Fall 2022 MCAT Biochem Passages Workshop

Syllabus

Part 1: Course Information

Instructor Information

- **Instructor:** Josh McCartney
- **Office:** 345 East 37th St. Suite # 316, New York, NY 10016
- **Contact Hours:** 9am-5pm Weekdays
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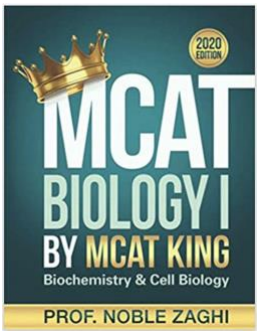
Course Description

- We will work through passages and questions that address key facets of the high yield biochemistry content on the MCAT. We'll drill passage strategies and recall techniques, and simplify experimental design. Lastly, as always, we will pay special attention to test-taking skills, as well as covering incorrect answer pathologies. This class is taught by Josh over Zoom.

Textbook & Course Materials

- **Required Text(s):**
    - **MCAT Biology I by MCAT KING: Biochemistry & Cell Biology**



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- **Additional Recommended Resources:**
    - **Khan Academy MCAT**
        - Practice Passages

        - Biomolecules
        - Cells
        - Chemical Processes
    - **Anki**
        - (Scroll down, find the operating system you are running, and you will be able to download the app)
        - Download link page for the best MCAT Anki Deck (MileDown's Deck)
            - (Download this, open Anki, hit file, import, and find the MileDown Deck file)
        - YouTube Video on using Anki for the MCAT
    - Other resources and readings will be made available throughout the course.

Course Requirements

- Strong internet connection
- A quiet space with an appropriate background for 2-hour zoom meetings

Online Course Structure

This is a fully-online course. All course activities and resources will come from this syllabus, our workshop slides, and via email. At designated times throughout the course, you will be asked to complete an *extremely short* survey that will help me tailor our work to your needs.

We will blend review of high-yield, foundational Biochemical concepts with group-paced work on practice passages and questions. All of the learning activities will be completed either during the workshop meetings or on your own time between classes.

Important Note: This syllabus, along with course assignments and due dates, are subject to change. It is the student's responsibility to check the syllabus weekly for corrections or updates. Any changes will be clearly noted via email and in course announcements.

Part 2: Objectives

Course Objectives

- To build a foundation for deeper understanding and control of the high-yield Biochemical content on the MCAT
- To gain comfort and confidence using expert strategies and techniques to tackle complex Biochemical passages and discrete questions
- To learn and diligently apply the MCAT study methods that best fit your learning style and preparation environment

You will meet the outcomes listed above through a combination of the following activities in this course:

- Attend all class sessions. Watch and engage with recording of any classes that you cannot attend.
- Participate regularly in class discussions.
- Complete assignments in a timely manner before the following class meeting.

Part 3: Topic Outline/Schedule

Important Note: Refer to the course calendar for specific meeting dates and times. Activity and assignment details will be explained in detail within each week's corresponding module. If you have any questions, please contact your instructor.

Week	Date	Topic	Assignments
1	Sept. 22nd	Introduction & Cell Biology	Read Ch. 1-2 Anki Practice Passages
2	Sept. 29th	Amino Acids	Read Ch. 8 pg. 124-130 Memorize Amino Acids Anki Practice Passages
3	Oct. 6th	Peptides & Proteins	Read Ch. 8, pg. 136 Continue amino acid memorization Anki Practice Passages Survey
4	Oct. 13th	Nucleotides & Nucleic Acids	Read Ch. 3-4 Memorize Nucleotides Anki Practice Passages
5	Oct. 16th	Enzymes & Enzyme Kinetics	Read Ch. 9 Memorize Enzyme Types Memorize Inhibitors Anki Practice Passages
6	Oct. 20th	Metabolism I	Read Ch. 8 pg. 136-145 Memorize Glycolysis Memorize TCA & ETC Anki

			Practice Passages
7	Oct. 31st	Metabolism II	Read Ch. 8 pg. 145-146 Continue glycolysis, TCA, & ETC memorization Memorize Inputs / Outputs / Rate-limiting steps for rest of metabolism Anki Practice Passages
8	Nov. 3rd	Biochemical Lab Techniques	Read Ch. 5 Read Extra Slides Anki Practice Passages
9	Nov. 14th	Carbohydrates & Lipids	Read Ch. 8 pg. 130-136 Memorize Sugar Structures Anki Practice Passages
10*	Nov. 17th	Cell Cycle & Genetics	Read Ch. 6-7 Memorize Inheritance Pedigrees Anki Practice Passages
	Nov. 22nd	Course Wrap-up	Memorize Hardy-Weinberg Equation forms I & II Anki Quiz Survey

Part 5: Course Policies

Participation

As this is an online course taught via-zoom, your participation is key to your and your fellow students' success. You will each gain more from this exercise if you provide regular input as we

move through the topics and practice material. Students are expected to participate in all activities as listed on the course calendar.

Expectations

All assignments for this course should be completed prior to the following class meeting. This is not a collegiate course and there is no grading. However, should you choose to forgo assignments, you will be a detriment to your classmates in discussion, and you will do yourself a disservice in your preparation for the MCAT. If you cannot complete the minimal workload in this course, the rigors of future medical education may be beyond you.

If, at any time, you find it difficult to keep up with the coursework or discussion, make sure you let me know as expeditiously as possible.

Important Note: Do not share course material in any form with anyone outside of this class and your instructor.