

Tips for success at Organic Chemistry

Organic Chemistry is not your typical science course. Simply put, it is a completely different way of thinking all together. Yes it has tests and yes it has a lab, but unlike other Science courses, there is not a whole lot that you need to memorize (Yes there is material you MUST memorize and know) and you don't even need a calculator to do the math.... So then why is it so hard?!?! Unlike almost any other course you will take, Organic is highly visually and spatially based. It takes being able to think and understand things in three dimensions and also think about things, as we will see, electronically.

How does one conquer organic chemistry and/or just pass the course? Simply, it takes a lot of time DOING organic chemistry.

Organic is not:

- a subject that can be learned by simply reading and memorizing concepts.
- a subject that you can cram for and be able to pass or even partially understand.

This course is like a foreign language. It is completely different than any other course you have taken before. Organic chemistry is actually fairly simple, but it takes a lot of time and effort to think and speak in this new language.

What does it mean to DO Organic Chemistry?

- I. Doing or answering the homework problems is key to learning this new language.
 1. You need to have the answer manual.
 2. Try and answer all of the questions. Answer as many as you can without looking at the answers.
 3. Once you get too stuck to go on or are finished, compare your answers to those in the answer book.
 4. Start with the easiest problem, and move to the hardest ones. If you got it wrong, don't simply correct it, figure out why and how you got it wrong, and then figure out why and how to get it right. Often times there can be more than one way to get to a right answer. But if it is wrong, it is wrong for a reason. You need to understand why that way is wrong and why the right way is right. This might be one of the singly most important exercises in this course.

THERE IS NO SUBSTITUTE FOR DOING THE PROBLEMS!! Work thought all of the in chapter practice problems, and then move on and do the homework problems.

II. Organic Chemistry is like a foreign language. **You need to do it, and do it every day.** You must look at this material at LEAST 6 out of 7 days a week. For every hour you spend in the class room, you must spend at least three hours going over the material outside of the classroom.

III. Organic Chemistry is three dimensional. Using the model kits to build and look at models of molecules is very important. Much of Organic Chemistry makes sense

because of basic principles happening in a three dimensional space... but it is very very hard for most people to think actively in three dimensional space without actually looking at the problem itself in three dimensions.

IV. Foundational basics are KEY. If you don't eat, breath, think, speak, and fully understand the basics of Organic Chemistry, from the first few weeks, you will be dead in the water the rest of this course and Organic Chemistry II. Not understanding the basics, however simple and bellow you they may seem, will forever limit your ability to do well from here on out. Yes it sounds cliché but, some of the most important concepts you will learn in this course that are very basic, but they have very powerful implications later on.

Fundamentals you must KNOW:

- Calculating the formal charge on an atom
- Electronegativity – Electron affinity
- Arrow pushing – Movement of electrons
- Stereochemistry
- Bonding patterns

For every reaction you learn, you should know exactly how the electrons move, and WHY they are moving! This is not necessarily a point of memorization, rather it is something that you must think through and understand why and how they are moving. There is a reason why things are happening, so understand the reason, and you will not have to memorize anything, and all of organic chemistry will be a breeze... I hope.