

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 difficult to master. Success is most likely for those who are most methodical in their study habits -- "cramming" before exams is usually ineffective. Most people find that the material becomes harder toward the end of the semester, so don't become complacent if the early material comes easily to you (this trend continues in Chemistry 345).

2. Recopy your class notes within 24 hours of the lecture. Many important facts slip by before you can record them but remain in your short-term memory. Recopying gives you the opportunity to set down the full story, and 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 lecture. There is not time for all important material to be covered 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 notoriously easy to look at a problem, think for a moment, look at the printed solution, and then tell yourself, "oh yes, I knew that." Failure to make the best use of the problems in the text correlates strongly with poor performance in the course. Reviewing lecture notes and the text will make the material familiar, but such familiarity does not necessarily mean that you have acquired the intellectual mastery 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 solving problems. If you cannot do the problems in the book, then you are likely to have difficulties in exams.

5. Look for relevant problems in other organic chemistry text books, and work those problems, too. It is a commonly heard analogy that learning organic chemistry is like learning a foreign language. The more you practice, the greater your facility will become (and the more successfully you will perform on exams).

6. A set of sample exams (from previous years) is available on the course web site, and these should be considered carefully. Answer keys to this year's exams will be posted after grading.

7. Get a good set of molecular models and use them regularly. Success in organic chemistry requires an ability to think in three dimensions. The structures we use to communicate with one another about organic molecules are two-dimensional, but you must be able to translate those flat images into three dimensions in your mind. You will learn to make this translation by working with models.

8. General Perspective. Each student should be mindful of two main goals in this course: (1) to develop a solid understanding of the foundations 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 the students who take this course, but every student should be attracted to the second goal. If you can learn how to master organic chemistry, then you will have developed intellectual tools that can be applied to mastering many other subject areas. Use this course to hone your learning skills; the learning strategies that work best for you may differ from those that are most successful for others.

(Note: You should review this sheet every two weeks.)