
Instructor: Jay Siegel (orgodoc@chem.ucsd.edu) 5224A Pacific Hall (4-5659)

TAs: Amy Choi (sochoi@chem.ucsd.edu), Jeremy Klosterman (j Kloster@chem.ucsd.edu)

Lectures: Tuesday/Thursday 8:00-9:20 am in Center 109

Office Hours (In office) TTh 10:00-11:00 am; (Problem Session) Saturday 2:30-4:30 pm. PH4500

Disc. Sections: M 2:30-3:20 (Center 203); Tu 5:45-6:35 (Center 220); W 8:00-8:50 (HSS 2321); Th 6:50-7:40 (HSS 2150)

Text: Organic Chemistry by Vollhardt and Shore

Course Objectives: Chemistry 141ABC is a three quarter sequence designed for chemistry majors and students interested in the molecular sciences. While providing an introduction to Organic chemistry, Chem 141A covers the field at a very sophisticated level. This course is rigorous and demanding, but it will also be stimulating and rewarding to those who participate fully; it draws heavily on material from other courses in chemistry (particularly the Chem 6 or 7 series) and the sciences, and presupposes that the student has a well-founded background in logical analysis and problem solving. Route memorization will be perilous here as we will be exploring the philosophy and structure of the discipline and not just presenting a litany of facts. Our goal in 141B is to cover material stemming from but not solely included in chapters 10-18 of the text at the rate of about one chapter a week. We begin with a formal introduction to spectroscopy (NMR and IR) and then return to our mechanistic based survey of functional group reactivity. A key task for 141B will be the greater development of strategies for chemical synthesis. By the end of this quarter, students should be proficient in the four sub areas of organic chemistry (structure, spectroscopy, reactivity, and mechanism) and be prepared to use these toward the central focus of organic chemistry: the design and synthesis of organic molecules. Outside reading and problem solving are essential to grasping the presented material. Office hours and discussion sections are ideal for working through problems and reviewing basic principles of chemistry (not just organic chemistry). Use these times routinely, not just to cram for exams.

Homework: As the working of problems is crucial to understanding Organic chemistry, homework will be collected on a routine basis. In borderline grading cases, regular completion of homework will be considered and could be a deciding factor. Problems in [ ] are less important otherwise all problems are worth doing. The specific problems below are to be done as homework and turned in every Monday.

Problems: (Homework problems)
Chapter 10: [3, 13] 1, 15, 17, 22, 23, 24, 25, 30, 32, 33, 35.
Chapter 11: [1, 3, 18] 8, 9, 14, 17, 23, 28, 33, 36, 47, 49
Chapter 12: [1, 7] 3, 4, 6, 9, 12, 14, 25, 32, 43, 53, 54
Chapter 13: [1, 20] 5, 8, 11, 12, 19, 24, 26, 31, 38, 43
Chapter 14: [7, 35] 3, 8, 12, 18, 20, 27, 34, 43, 57, 58
Chapter 15: [1, 2, 3, 8] 5, 7, 11, 14, 17, 22, 25, 37, 40, 49
Chapter 16: [none] 2, 6, 10, 12, 16, 23, 28, 35, 37, 45
Chapter 17: [1, 16, 17] 2, 3, 7, 8, 15, 18, 20, 26, 30, 45
Chapter 18: [none] 10, 17, 20, 24, 25, 30, 39, 44, 48, 50, 55

General remarks. The enrollment in this course is smaller than Chem 140B and over the quarter we should be able to get to know each other well. The sections should also be more personal. Despite the added attention, this course is extremely fast paced. It is crucial that you review notes and work problems everyday. Make use of section to work problems at the board. There are never enough problems, so do all that you can possibly stomach. The problems in this book are good. Try to understand the solutions and not memorize the answers. Try to read over the book every night. We will be covering about 10-15 pages
per lecture. Expect to do about 3-4 hrs of work at home for each lecture. When possible get together to do problems and discuss the material. As with all science classes the grasping of later material depends on a firm understanding of the early material. Review your Chem 6abc notes. Don't be afraid to ask questions about introductory chemistry, esp. in section. Start on all of this today. With the right discipline you can master this course.

Model Kits: It will probably help you to have (or to share with another person) a molecular model kit. They are available through the student ACS group or at the bookstore. Use them to help you solidify three-dimensional ideas in your head; however you ultimate goal should be to visualize these features in your mind. Model will not be allowed during exams.

Exams and Grading: Even though lectures will be presented in a palatable "easy going" style, the exams will cover a lot of material and will feel tough (severe). This course covers a large amount of material in a variety of areas. Each student will have her/his own affinity for certain material, so in order to give each person a chance to show his/her knowledge the exams will cover a wide spectrum of material. Grading will be on a curve, but if the class as a whole does well the curve will be raised to everyone’s benefit. In any case, prepare or be prepared to deal with the difficulties.

There will be two (2) exams worth 100 points each to give a total of 200 points. There will also be a final worth 200 points. The first exam will be on Thursday, January 31st, and will cover chapters 10-14; the second will be on Thursday, February 28th, and will cover chapters 15-17; the final will be on Thursday, March 21st from 8:00-11:00 am and will be COMPREHENSIVE (Chapters 10-18).

Exams will be taken in pen (blue or black) or pencil (#2) on the exam sheets provided at the exam. Note: Exams taken in pencil may not be submitted for regrade. When an exam or quiz is announced to be over, stop working immediately, no exceptions. Be prepared to show a picture ID at the final examination. There will be no make-ups, so don't ask!

Regrades shall be in writing only and shall be submitted through the TA’s. Write your comments on a separate sheet of paper do not make any new marks on your exam whatsoever!!!!!!! One week after an exam or quiz is returned the grade is considered final no changes can be made thereafter. Note: The entire exam will be regraded, and, therefore, negative regrades are possible.

Academic Dishonesty: Cheating is inexcusable and will result in severe penalty such as failure and a note added to your academic file concerning academic dishonesty. This information may be carried with the file to future references (e.g. professional schools, graduate schools, employers).