How To Do Really Well In Organic Chemistry

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General Study Strategies

Following are some tips for succeeding in Organic Chemistry I and II. If you did really well in General Chemistry, then keep up the good work! Stick with the habits that made you successful, but consider the important tips below to make sure you will be successful again. If you didn't do as well as you would have liked last year, you may want to adjust your approach, and below are some ideas for doing just that. The tips are based on my own experiences, feedback from students, TAs, and faculty colleagues.

The main strategies that tend to be the most effective are: (1) prereading sections before they're covered in class, (2) attending lecture and taking good, detailed notes, (3) working through problems thoughtfully and not relying on the solutions manual, and (4) not getting behind. Each point is expanded below.

Prereading.

Prereading gives you exposure to the material before you see it in class. This is important because as you've seen, taking notes in class is fast-paced: you're simultaneously writing, listening to the instructor, trying to read our sloppy handwriting, etc. In lecture is NOT the place for deep learning. If you have a sufficient pre-exposure to the material before you attend lecture, you'll say, "Ah, I remember reading about this, and I didn't quite get it the first time but now it's making more sense." Organic is a dish best served through active learning on your part, not force-fed to you by the professor.

Notes.

Your professor has distilled down the material in the text and is presenting you with their version of what they think is most important. Your notes will serve as a reference as you study for exams that will both compliment and expand on the material in the text. Taking good notes is important because many times professors will spend more time on the topics that are likely to appear on exams, and you now have a manual detailing their favorite topics and time-tested methods for solving problems, etc.

Problems.

You can read a driver's manual over and over, but you will never know how to drive a car until you get out and do it! The same goes for orgo. After a while, stop reading and start solving problems: book problems, problem sets, old exams, etc. DON'T just "think" about the answers. WRITE and DRAW your answers completely when you are doing problems. Evidence shows that orgo students who actually write out problems and answers do much better than students who don't. And DON'T pull out the answer keys until you've solved the problem yourself first. Have a friend check your answers, but not correct them. Once you've seen the ones that are wrong, attempt again to solve them on your own: go back through your text, notes, etc. and discover the answer for yourself. This is critical. Someone (or a key) can show you the right answer and you can say, "Yeah, ok, I see why that answer is right and mine is wrong," but if you just move on *you haven't learned anything*. You haven't solved the problem, you've only agreed with the correct answer. You and your brain need to participate in the actual problem-solving process to succeed.

Stay ahead.

It is critical that you don't fall behind. You can't wait until a few days before the exam to say, "Ok, I'm going to read the last three chapters Friday, Saturday, and Sunday night before my exam on Monday." It just won't work.

Remember that you'll have to get a good foundation in Orgo I so that you can do well in Orgo II. The two courses are really just one big course; you only stop between them because the semester will be over. Orgo II will pick up right were you left off and *build off of everything* that you were doing. Some action steps moving forward:

- Orgo I builds on some of the concepts you learned in General Chemistry (especially Lewis Structures, VSEPR and acid/base). Review your notes, old problem sets, the book, and any other resources you may have.

- *Exception to the "no memorizing rule"- Memorize reactions (not mechanisms). Compile all of the reactions that you covered and make either a stack of flashcards or start a notebook listing the important features of each. I think it's easiest to classify them by reaction type (alkene → alcohol, or alkyl halide → ether, etc.), but do them however you like. At the end of each chapter in your book, there are lists of "new reactions". USE THE LISTS to help you review! Keep adding to your database as you progress through Orgo I and Orgo II. We are going to go through A LOT of reactions this semester, and there will be even more next semester. Keeping up, organizing reactions, and recognizing themes is the key to success!

- Synthesis is another big theme in Organic Chemistry. If organic chemistry is a language and atoms are the letters, molecules are the words, and reactions are the sentences, then synthesis is paragraphs (and sometimes full blown novels!). You can see why fundamentals are important.

- For the most part, "Memorizing is bad, mmmKay?" There is just TOO MUCH STUFF to memorize. Learning HOW things work is essential. Don't fall back into *the memorizing rut*. Like Billy Madison, you're here to *learn*. Go on with the chlorophyll.

- Keep in mid WHY you're taking this class. What are your long-term goals that brought you here? When your friends are hanging out watching reality TV after dinner, what will you do? The choices you make this semester will make or break you in this class. Decide what is important to you and keep your eyes on the prize.!

Good Luck! And let me know how I can help you stay on track!

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