

***Chemistry CEE 2301***  
***Elementary Organic Chemistry I***

W: 6:00-9:00 p.m.  
100 Smith Hall  
Fall Semester, 2008

*Instructor:* Professor Steven Kass, 223 Smith Hall, 625-7513 (kass@umn.edu)

*Website:* <http://www.chem.umn.edu/class>

*Office Hours:* Wednesday, 4:00-5:00; Monday, 11:00-12:00; other times by appointment.

*Teaching Assistants:* Teaching Assistants are available for questions in Room 121 Smith Hall.

*Texts:* L. G. Wade Jr., Organic Chemistry, Sixth Edition, Prentice-Hall, Inc., Solutions Manual and Molecular Model Set. Flash cards by Prof. Gray also are available at the bookstore and are recommended, but are not required. The Wade website at [www.prenhall.com/wade](http://www.prenhall.com/wade) is useful as well. It has practice questions, 3-D visualizations and much more.

*Exams:* Four 50 minute exams [notes, model sets, and calculators are forbidden during tests].

Exam 1, October 1  
Exam 2, October 22  
Exam 3, November 12  
Exam 4, December 3

*Final Exam:* Wednesday, December 17, 6:00-9:00 p.m. (3 hours).

All four hour exams will be taken in 100 Smith Hall and in a classroom still to be determined. If your last names starts with an A - K, please go to 375 Science Classroom Building for your exams, whereas if your last name begins with L-Z then 100 Smith Hall is where you should go.

**GRADING:**

Hour Exams:                   20% x 3 = 60% (or 20% x 4 = 80%)  
Final Exam:                   40% (or 20%)

Grading Scale: A 80–100%; B 60–79%; C 40–59%; D 30–39%; F 0–29% (minus and pluses will be used so the lower end of the specified ranges will receive the letter grade (A, B, and C) with a minus and the higher part of the ranges will get the letter grade with a plus (B and C only)

Final grades will be assigned based on either one's three highest 50 minute exams (60%) and the final exam (40%) or all four 50 minute exams (80%) and the final exam (20%) depending upon which scheme gives the higher total numerical score. This will be done for you, and your grade assigned accordingly.

**NO MAKE-UP EXAMS WILL BE GIVEN.** If one misses a 50 minute exam it will be treated as one's lowest exam score and will be dropped. One's grade will be based on the remaining three 50 minute exams (60%) and the final (40%). If additional exams are missed they will be recorded as zeros and counted as such. If the final exam is missed, it can be made up only by taking a grade of "I".

All exams should be taken in INK. If you believe a grading error has been made, write the nature of the problem on a separate sheet of paper, attach it to your exam and turn it in to me within 1 week of when the exam was returned to the class. The whole test will be examined and points will be added/subtracted as appropriate. Regrades will not be considered for exams taken in pencil.

*Policy for "I" Grades:* Any student who does not officially withdraw or who does not satisfactorily complete the course will receive an "F" grade. As for incompletes, the policy of the Chemistry Department is that a student may request an incomplete only when (a) he or she has a University sanctioned excuse for missing the final exam and (b) he or she is passing the course based on all other graded components. Assignment of an I requires that the instructor and student sign a contract, available in the Departmental undergraduate office, stipulating the procedure by which the I grade will be made up (e.g., taking a final exam from another instructor in the next semester). Failure to complete successfully the procedure outlined in the contract will result in the I being administratively changed by the University Registrar to an F or N (depending on the grade base) one calendar year from the end of the semester for which the I grade was granted.

### **How To Do Well In This Class**

1. **COME TO CLASS.** Organic chemistry is a fast paced class. To do well you must keep up. Lectures will cover material in the book as well as other things that are not in the text.
2. **PARTICIPATE IN CLASS.** Come to class thinking. Try to follow what is being said in lecture. Don't just copy it down in your notes.
3. **PROBLEMS!!** As soon as you can, start working problems and practice writing compounds and reaction mechanisms. You cannot learn organic chemistry simply by reading or listening to the lecture. To apply the concepts you are learning, you must work problems. When you test yourself you may get stuck and have to look back at the book or solutions manual to answer the problem. This is fine, but, you will want to try a similar type of question at a later date without resorting to this crutch. Remember, you will not have the solution manual or textbook on the exam. If you select a variety of problems and solve them under exam conditions (no book, limited time), this should provide you with a good indication of how well you know the material and how you might expect to perform on the real test.

Remember, contrary to what many people think, science is not a vast array of trivial facts. It is a set of a few concepts that can be used to predict a wide variety of things. In this class, you will learn and apply such concepts. This is what makes organic chemistry interesting and even fun!

### **Policy on Academic Dishonesty:**

Scholastic dishonesty is a serious violation of ethical standards. *In this course, the use of any material not supplied by the instructor during an exam (except for a pen) constitutes scholastic dishonesty.* Model sets, calculators, notes, and copying the work of another are strictly forbidden for all of the examinations in this course. If a student is found cheating on an exam the matter will be reported to the student's college Scholastic Conduct Committee and they will receive a zero on the test or an "F" in the course. In the former case, this result may not be used as a dropped exam.

## Approximate Course Schedule

During the semester we will cover Chapters 1-3, and 5-13 of the text. It is imperative that you carefully read these chapters and *work as many problems as you can*. Learning organic chemistry is like learning a foreign language or riding a bicycle - one needs to practice extensively. You need to get involved, ask questions, practice writing molecules, memorize key points, and spend a lot of quality time with your textbook in a quiet location!

Week 1:	Chapter 1:	Introduction and Review
Week 2:	Chapter 2:	Structure and Properties of Organic Molecules
Week 2-3:	Chapter 3:	Structure and Stereochemistry of Alkanes
Week 4-5:	Chapter 5:	Stereochemistry

### **Exam 1 (October 1)**

Week 6-7:	Chapter 6:	Alkyl Halides: Nucleophilic Substitution and Elimination
Week 8:	Chapter 7:	Structure and Synthesis of Alkenes

### **Exam 2 (October 22)**

Week 9-10:	Chapter 8:	Reaction of Alkenes
	Chapter 9:	Alkynes
Week 11:	Chapter 12:	Infrared Spectroscopy and Mass Spectrometry

### **Exam 3 (November 12)**

Week 12:	Chapter 13:	Nuclear Magnetic Resonance Spectroscopy
Week 13:	Chapter 10:	Structure and Synthesis of Alcohols
Week 14:	Chapter 11:	Reactions of Alcohols

### **Exam 4 (December 3)**

Week 15:	Review
----------	--------

### **Final Exam 6:00–9:00 (December 17)**

## Assigned Problems

(These represent an absolute minimum number. The more you can do, the better)

Chapter 1: 25, 26, 27, 34, 36, 37, and 41.

Chapter 2: 27, 28, 30, 35, and 39,

Chapter 3: 33, 34, 37, 42, 44, and 46.

Chapter 5: 26, 27, 28, 29, and 30.

Chapter 6: 43, 44, 45, 46, 47, 53, 55, 56, 61, and 72.

Chapter 7: 38, 41, 45, 49, 50, and 56.

Chapter 8: 47, 49, 50, 61, 64, and 67.

Chapter 9: 33, 34, 36, and 37.

Chapter 10: 37, 38, 40, and 49.

Chapter 11: 42, 46, 48, 54, and 56.

Chapter 12: 15, 16, 20, 23, and 25.

Chapter 13: 34, 36, 39, 40, 45, and 47.