ample time to prepare, including content review and the use of practice questions and full-length exams.
    - [AAMC How to Create an MCAT Study Plan](#)
- **Practice Tests:**
  - Most examinees take a diagnostic test early in their test prep to gain familiarity with the content and format, then use additional practice exams to guide their continued content review.
  - Our applicants report taking an average of 8-10 practice exams. Take exams until your scores stabilize in a range that will make you competitive for schools of interest.
  - [AAMC Full-length exams and practice questions](#) are deemed the most useful prep resources by our students.
- Many prep companies offer free preparation materials that are shared through their mailing lists. HPA also shares this information in the *Vitals* newsletter and on the HPA website.
- Past applicants’ advice is shared on the [Standardized Tests](#) page of the HPA website.

## MCAT and Application Timing

- The MCAT is offered in January, then in March through September (no tests in October-December or February).
- **Take the MCAT no later than early May of your application year** if you want to know your score before applying. **This will maximize your chances of interviews and acceptances.** Medical school interview invitations are offered on a rolling basis—an earlier application means a higher likelihood of interviews and acceptances. The MD application (called the AMCAS) opens in May, with the earliest date to submit in early June. MCAT scores are released approximately one month after the exam, so an early May MCAT date means you can apply early in June, knowing your MCAT score.
- **If you take the MCAT later than early May of the application year, maximize your chances for interviews and offers by submitting the application in early June without an MCAT score.** The application verification process does not require an MCAT score so the application can be processed prior to score release.
- Learn more about application timing on the [HPA website](#).

## Pros and Cons of MCAT Dates

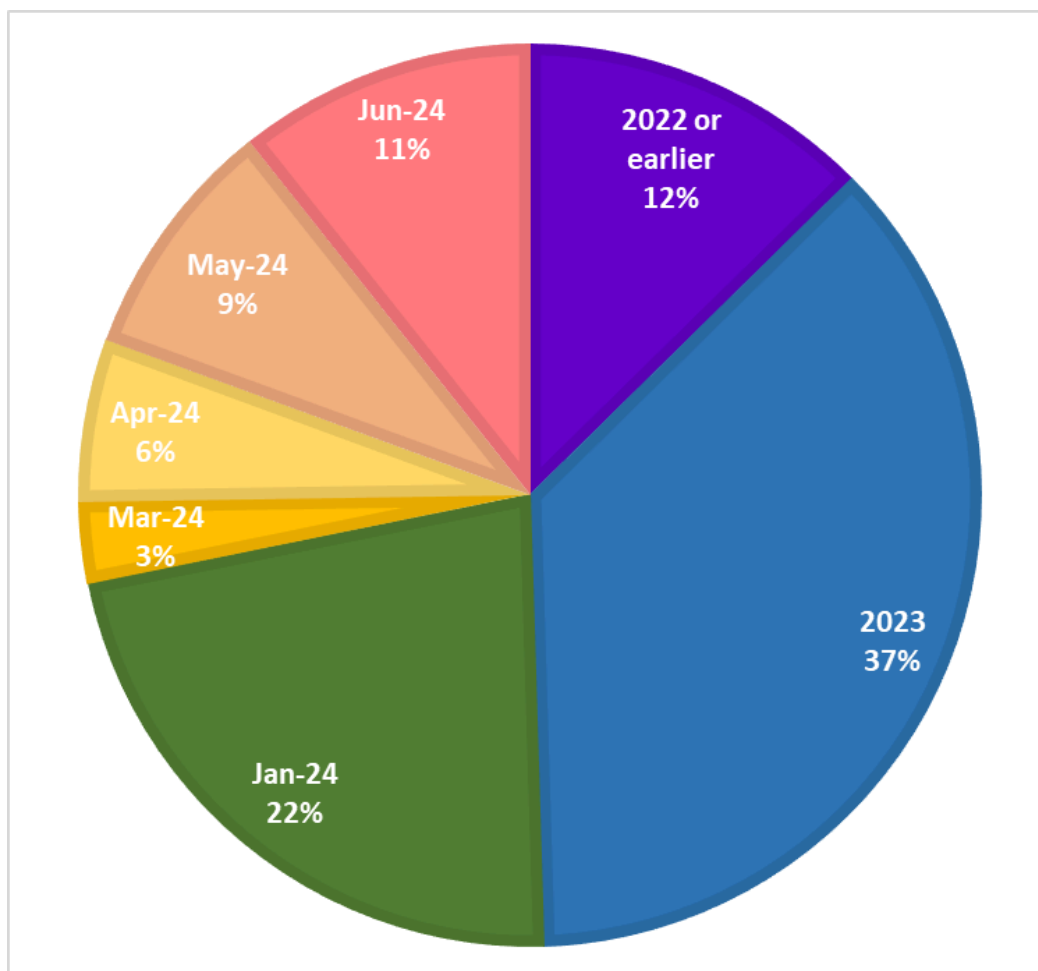
[See MCAT Calendar, Scheduling Deadlines, and Score Release Dates Online](#)

Timing	Pros	Cons
Before the application year (as early as 2024 for 2027 matriculation)	<ul style="list-style-type: none"><li>• Scores are available before application submission.</li><li>• More time to manage other aspects of the application because studying is done early.</li></ul>	<ul style="list-style-type: none"><li>• May cause you to rush prerequisite courses unnecessarily.</li><li>• If you postpone your application, your score may expire.</li></ul>
Summer/Fall before the application year (2025 for 2027 matriculation)	<ul style="list-style-type: none"><li>• Scores are available before application submission.</li><li>• Having fewer time commitments in the summer allows more time to focus on studying.</li><li>• Time to restudy and retake if needed and still be early in the application cycle.</li></ul>	<ul style="list-style-type: none"><li>• Need to finish prerequisite courses in time.</li><li>• May interfere with research, internship, or other summer plans.</li></ul>
January of the application year	<ul style="list-style-type: none"><li>• Scores are available before application submission.</li><li>• Easy to manage other aspects of the application because studying is done early</li><li>• Difficult but possible to restudy and retake if needed.</li></ul>	<ul style="list-style-type: none"><li>• Must juggle MCAT study with classes and activities.</li><li>• May coincide with academic deadlines.</li></ul>
March through early May of the application year	<ul style="list-style-type: none"><li>• Scores are available before application submission.</li></ul>	<ul style="list-style-type: none"><li>• Must juggle MCAT study with preparing application(s).</li><li>• Unrealistic to restudy and retake in a timely manner for this application cycle.</li></ul>
May through early June of the application year	<ul style="list-style-type: none"><li>• More time to study, including some after final exams end.</li></ul>	<ul style="list-style-type: none"><li>• Must juggle MCAT study with finals and completing application(s).</li><li>• Application should be submitted before MCAT score release for best outcomes.</li><li>• Unrealistic to restudy and retake in a timely manner for this application cycle.</li></ul>

Timing	Pros	Cons
		<ul style="list-style-type: none"> <li>• Could lead to later screening, interview invites, and offers.</li> </ul>
June or July of application year	<ul style="list-style-type: none"> <li>• Time to focus on studying after classes have ended.</li> </ul>	<ul style="list-style-type: none"> <li>• May be difficult to focus on MCAT study so soon after classes and final exams.</li> <li>• Must juggle MCAT study with completing primary and secondary applications.</li> <li>• Application should be submitted before MCAT score release for best outcomes.</li> <li>• Not enough time to restudy and retake in a timely manner for this application cycle.</li> <li>• Could lead to later screening, interview invites, and offers.</li> </ul>

### Princeton Accepted Applicant MCAT Timing for the 2025 entering class

About half of the accepted applicants last year took the MCAT in the years before their application year.



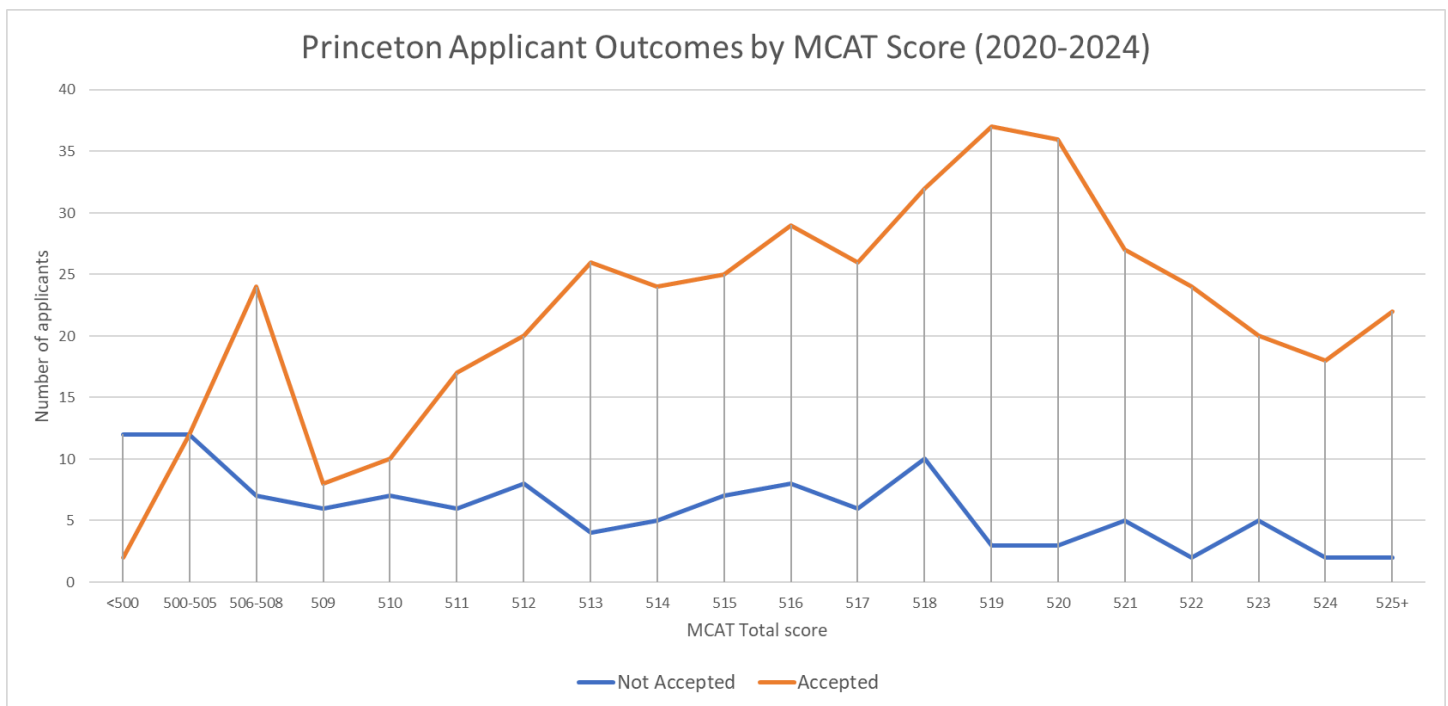
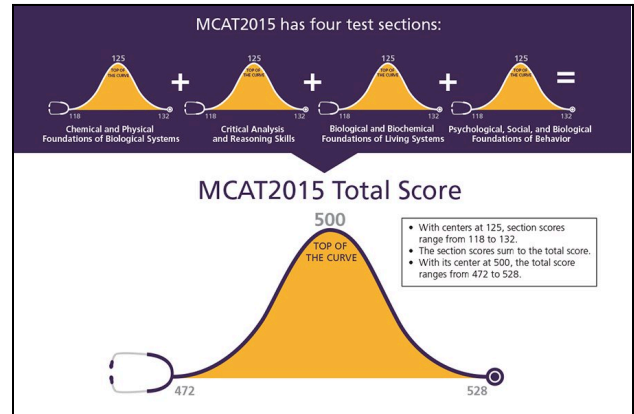
## MCAT Scoring

Each of the four sections is scored from a low of 118 to a high of 132. The section scores are combined to create a total score that will range from 472 to 528. Scores are reported along with confidence bands and percentile ranks that reflect information about your score relative to other examinees – a score of 500 will be at or near the 50th percentile.

Nationally, the mean score for matriculants to US allopathic medical schools in 2022 was 512 (84th percentile), with subsection scores of 127-129<sup>1</sup>.

The range of scores for Princeton applicants accepted by US medical schools in 2023 was 501 to 526, with a mean score of 516 (92nd percentile) and subsection scores of 128-130.

- [Learn more about the score scale from the AAMC](#)
- [AAMC Applicant and Matriculant data](#)
- [Additional HPA Data](#)



## Additional Resources

- [AAMC: How I Prepared for the MCAT](#)
- [HPA Student Recommendations for Study Materials](#)

<sup>1</sup> [FACTS: Applicants and Matriculants Data | AAMC](#)