

Organic Chemistry I Chem 321 Fall 2008

Course

Chemistry F321 Organic Chemistry I
3.0 Credits
CRN: 73981
Reichardt 202, MWF 1:00-2:00 pm

Required Materials

Text: McMurry, 7th edition, Brooks/Cole 2008
RF Response Card available at bookstore
ACS Organic Chemistry Study Guide

Highly Recommended

Study Guide Solutions Manual for McMurry

Prerequisite: Chem 106X

Schedule and Coverage

Sept 5 - Sept 19 Chapters 1-3
Sept 22 - Oct 6 Chapters 4-6
Oct 8 - Oct 24 Chapters 7-9
Oct 27 - Nov 12, Chapters 10-12
Nov 19 - Dec 3, Chapters 13-15
Dec 5 - Dec 12, Chapters 16 and Review

Homework (2 types)**OWL (150 pts)**

See OWL Link on the Course Webpage. Due dates are indicated within the OWL website and are the same due dates at the EOC Problems below.

End-of-Chapter Problems: (150 pts)

Chapter 1: 1.30,1.38,1.40,1.46,1.51 Due Sept 12
Chapter 2: 2.30,2.34,2.40,2.47,2.53 Due Sept 17
Chapter 3: 3.30, 3.33, 3.34,3.42,3.43,3.54 Due Sept 22
Chapter 4: 4.36,4.40, 4.42,4.43, 4.49, 4.49 Due Sept 29
Chapter 5: 5.30,5.31,5.33, 5.35, 5.37 Due Oct 3
Chapter 6: 6.42, 6.45, 6.46, 6.55, 6.58 Due Oct 8
Chapter 7: 7.32, 7.39, 7.48, 7.54, 7.55 Due Oct 17
Chapter 8: 8.31, 8.33, 8.36, 8.38, 8.41 Due Oct 22
Chapter 9: 9.37, 9.54, 9.56, 9.61, 9.63 Due Oct 27
Chapter 10: 10.24, 10.27, 10.28, 10.29,10.37 Due Nov 3
Chapter 11: 11.29, 11.41, 11.53,11.55, 11.59 Due Nov 10
Chapter 12: 12.16, 12.21, 12.23, 12.24, 12.30 Due Nov 14
Chapter 13: 13.50, 13.52, 13.55, 13.57, 13.59 Due Nov 26
Chapter 14: 14.26, 14.36, 14.43, 14.54, 14.55 Due Dec 3
Chapter 15: 15.29, 15.30, 15.32, 15.35, 15.40 Due Dec 8

Point Totals

6 exams @ 100 pts each = 600 points
OWL HW = 150 points
End-of-Chapter HW 15 @ 10 = 150 points
HyperChem 4 @ 25 pts = 100 points

Total = 1000 pts

Instructor

Thomas Green, Professor of Chemistry
Reichardt 174
Phone: 474-1559
Email: ffikg@uaf.edu
Office Hours: Tuesday 2-5pm, Thursday 2-5pm.
Website:
<http://www.uaf.edu/chem/faculty/tgreen/tgreen.htm>

Exam Dates (6 @ 100 pts = 600 pts)

Sept 23, Tues 7-9 pm, Chapters 1-3
Oct 9, Tues 7-9 pm, Chapters 4-6
Oct 28, Tues 7-9 pm, Chapters 7-9
Nov 18 Thurs 7-9 pm Chapters 10-12
Dec 9, Tues 7-9 pm Chapters 13-15
Dec 15, Monday 1-3 pm Comprehensive Final including Chapter 16.

HyperChem Assignments (4 @ 25 pts = 100 pts)

Cyclohexane Experiment, Due Friday, Sept 26.

Allyl/Benzyl Carbocation, Due Friday, Oct 17.

IR spectroscopy, Due Friday, Nov 7.

Thiophene Stability, Due Friday, Dec. 5.

Grading

90-100% A
80-89% B
70-79% C
60-69% D
<60% F

Course Description:

This course will focus on the theory of organic chemistry (or chemistry of molecules containing carbon) from the viewpoint of structure/reactivity relationships. Topics covered will be bonding, functionality, reactivity, synthesis, spectroscopy, nomenclature, and computer modeling. Homework and Exams will constitute the majority of the points earned in class, with some computer modeling using the Department's HyperChem software.

Goals: At the end of this course, students should be proficient in

1. Understand fundamental concepts of bonding in organic functional groups.
2. Know how to name simple organic compounds.
3. Be able to predict the reactivity of alkenes, alkynes, alkyl halides, and aromatic compounds.

4. Be able to confidently interpret the IR and NMR spectra of simple organic compounds in order to arrive at a structure.
5. Understand the basic concepts of stereochemistry.
6. Be able to predict and write mechanisms of reactions based on fundamental concepts of acid/base chemistry (nucleophiles and electrophiles).

Instructional Methods:

1. The instructor will lecture on the theoretical aspects of organic chemistry, using a combination of Power Point slides and Chalkboard, providing copies of notes to the students via the web.
2. Exams will be offered on Tuesday or Thursday evenings at 7 pm in order to provide for a more relaxed and thoughtful environment for taking exams.
3. Computer modeling assignments will be given on a timely basis in order to reinforce concepts in lecture.
4. I will also be using TurningPoint software to test comprehension as we move along.

Notes and Policies:

1. Exams are held on Tuesday or Thursday evenings at 7 pm and are approximately 2 hours in length. Those unable to attend due to work, conflicting classes, etc., will be allowed to take the exam at a later date, preferably the day after the regular time period. Arrangements should be made with the instructor to schedule the exam. Molecular models are allowed during the exam. The Final is 1-3 pm, Monday, Dec 15.
2. Plus/minus grades **will not** be given.
3. Modeling assignments will be given in class and will involve the use of the program HyperChem, which is available to students in the Departmental Computer Lab. A user name and password is required to use the computers.
4. Class attendance is expected and role will be taken through the use of the RF Response Cards.
5. Make-up exams are only allowed in the event of a legitimate excuse as determined by the instructor. Exams must be made up as soon as possible.
6. Cheating will result in a grade of F for the course.
7. The course will move quickly and it is important to keep up on a daily basis. The best way to do this is to read the text and to work the problems. Use the solution manual after you have worked the problems.
8. Students with documented disabilities who may need reasonable academic accommodations should discuss these with me during the first two weeks of class. You will need to provide documentation of your disability to Disability Services in the Center for Health and Counseling, 474-7043, TTY 474-7045. I will assist you in providing accommodations.
9. **ATTENTION:** Those wishing to take Chem 324 Organic Lab in the future should get on the waiting list. Contact Mist in the Chemistry Dept Office, Reichardt 194, 474-5510.