

- Instructor:** Dr. Alvan C. Hengge, ML 140
Phone: 797-3442, Email: alvan.hengge@usu.edu
- Meeting Time/Place:** MWRF 8:30 - 9:20 am in ENGR 302
- Office Hours:** Wednesdays 10:00 -11:00 am; Thursdays 4:00 – 5:00 pm.
- Texts:** Organic Chemistry with Biological Topics by Smith and Vollmer-Snarr.
This course is a part of an access program offered by the University, so you will not need to purchase any additional materials. You will access Connect McGraw Hill's online system through Canvas. From here you will have access to an interactive reading experience called the Smartbook as well as an ebook.
- Model Kit:** Not required, but helpful. The Andrus kit is available in Chem Stores (first floor of Widtsoe) and costs \$26.04 with tax.
- On-Line Material:** Use of the Canvas site is mandatory. You will complete graded homework assignments and the electronic text from the McGraw-Hill Connect link. From the Canvas site you can see your test grades and access practice exams and other materials.
- SI Leader:** Jeff Chipman, Email: jeffchip28@gmail.com
SI sessions: Tuesdays at 7:30 – 8:20 PM and Thursdays 6:30 – 7:20 PM in MAIN 121.
- UTF:** Noah Thackeray, Email: noah.thackeray@aggiemail.usu.edu
Noah's office hour: Mondays 1:30 – 2:30 in Widtsoe 226
- Homework:** A series of graded homework assignments will be administered through the McGraw-Hill Connect site. These are accessible directly from Canvas.

A Course Outline with Homework and Exam Schedule is below. Homework assignments are accessed from within your McGraw-Hill Connect account via Canvas. Exams will typically be either the Monday or Wednesday of the week posted. The specific date will be announced at least a full week in advance.

Note: Homework assignments open on Wednesday mornings of the week shown and remain open for 8 days, closing the following Wednesday at midnight.

Week	Dates	Homework assignment	Text material covered
1	8/27 – 8/31	1	Chapter 1
2	No classes September 3 9/5 – 9/7	2	Finish chapter 1; Chapter 2.
3	9/10 – 9/14	3	Chapter 3, begin chapter 4
4	9/17– 9/21	4	Chapter 4
5	9/24 – 9/28		Exam 1, begin chapter 5
6	10/1 – 10/5	5	Finish chapter 5, start chapter 6
7	10/8 – 10/12	6	Finish chapter 6, start chapter 7
8	10/15 – 10/18 No classes October 19	7	Finish chapter 7, start chapter 8
9	10/22 – 10/26	8	Chapter 8
10	10/29 – 11/2		Exam 2, begin chapter 9
11	11/5 – 11/9	9	Finish chapter 9, start chapter 10
12	11/12 – 11/16	10	Finish chapter 10, start chapter 11
13	11/19 No classes November 21-23		Chapter 11
14	11/26 – 11/30	11	Exam 3, begin chapter 12
15	12/3 – 12/7		Finish chapter 12
16	Monday, December 10		Final Exam (7:30 – 9:20 am)

Online graded homework policies:

Each homework assignment consists of approximately ten questions, worth a total of ten points for the assignment. The best ten out of eleven will be counted toward the final grade.

You will have an unlimited number of attempts at each homework assignment before the closing date. Only the best score will be counted. After the closing date homework assignments will be opened for ungraded practice.

There are several types of assistance provided within the homework assignments, which can be used as you complete the problems:

- **eBook and resources:** Clicking on the eBook Link icon within a question will show you relevant readings. There is no point penalty for using this.
- **Hint:** The View Hint link will offer a direct suggestion but incurs a 5% deduction from the question score (the deduction is only applied once per question).
- **Check my work:** You can click the “check my work” icon to see if your answer is correct before submitting it for grading. This can only be used once per question.

Assessment:

Assessment involves measuring student progress as well as teaching effectiveness. Student IDEA evaluations will be used to evaluate course/instructor strengths and weaknesses. Constructive suggestions are welcome.

General Learning Objectives for 2310

At the end of this course, a student should:

- 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 common reactions of alkenes and be able to predict the products of such reactions.
- Be able to draw and interpret reaction coordinate diagrams, and 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.

Grading Scheme: Point Distribution:

Best two out of three one-hour exams (100 pts each, 200 total)

Best ten out of eleven graded homework assignments (10 pts each, 100 total)

Comprehensive Final (200 pts)

Total Points: 500

Grade Assignment: A student's grade for the course is determined solely by exam and homework performance. The final grade percentile ranges given below are guaranteed. The actual grade ranges may be curved slightly lower at the discretion of the instructor.

A, A-	90% or higher (450 points)
B- to B+	80% or higher (400 points)
C- to C+	68% or higher (340 points)
D to D+	55% or higher (275 points)

Course Procedures and Regulations:

1. What is covered on the exams? Exams may cover any material from lectures and from the text. Not all material assigned in the text will be repeated in lectures. It is expected that students will come to class having read assigned sections of the text ahead of time.

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 evaluate your ability to apply basic principles taught in the course to solve new problems.** Practice problems and past exams will be available on the Canvas site.

Any questions about exam grading must be discussed with the instructor within one week of the return of the exam. No grading adjustments will be made after this time.

2. Course policies for make-up exams and for Incomplete grades: There will be no make-up exams. An exam may be taken in advance by prearrangement with a valid excuse (i.e. funeral, surgery, or scheduled absence due to university-sponsored activity). A missed examination for a reason meeting the university guidelines for excused absence (<http://catalog.usu.edu/content.php?catoid=12&navoid=3160>) will receive a grade equal to the percentage earned on the course final exam. A missed exam for any other reason will receive a grade of zero. (Note, for course grading calculation, the lowest score among the three one-hour exams is dropped). If appropriate, a grade of Incomplete may be assigned for extenuating circumstances according to university policy. See: <http://catalog.usu.edu/content.php?catoid=12&navoid=3805> for the current policy.

3. Graded homework will be given through the online text site and must be taken on your own time. Each homework assignment will be available for a full week, from Wednesday morning, until the following Wednesday at midnight. They will consist of various problem types, where you may have to draw structures or show mechanisms. They will be open-book, worth up to a maximum of ten points for each assignment. You can have as many attempts as you wish before the due date.

You are responsible for your homework grades:

- 1) It is your responsibility to note homework due dates, monitor your McGraw-Hill Connect site, and insure that you complete the homework before it closes and that a score is properly recorded.
- 2) Homework is not posted every week. Pay attention to the calendar.
- 3) Do not wait until the last open day to do the homework. No accommodations will be made for last minute emergencies or internet/computer issues that prevent you from doing the homework. No extensions will be granted for any reason.

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. Rescheduled exams are not given to accommodate personal travel, weddings, etc. 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 here: <http://www.usu.edu/registrar/registration/after/add-drop>. The last day to add or drop is 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 Registrar's web site for exact dates.

6. 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.

7. 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. If you have a question about a practice problem, bring any partial work you have completed. If you have a study group, feel free to come as a group.

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 practice problems in the text as you have time for!** Studying and working practice problems in groups is very beneficial if everyone contributes.
- Use the practice tests posted in Canvas 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.