

My Comments for Success in Chemistry 254

Well, you got through the first semester (whew!) with some level of proficiency. You now know that organic chemistry can be approached in a logical and systematic way (hopefully you did not try to memorize everything but, rather, found some unifying concepts). You need to be aware that the second semester is usually considered “harder” than the first - even though you are already ‘into’ the course! I have a few suggestions for success in Chem 254:

1. DO NOT FALL BEHIND. Keep up with your studying *daily*! Organic is a course in which a new idea almost always builds on another previously encountered idea (and, yes, many are from the first semester!). It is essential that you keep up with your reading to match the pace of the lecture presentations. (It would be better if you have read the material *before* the lecture because you would then have some understanding of the material.)
2. Study the material in small units; that is, understand each new idea by reading the section of the chapter, and working the in-chapter problems that accompany that section. These problems are designed to check your progress and understanding of the material just presented. Your study will be much more effective if you understand completely each idea as it is presented before you move on to the next concept. Trying to master a chapter on the weekend will not work; but small daily doses will nicely finish the chapter!
3. Work all of the assigned homework problems at the end of each chapter. And use the *Study Guide* properly! Only refer to the answers after you have completed working on a question (!) to check your answer, OR, after you have *really* made an effort to solve the problem and find yourself completely ‘stuck.’ And then only look at the beginning of the answer and then continue on your own to finish the problem. The value of the problem is in solving it (!), not just reading the answer.
4. Write everything! Write the structures, the reactions, the mechanisms, the concepts over and over again. Organic chemistry is best assimilated through the fingertips by writing, and not through the eyes by simply looking, or by highlighting material in the text, or by referring to flash cards. There is a good reason for this. Organic structures, reactions, and mechanisms are complex. If you simply examine them, you may think you understand them thoroughly, but that will be a misperception. You need to know the material so thoroughly that you can explain it to someone else. This level of understanding comes to most of us (those of us without photographic memories) through writing. Only by writing reaction mechanisms do we pay sufficient attention to their details, such as which atoms are connected to which atoms, which bonds break in a reaction and which bonds form, and the three-dimensional aspects of the structures. When we write reactions and mechanisms, connections are made in our brains that provide the long-term memory needed for success in organic chemistry.*
5. Form a study group. Study with other students and practice explaining concepts, mechanisms, and homework problems to each other.

* From: Solomons and Fryhle, *Organic Chemistry*, 7th Edition, John Wiley & Sons, NY, 2002