**MCAT Prep Guideline**

There is no “one size fits all” best way to prepare for the MCAT however, the following is a guideline you can consider as you move through your post bac year. This guide was prepared using input from Kaplan, former PBPM students from the last several cohorts, and information post bac program directors and advisors have shared from other institutions.

**Fall semester**

* ***Note:*** *while you may not need to memorize formulas for your physics exams you will need to have them memorized for the MCAT*
* Use your Kaplan post bac syllabus and E-Books to follow along with your coursework
* Become familiar with working through timed passages by practicing! Consider doing the weekly newsletter’s CARS and/or Psych/Soc passages
* Begin reviewing other material not covered in the program (for example behavioral psychology & sociology) using Kaplan, AAMC, and Khan Academy resources, podcasts or other materials of your choice
* Register for the MCAT test either May 19th or 27th

**Winter Break**

It is going to be helpful to maintain some level of disciplined study time during your Winter Break. Create a weekly schedule with realistic timelines and goals so you can follow through with the recommendations below.

Week 1:

* Take some time to relax, reconnect with loved ones, and rest!
* Begin learning how to draw and/or identify an amino acid structure or abbreviation - this is a huge component of both Biochemistry and the MCAT. You cannot answer complex problems without this essential basic vocabulary so start to memorize the 20 amino acids.
* Draw out all structures and label 2x per day
* Must memorize 3 and 1 letter abbreviations
* Would be helpful to memorize pKas of side chains
* Watch this (and other) videos for more background information: <https://www.khanacademy.org/test-prep/mcat/biomolecules/amino-acids-and-proteins1/v/classification-amino-acids>

Week 2:

* Continue to draw and label the 20 amino acids 2x per day
* Choose at *least* 1 of 3 Psych/Soc Options and then Practice:
	+ **Read** the Kaplan MCAT Psych/Soc. Prep book
	+ **Listen** to a free Intro Psychology course or podcast (look at Coursera, Spotify, or iTunes)
* **Watch** the Kaplan MCAT/Khan Academy (Foundational Concepts 6-10) videos
* Practice question sets either in Kaplan or Khan Academy:
* <https://www.khanacademy.org/test-prep/mcat#behavior>
* <https://www.khanacademy.org/test-prep/mcat/social-sciences-practice>

Week 3:

* Read the entire Kaplan General Chemistry, Psychology/Sociology and/or Biology E-Books
* Target your efforts on your weaker areas attempting questions within relevant chapters, create Kaplan quizzes, and use AAMC Section and Q-Banks
* Review questions missed, thoroughly read explanations, and write out correct answers in a designated MCAT notebook

Week 4:

* Wrap up General Chemistry, Psychology/Sociology and/or Biology review
* Draw amino acids and label until comfortable
* Attend Gen Chem Review Session with Professor Mattson on Jan. 18th
* Take a full length practice exam *under the same conditions and timing* as the “real” exam. (You can do this on your own or with your classmates- we’ll host a group practice exam in January before Spring semester begins)
* Test Day Conditions: no extra breaks, use of phone or drinking, limit bathroom breaks, etc. during practice exam. This helps you become familiar with the discipline and stamina it takes to complete the exam.
* We suggest taking the Kaplan exams first and saving the AAMC test for closer to the exam date.

**Spring Semester**

* Faculty Liaison & MCAT Chair will identify weekends throughout Spring semester to host full-length practice MCAT exams OR
* Review your own academic schedule to identify and hold several days throughout the semester where you can take full-length practice exams
* Continue reviewing Biology concepts not covered in the second semester (E-Books/Khan Academy)

**Learning Techniques**

* Using the flashcards you made: **always test yourself**.
	+ That is, don't just glance at all the basic info on say Asparagine (the name, the abbreviations Asn and N, and the structure). Start with one thing (e.g. the name) and try to recall the other three before checking. Even failure here is useful.
	+ Just glancing over the flashcards is much less efficient than forcing yourself (uncomfortably) to attempt [active recall](https://en.wikipedia.org/wiki/Active_recall). This leverages the [testing effect](https://en.wikipedia.org/wiki/Testing_effect).
		- Advice from Gabriel Wyner, author of "[Fluent Forever](https://www.amazon.com/Fluent-Forever-Learn-Language-Forget/dp/0385348118)" (on learning foreign languages): "When you study by reading [something] multiple times, you’re practicing reading, not recall. If you want to get better at recalling something, you should practice recalling it.”
		- In fact, just glancing over the material can be detrimental, leading to "false fluency."
		- As your UVA colleague Daniel Willingham [puts it](https://www.aft.org/periodical/american-educator/winter-2003-2004/ask-cognitive-scientist): "‘Familiarity’ fools our mind into thinking we know more than we do.”  That's "Why Students Think They Understand—When They Don't" (the title of his article).
	+ Sometimes start with the structures and go the other way. Change it up.
* Active creation & recreation: **make and remake the material.**
	+ Make your own flashcards. It's more effective than using premade ones.
	+ Also get a cheap new O-chem modeling set (say, [this one](https://www.amazon.com/LearnOn-Organic-Chemistry-Molecular-Students/dp/B015JJ6CWG) on Amazon) and make a model of each amino acid, saying (or singing!) its name and abbreviations.
		- Then take a picture with the name & abbreviations in a different place and with any other memory hook (e.g., a piece of asparagus for Asparagine).
		- Multiple sensory hooks make the information more retrievable. Just moving to a different location in your house or apartment to make & photograph the next model is helpful.
		- Also, silly/funny memory hooks are extremely effective. Incorporating a piece of asparagus into the process with Asparagine, for instance, is a no-brainer.
		- This is how every "memory athlete" memorizes say a full deck of randomly shuffled cards in 5 minutes. There's no time for spaced repetition. So you have to have a system of making funny associations. See, for instance, Joshua Foer's tale of winning the U.S.A. Memory Championship in this [NY Times article](https://archive.nytimes.com/www.nytimes.com/interactive/2011/02/20/magazine/mind-secrets.html).
		- This particular technique of making funny associations has the side benefit of making the process more fun and less stressful (not just memorizing the amino acids, but the whole task of studying over the break). There are good knock-on effects when the studying process is "game-ified" in a personal way (not game-ification in the sense of competitions, but rather in the sense of literally making the process a personal game).
	+ Group and regroup (e.g., by key features [per this chart](https://en.wikipedia.org/wiki/Proteinogenic_amino_acid) on Wikipedia).
		- This builds logical connections to previously mastered information and grows the fact base.
* Spaced repetition: you need many repetitions to get all the amino acids, no doubt. But you can space out the review further over time (a la a [Leitner box](https://en.wikipedia.org/wiki/Leitner_system), which automatically increases the interval between reps on things you remember).
	+ It's actually more effective to allow more forgetting and struggle with the active recall (having the thing on the "tip of the tongue"). This is [desirable difficulty](https://en.wikipedia.org/wiki/Desirable_difficulty).