

# MCAT 2015

## MCAT 2015 Sections

**CPBS: Chemical and Physical Foundations of Biological Systems**

**CARS: Critical Analysis and Reasoning Skills**

**BBFL: Biological and Biochemical Foundations of Living Systems**

**PSBB: Psychological, Social, and Biological Foundations of Behavior**

## Scores of Each Section & Total Score

**Section Scores: 118-132** (mid-point = 125)

**Total Score: 472-528** (mid-point = 500)

Each of the four sections [Chemical and Physical Foundations of Biological Systems; Critical Analysis and Reasoning Skills; Biological and Biochemical Foundations of Living Systems; Psychological, Social, and Biological Foundations of Behavior] will receive a scaled score from a low of 118 to a high of 132, with a midpoint of 125.

**Note that the “old” MCAT individual section scores were from 1 to 15, and the new scale also has 15 integers, but numbered from 118 to 132.**

The four new MCAT scaled scores will be combined to create a total score that will range from 472 to 528, with a midpoint of 500.

**Medical school admission committees should use scaled scores to evaluate the MCAT component of the admissions process (*not* percentage, *not* percentile).**

**The AAMC will provide students with a score report that reflects:**

- (1) Percentile ranks to show how one fared compared to other exam takers
- (2) Confidence bands that show the ranges where one's true scores lie
- (3) Score profiles that reflect one's strengths and weaknesses in the four sections

## MCAT 2015 vs. Old MCAT – Content & Content Changes by Subject Area

New MCAT Biology	DNA, genetics, evolution, biotechnology, eukaryotic cell, prokaryotes vs. eukaryotes, viruses, reproductive system, embryology, nervous system, endocrine system, circulatory system, respiratory system, digestive system, immune system, lymphatic system, muscular system, skin system and skeletal system	<b>Removed:</b> Bone growth and bone generation, pedigree analysis, origin of life  <b>Added:</b> Biotechnology
New MCAT Biochemistry	Enzymes, bioenergetics, metabolic regulation, pentose phosphate pathway, lipid metabolism, glycolysis, gluconeogenesis, citric acid cycle, oxidative phosphorylation, nucleotides and nucleic acids, amino acids, peptides, proteins, protein structure and function, carbohydrates and lipids	<b>Added:</b> Pentose phosphate pathway, lipid metabolism, gluconeogenesis, more advanced enzyme kinetics (for example, although $K_{eq}$ , $K_m$ and $V_{max}$ were old MCAT topics, new exam topics also include: $K_d$ , $K_a$ , $k_{cat}$ , $K_i$ , $IC_{50}$ )  <b>Note:</b> Many new MCAT Biochemistry topics were covered in the old MCAT in Biology and Organic Chemistry.
New MCAT Physics	Translational motion, force, equilibrium, work, energy, periodic motion, fluids, electrostatics, electromagnetic radiation, electrical circuits, circuit elements, light, magnetism, sound, matter, atoms, nuclear decay, electronic structure, atomic and chemical behavior, thermodynamics, optics	<b>Removed:</b> Momentum, solids (density, elastic properties, etc.), periodic motion (springs and pendulums) and wave characteristics (exception: spring potential energy), circular motion, alternating current
New MCAT Organic Chemistry	Key functional groups/compounds, nomenclature, stereochemistry, hybridization, nucleophilic substitution (not elimination), molecular structure and absorption spectra, aldehydes and ketones, alcohols, carboxylic acids, acid derivatives, mass spectrometry, polycyclic and heterocyclic aromatic compounds, phenols, separations and purifications	<b>Removed:</b> Simple organic compounds (e.g. alkanes, alkenes, alkynes), ethers (note: technically, alkenes, alkynes and ethers have not been on the AAMC official topic list since 2003), amines, acyl halides, recrystallization  <b>Added:</b> polycyclic and heterocyclic aromatic compounds, phenols
New MCAT General Chemistry	Gas phase, electrochemistry, molecular structure, stoichiometry, acid/base equilibria, solubility, ions in solutions, titration, covalent bond, liquid phase, intermolecular forces, kinetics, equilibrium, water, molecules, thermochemistry	<b>Removed:</b> Phase Equilibria (however, phase diagrams can still be tested)
New MCAT Psychology and Sociology	Sensory processing, the senses, perception, attention, cognition, consciousness, memory, language, emotion, stress, personality, psychological disorders, motivation, attitudes, beliefs, psychological, biological and social factors that affect behavior, personality, self and identity formation, prejudice and bias, stereotypes, social class, stratification, social mobility, poverty, culture, and health and healthcare disparities	<b>Added:</b> All topics in Psychology and Sociology

## MCAT 2015 vs. Old MCAT – How do they compare?

**MCAT<sup>2015</sup> is longer.** The 'old' MCAT took about five hours and 10 minutes to complete while the new MCAT takes around seven hours to finish. Yes, it takes longer to sit through it because instead of only three sections as in the 'old' MCAT, there are four sections in MCAT<sup>2015</sup>. Additionally, each section is longer.

**MCAT<sup>2015</sup> is broader but at the same time, it is more in-depth** in its approach to measuring your grasp of the sciences. Keep in mind that in real life, the boundary between sciences is artificial. A molecule does not know if it is a matter of physics, chemistry or biology. You were trained to put that molecule into a box depending on the course code. MCAT<sup>2015</sup> blurs the boundary. After all, the molecule is physics, is chemistry, can be biology, and may have psychological or sociological implications.

**MCAT<sup>2015</sup> cuts across scientific disciplines** (Physics, Organic Chemistry, Inorganic Chemistry, Biochemistry, and Biology) which interact in living or biological systems. There is also a section which seeks to test your grasp of the interplay between Psychology, Sociology and Biology with the context being basic research methods.

**The key words for the new exam are 'foundations' and 'systems'.** Just as it takes different elements to create a foundation; and it takes all sorts of concepts to comprise a system, so MCAT<sup>2015</sup> will test your knowledge of how each scientific discipline interacts, interplays and influences other scientific disciplines.

**MCAT<sup>2015</sup> is harder.** First, it is more comprehensive as there are more topics included (Psychology, Sociology, Biochemistry and Statistics). Second, it is organized along different criteria that span all the subjects. Third, the purpose is to ensure that the students who do get accepted to medical school have a good foundation of scientific facts and relevant formulae but also the mental agility to look holistically at the sciences (take in the big picture), and yet be comfortable at critically analyzing scientific data with depth of perception (focus on the necessary details).

**MCAT<sup>2015</sup> is not for those who can cram four years' worth of study into three months.** It is for those students who can take scientific facts presented to them and make sense of them enough to solve particular problems. All this is compounded by the fact that the test seeks to probe what you know about how your thoughts, feelings and functioning impact your actions and behavior (Psychology and Social Sciences section). Sounds complicated, doesn't it?

Well, it is complicated. The science of life and the science of medicine are complicated. Medical technology and medical knowledge are exponentially expanding and this further complicates what you already know about the science of life. The doctors of tomorrow need to have mental agility to cope with the fast-changing developments in science, technology and yet learn to deal with patients as people and not as mere medical conditions – that is what good doctors are supposed to do. And that is how good medical schools propose to train their students to become the doctors of the future.

Each of the four sections -- Biological and Biochemical Foundations of Living Systems; Chemical and Physical Foundations of Biological Systems; Psychological, Social, and Biological Foundations of Behavior; and Critical Analysis and Reasoning Skills -- will receive a scaled score from a low of 118 to a high of 132, with a midpoint of 125