

01: Introduction to Biology in MCAT

Key MCAT Terms

- **MCAT:** Medical College Admissions Test is a standardized exam required to gain admission to medical school.
- **MCAT Courses:** The new four-sections MCAT requires seven college courses – general chemistry, organic chemistry, biochemistry, biology, physics, psychology and sociology.
- **Passage-Based Question:** A question relating to information in an accompanying passage. The answer may or may not be in the passage.
- **Discrete Question:** A question that has a topic independent of a passage or other questions with four possible answer options.
- **Test Sections:** (1) Chemical and physical foundations (2) Critical Analysis and Reasoning Skills (3) Biological and Biochemical Foundations (4) Psychological, Social and Biological foundations.
- **General Biology:** MCAT requires students to take two semesters of college-level biology for pre-med.
- **Computer-based Test:** MCAT is 100% to be taken on computer with on-screen timer but no calculator provided.

MCAT Overview

Registration

- The MCAT is offered multiple times a year.
- Register here: <http://www.aamc.org/mcat/>
- Plan ahead six months before taking the exam.

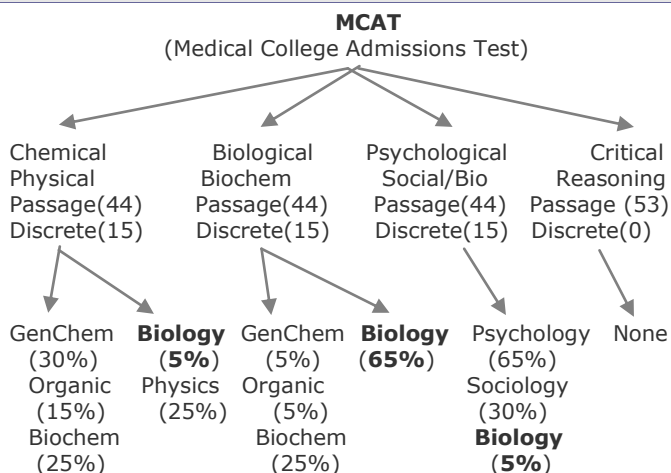
Scoring

- Four sectional scores and one total score with midpoint
 - Chem/Phys Section: 118-132 (midpoint = 125)
 - Critical/Reasoning: 118-132 (midpoint = 125)
 - Bio/Biochem – 118-132 (midpoint = 125)
 - Psy/Social - 118-132 (midpoint = 125)
 - Composite Score: 472-528 (midpoint = 500)

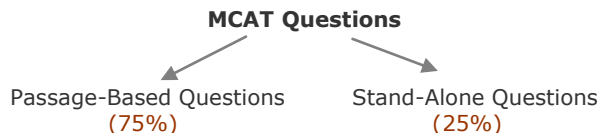
Test Day Schedule (4 sections 10-min break each)

- Chem/Phys: 95 minutes, 59 questions.
- Critical/Reasoning: 90 minutes, 53 questions.
- Bio/Biochem: 95 minutes, 59 questions.
- Psy/Social: 95 minutes, 59 questions.

MCAT Test Format



- Biology in MCAT requires the biological understanding at the organizational levels – molecular level, cellular level, and human system level.
- MCAT is a 100% computer-based test.
- The new exam is longer with total seat time 7.5 hours.



Biology on the MCAT

Test Coverage

Most if not all the biology questions will be covered in traditional two-semester biology courses. However, more advanced courses are highly recommended to offer in-depth coverage. These courses include, not limit to, molecular biology, cellular biology and human biology, i.e. anatomy & physiology.

Key Topics

- Enzymes and Metabolism
- DNA and Protein Synthesis
- Eukaryote Molecular Biology
- Genetics
- Microbiology
- Eukaryotic Cells
- Nervous and Endocrine Systems
- Circulatory, Lymphatic and Immune Systems
- Respiration System
- Skin System
- Digestive and Excretory Systems
- Muscle and Skeletal Systems
- Reproductive System and Development
- Evolution

Test-Preparation Strategies

Time Management

- Study only the Biology topics given.
- Spend core study hours on weak areas only.
- Set a study schedule and stick to it.

Concept Mastery

- Translate formulas into words to give them meaning.
- Generalize concepts to save memorization and time.
- Resolve any questions you have.

Practice Problems

- Solve problems in these tutorial drills.
- Solve relevant problems in Biology textbooks.
- Solve problems in full-length practice exams.
- Solve problems on self-made mock exams

Review

- Make cheat sheets.
- Use audio for learning-on-the-go.

Test-Taking Strategies

Know the Test

- Arrive early with required materials.
- Memorize the MCAT time format ahead of time.
- Memorize the instructions ahead of time.

Plan Your Attack

- Skim the section to budget time.
- Set approximately a 1-minute time limit per question.

Build Focus

- Go with your first instinct answer.
- If distracted, pull back to regain focus.
- Set the time limit per question and move on.

Zoom In On the Answer

- Think of the answer first, and then scan the choices.
- Beware of the familiar and the absolute.
- Deal with similar or opposite answer choices.

Guess the Right Way

- Never leave a question unanswered. Guess instead.
- Eliminate incorrect answers to improve guessing odds.

How to Use This Cheat Sheet: These are the keys related this topic. Try to read through it carefully twice then recite it out on a blank sheet of paper. Review it again before the exams.