

CH 332T: Organic Chemistry II

Spring Term 2003, 3:00 to 3:50 MWF
Gilbert Hall Room 224

- Instructor** Professor Rich G. Carter
E-mail: rich.carter@oregonstate.edu
Office Tel: 737-9486
- Office Hours:** MW 10:30 – 11:30, Gilbert 301
- TA / Recitation:** *Fay Tonsiengsom*. Recitations are your opportunity to get assistance from Fay with your homework problems and other course-related questions. The times and locations are: T 1:00-1:50 (WING 285), W 4:00-4:50 (WNGR 285), R 10:00-10:50 (GILK 100).
- Goal:** To provide the student with a solid, well-rounded background in organic chemistry that will allow for further application in their future endeavors.
- Prerequisite:** Successful completion of CHEM 331.
- Required Materials:**
- “Organic Chemistry” Third Edition by P. A. Bruice
 - Molecular model kit
- Grading:**
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| Exams (2, 100 pts each) | 200 |
| Quizzes (4, 10 pts each) | 40 |
| Final Exam | 160 |
| Total | 400 pts |
- The following points represent a minimum cut-off for course grades.
A – 348 pts, B – 308 pts, C – 268 pts, D – 228 pts
- Exams:** The class will be informed of the content of the exams no later than one week prior to the exam date.
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| Exam 1: Week 5 | Monday, April 28, 3:00 pm |
| Exam 2: Week 9 | Friday, May 30, 3:00 pm |
| Comprehensive Final Exam | Thursday, June 12, 6:00 pm |
- Quizzes:** These quizzes will be take-home. You are able to work with other students in the course and use any printed material; however, you are not allowed to obtain assistance from any individual (including your TA) that is not enrolled in the class. You must acknowledge on the exam which student(s) you worked with for each question.
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| Quiz 1: Week 2 | Distributed: Monday, April 7, 3:50 pm
Due: Wednesday, April 9, 3:00 pm |
| Quiz 1: Week 4 | Distributed: Monday, April 21, 3:50 pm
Due: Wednesday, April 23, 3:00 pm |
| Quiz 1: Week 7 | Distributed: Monday, May 6, 3:50 pm
Due: Wednesday, May 8, 3:00 pm |
| Quiz 4: Week 9 | Distributed: Monday, May 27, 3:50 pm
Due: Wednesday, May 29, 3:00 pm |
- On-Line Services:** The Blackboard website will be used for this course to post announcements and grades: <http://my.oregonstate.edu/>
In addition, Prentice Hall and the textbook author maintains a useful website: <http://cwx.prenhall.com/bookbind/pubbooks/bruice2/>

Examination Rules¹

Failure to appear at an examination will result in a grade of zero. Failure to turn in an assignment on time will result in a grade of zero. In those rare cases of the observance of a religious holiday or participation in an officially sanctioned university activity, prior notification of the absence must be given in writing to me not later than 24 hours before the exam. In those instances where illness or compassionate situation prevents a student from attending an examination, the student will be excused, provided the student furnishes the appropriate documentation.

Academic Dishonesty¹

Academic dishonesty is defined as an intentional act of deception in which a student seeks to claim credit for the work or effort of another person or uses unauthorized materials or fabricated information in any academic work. It includes “cheating” (intentional use or attempted use of unauthorized materials, information or study aid), “fabrication” (intentional falsification or invention of information), “assisting in dishonesty” (intentionally or knowingly helping or attempting to help another commit an act of dishonesty), “tampering” (altering or interfering with evaluation instruments and documents) and “plagiarism” (intentionally or knowingly representing the words or ideas of another person as one’s own).

Helpful Advice:

Organic chemistry is not about memorizing! In fact, most of organic chemistry can be explained by two simple concepts: plusses and minuses like to come together (electronic effects) and big bulky groups do not want to be near each other (steric effects). Look at each new piece of information that we cover in class. Try to see how either one or both of these concepts are governing it. If you approach organic from this viewpoint, you hopefully will not feel like you are just memorizing a bunch of isolated facts.

Along the same lines, try to look at each new piece of information and see how it relates to what you have already learned. *Warning: These bits of information are not the magic bullet.* Organic chemistry will require your attention. You need to come to class regularly and attempt all the recommended homework problems. However, if you use these tips, you will probably find that the subjects that we cover are not as unrelated as they initially appear.

¹ Dr. Jeff Walker is acknowledged for this description.

Homework:

Selected problems are assigned for each chapter that we cover from the textbook. These problems will not be graded or turned in, but it is **highly recommended** that you attempt the problems. **Note: IS** denotes sections that you are expected to cover as independent study. You are also encouraged to use the Bruice website (<http://cwx.prenhall.com/bookbind/pubbooks/bruice2/>) for additional exercises and assistance.

Unit 1. Spectroscopy. Sections 12.6-12.20, 13.1-13.18.

Chapter 12. Problems 21, 23b-d, 26, 27, 29, 32e-f, 36, 43, 47, 49b-c, 52, 56.

Chapter 13. Problems 3-4, 6, 9-12, 14, 17-18, 20, 22, 25-27, 30-31, 33-34, 36-37, 39, 41-43, 46-48, 55, 58, 60.

Unit 2. Aromatics. Sections 14.1-14.14, 15.1, 15.3-15.4.

Chapter 14. Problems 2, 5-7, 10, 15, 17, 18-20, 22, 25, 26b, 27-28.

Chapter 15. Problems 2, 6, 9-11, 41a, 41c, 43f, 44, 53a.

Unit 3. Alcohols and Ethers. Sections 2.5-2.6 (IS), 2.8-2.9 (IS), 3.13-3.14, 3.17, 9.7-9.8, 10.9-10.10, 17.2-17.4, 17.6, 18.4

Chapter 2. Problems 38, 45.

Chapter 3. Problems 30-35.

Chapter 9. Problems 17-22, 33, 38, 48-49.

Chapter 10. Problems 21, 23, 30, 34a-c, 44.

Chapter 17. Problems 5-7, 12, 14-15, 32d, 32f, 33, 34a-c, 49a-b, 58.

Chapter 18. Problems 11-14, 34.

Unit 4. Carbonyl Chemistry Part 1: Oxidation and Protection. Sections 17.8-17.9, 18.2-18.3, 18.5-18.7.

Chapter 17. Problems 22-26, 32a, 32d-h, 41b, 50, 51a, 52, 62, 62b.

Chapter 18. Problems 7-9, 15-23, 29, 30a-b, 30e, 30h, 30n, 30p-r, 31, 32, 33a-b, 35, 36a-e, 37, 42, 45a, 45c, 46, 55.

Unit 5. Carbonyl Chemistry Part 2: Enolate Chemistry. Sections 19.1-19.4, 19.8, 19.11-19.15.

Chapter 19. Problems 1-7, 11-13, 16-25, 45, 47, 49-50, 51a-e, 55-56, 61-62.

Unit 6. Carbonyl Chemistry Part 3: Wittig Reaction and Conjugate Addition Reactions. Section 17.11, 17.14, 19.10, 19.16.

Chapter 17. Problems 27, 37e, 30, 32h, 43a-c, 45a, 45c, 45e, 54-55, 60, 62c.

Chapter 19. Problems 15, 28-32, 53c, 77.

Unit 7. Cycloaddition Chemistry. Sections 7.9, 7.10 (IS).

Chapter 7. Problems 12-18, 27, 31-36, 39-40.

Unit 8. Radicals. Section 8.1-8.8, 8.9 (IS).

Chapter 8. Problems 1-3, 5, 10-14, 18-20, 22-23, 25.

Unit 9. Carbohydrates. Sections 20.1-20.4, 20.10-20.19.

Chapter 20. Problems 1-3, 20-24, 28-29, 35.