

- Instructor:** Dr. Alvan C. Hengge, Widtsoe 343
Phone: 797-3442, Email: hengge@cc.usu.edu
- Meeting Time/Place:** MWF 10:30 - 11:20 am, BUS 215; R 3:30 - 4:20 pm, Old Main 225
- Office Hours:** Mondays and Wednesdays 9:00 -10:00 a.m.; Thursdays 1:30 – 2:30 p.m.
Other times by appointment.
- Texts:** “Organic Chemistry”, Special USU edition, **or** the 5th edition, by Paula Yurkanis Bruice, **and the accompanying Study Guide and Solutions Manual.**
- Model Kit:** Not required, but helpful. Available in Chem Stores (first floor of Widtsoe). The best kit is the HGS Polyhedron Molecular Model Set, for about \$20.
- On-Line Material:** Use of the Blackboard Vista site is mandatory. You will take quizzes here, and in addition, you can see your test grades, get day-to-day information about where you should be in your readings and practice problems in the text, chat with other students in the course about problems, etc. To log on, go to www.bb.usu.edu. Your username is your banner id, and your password is your banner pin.

TENTATIVE Course Outline and Exam Schedule
(check the calendar posted on the Blackboard site for current information).

Week	Dates	Quiz	Chapters
1	8/27 – 8/31	Pre	Chapter 1
2	9/5 – 9/7	1	Chapter 1, 2
3	9/10 – 9/14	2	Chapter 2, 3
4	9/17 – 9/21	3	Chapter 3
5	9/24 – 9/28		Exam 1, Chapter 4
6	10/1 – 10/5	4	Chapter 4, 5
7	10/8 – 10/12	5	Chapter 5, 6
8	10/15 – 10/18	6	Chapter 6, 7
9	10/22 – 10/26	7	Chapter 7
10	10/29 – 11/2		Exam 2, Chapter 8
11	11/5 – 11/9	8	Chapter 8, 9
12	11/12 – 11/16	9	Chapter 9, 10
13	11/19	10	Chapter 10
	(no classes November 21-23)		
14	11/26 – 11/30		Exam 3, Chapter 11
15	12/3 – 12/7		Chapter 11
16	Friday, December 14		Final Exam (9:30 – 11:20 am)

Assessment:

Assessment involves measuring student progress as well as teaching effectiveness. The following assessment strategies have been incorporated into this course.

- A pre-test/post-test approach will be used to measure comprehension and teaching of important concepts. The pre-test will be administered through WebCT and must be taken on your own time. The fifteen multiple choice questions of the pre-test will reappear in the final, in slightly altered form, to assess teaching and learning progress during the semester. If weaknesses are observed in specific subject areas, teaching methods will be reevaluated. Although no formal points will be awarded, you must take the pre-test before you will be permitted to take course quizzes.
- Student evaluations will be used to evaluate course/instructor strengths and weaknesses. In addition to the standard end-of-course evaluation, a midterm questionnaire will be circulated to assess teaching/learning strategies. Constructive suggestions are welcome.

General Learning Objectives for 2310***

- Be able to describe atomic and molecular structure and bonding, and properly represent organic molecules.
- Be able to classify organic compounds by structure, use the IUPAC nomenclature, and identify conformational effects in organic compounds.
- Be able to write the mechanisms for reactions of alkenes and be able to predict the products of reactions of alkenes.
- Be able to draw and interpret reaction coordinate diagrams, and be able to relate the energetic changes associated with chemical reactions to equilibrium constants and rate; be able to differentiate kinetic versus thermodynamic control of reactions.
- Be able to identify the types of isomerism in organic compounds, to identify and classify chiral centers, and explain the physical and chemical consequences of chirality.
- Be able to correctly represent the structures and bonding of alkynes, and be able to write the mechanisms for reactions of alkynes and predict the products of such reactions.
- Be able to identify compounds in which resonance is important, to predict the effect of resonance on the stability of compounds and reactive intermediates, and be able to draw resonance structures.
- Be able to identify conjugated pi systems and to explain the effect of conjugation on molecular structure and reactivity; be able to predict the products of reactions of dienes.
- Be able to write the mechanism for radical reactions of alkanes, and to predict the products of such reactions.
- Be able to write mechanisms for substitution and elimination reactions, and to predict the effect of nucleophile, leaving group, and solvent on the relative rates of S_N1 versus S_N2 reactions, and E1 versus E2 reactions, as well as on the relative rates of substitution versus elimination.

***Detailed learning objectives for each chapter are available in the chapter study guides, which can be found on the Blackboard site for this class.

Grading Scheme: Point Distribution:
Best two out of three one-hour exams (100 pts each)
Ten quizzes (10 pts each)
Comprehensive Final (200 pts)
Total Points: 500 pts

Grade Assignment: A student's grade for the course is determined solely by exam and quiz performance. The final grade percentile ranges given below are guaranteed. The actual grade ranges may be curved slightly lower, depending on the overall class average.

A, A-	89% or higher
B- to B+	78% or higher
C- to C+	66% or higher
D to D+	53% or higher

Course Procedures and Regulations:

1. What is covered on the exams? Exams may cover any material from lectures and from assigned sections of the text. Not all material assigned in the text will be covered in class, especially when this material is review from general chemistry. Use the study guides listed on the Blackboard site for specific guidelines for what you need to learn from each chapter.

The exams are meant to test your understanding of the topics covered in lecture, not your ability to repeat memorized problems. Expect to see exam questions that are different from any of the practice problems. These are designed to see if you can use the principles you have learned to solve problems that you have not previously seen. Practice problems and past exams will be available on the Blackboard site.

2. There will be no make-up exams. An exam may be taken in advance with a valid excuse (i.e. funeral, surgery) by prearrangement. The lowest score among the three one-hour exams will be dropped. A missed examination will count as the one that will be dropped. A second missed exam, **for any reason**, will receive a grade of F. Any questions concerning exam grading must be discussed with me within two days of the return of the exam. No grading adjustments will be made after this time.

3. Quizzes will be given through the Blackboard system. They will consist of ten multiple-choice questions, chosen randomly from a bank of questions. They will be open-book, with a time limit of 30 minutes, and can be taken as many times as you want, with your highest score being recorded. However, you must take each quiz within the time frame posted. You will benefit the most from the quizzes if you prepare and try to take them without help from the book or your notes.

4. Scheduling of the Final Exam. It is University policy that unless you have three scheduled final exams on the same day, you must take the final exam for this course at the officially scheduled time. Permission to take a final exam at any other time can only be obtained from the Dean of the College of Science.

5. Drop/Add Policies. The USU policy is described in the Fall Schedule Bulletin on pages 106-107. August 31 is the last day to add a class without an instructor's signature. The last day to add is September 17th. After that any adds are given only for reasons of registration error, and the Provost's Office (not the Dean's Office) must approve the add. Pages 106-107 also describe the drop policy. In

short, a student may drop a class without any notation on the transcript by September 17. After that date, any drop receives a permanent "W" notation on the transcript. After 60 percent of a class is completed, your advisor must approve of a drop, and the "W" is accompanied by the grade in the class at the time of the drop. Finally, after 75% of a class is completed, a student may not drop a class for any reason. See the Fall 2007 Schedule of Classes, page 3, for exact dates.

6. Incomplete grade policy. The university policy on giving a grade of Incomplete will be strictly followed. See the section on Academic Policies in the Fall Semester Schedule of Classes for current policies.

7. Disability accommodations. Students with physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, 797-2444 voice, 797-0740 TTY, or toll free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice.

8. Use of Office Hours: The main function of office hours is to discuss and solve problems that you may have understanding the course material or in working practice problems. Formulate specific questions in advance ("I don't understand" is not a question). If you have a question about a practice problem, bring any partial work you have completed. If several students come to office hours at once I may convene a group question session in order to be fair to all.

Suggestions for Success in This Course:

- This is not a memorization course; to be successful on the exams you will need to understand the principles and use them to solve problems. The only way to become expert at doing this is to **WORK AS MANY OF THE PRACTICE PROBLEMS AS YOU HAVE TIME FOR! The suggested practice problems given in the on-line study guides for each chapter were chosen on the basis of content that I would be likely to ask on an exam. Working additional problems at the end of the chapters is recommended.** Studying and working practice problems in groups is very beneficial if everyone contributes.
- Use the practice tests in the Study Guide, at the end of each chapter's problem solutions, to help you prepare for exams.
- To be successful, you should expect to spend at least an hour of work outside of class (studying and working practice problems) for each hour of lecture.
- **Keep up** with the lecture and reading material. Getting behind in this course leads to disaster. You will benefit more from the lectures if you read the material in advance.