

CHEMISTRY 343 - (Prof. Gellman) -- RECOMMENDED STUDY HABITS

1. Study regularly and often (every day, if possible). This course covers a large amount of material, and many of the concepts are challenging. Success is most likely for students who are methodical in their study habits; "cramming" before exams is usually ineffective. Most students find that the material becomes more difficult toward the end of the semester, so one should not become complacent if the early material comes easily (this trend continues in Chemistry 345).

2. Take notes during lectures, and recopy those notes within 24 hours. Many important points slip by before you can record them during the class, but this information remains in your short-term memory. Recopying gives you the opportunity to retrieve this information, and the process cements your grasp of the points made in the lecture.

3. Read the chapter before the lecture; prior familiarity will enhance your understanding of the topics covered. There is not time for all important material to be presented in lecture, and some key points will be left for the text to explain.

4. Write out the answers to problems from the text **before** you look at the printed solutions. It is easy to look at a problem, think for a moment, look at the printed solution, and then tell yourself, "oh yes, I knew that." This is the path to disaster. Doing your best to solve the recommended problems, and then carefully checking your work against the answer key, is crucial for success.

Reviewing lecture notes and the text will make the material familiar, but such familiarity does not guarantee the intellectual mastery that is required to solve new problems (e.g., on exams). The only way to acquire such mastery (i.e., the only way to learn organic chemistry) is by working problems. The only way to know whether you can truly solve the recommended problems is by carefully checking your answers against the answer key (and, as necessary, by identifying the sources of your errors). This process takes time; there is no shortcut to the understanding that is our goal. A student who cannot do the recommended problems in the textbook is likely to have difficulties on exams.

5. A set of sample exams (from previous years) is available on the course web site, and these should be considered carefully. Try these exams before looking at the keys. Answer keys to this year's exams will be posted when the graded exams are returned.

6. Use molecular models regularly, especially early in the course. This subject requires an ability to think in three dimensions. The drawings we use to describe organic molecules are two-dimensional, and students must be able to translate those flat images into three dimensions in their minds. You will learn to make this translation by working with models.

7. General Perspective. Each student should be mindful of two main goals in this course: (1) to develop a solid grasp of organic chemistry, and (2) to learn how to master a challenging intellectual discipline that requires both understanding of a complex conceptual framework and memorization of specific facts. Intrinsic interest in organic chemistry varies widely among students, but every student should be attracted to the second goal. If you can master organic chemistry, then you will have developed learning strategies that can will serve you well in many other areas. Use this course to hone your learning skills; the strategies that work best for you may differ from those that are most successful for other students.

(Note: It would be useful to review this sheet periodically.)