

Chemistry 230-002, Fall 2011
Organic Chemistry I
Course Description and Syllabus
Class Sessions: TR 12:30 pm - 1:45 pm, CP-139

This print-out is an abbreviated version of the syllabus.

Get the full syllabus online at:

<http://www.chem.uky.edu/courses/che230/SAO/>

Instructor: Dr. Susan A. Odom

207 Chemistry-Physics Building

Office phone: 257-3294

Email: susan.odom@uky.edu

Office Hours: MWF 11:00 am-12:00 pm in CP-207

Help Sessions: Monday 5:00-6:00 pm in CP-220

Appointments: If you cannot attend office hours, please request appointments outside of office hours by email.

Course Objectives: To study the structure and reactivity of the major classes of organic compounds, and to develop the problem-solving skills related to organic chemistry. Upon completing the course, students will have the ability to analyze organic compounds and predict the outcome of reactions, even ones that have not explicitly been discussed. Students will have a better understanding of how organic chemistry relates to health, energy, and the environment.

Course Resources

1. *Organic Chemistry*, by Janice Smith (3rd Edition, suggested). The author also offers a Study Guide/Solutions Manual (optional). Smith's 2nd edition is also fine instead, and it is also reasonable if you'd like to use a different organic chemistry textbook altogether (McMurry, Jones, etc.).

2. The Internet is filled with free videos and tutorials. Some links will be posted on the course website and Blackboard. You are also encouraged to seek out your resources.

3. A set of molecular models, for example: HGS Molecular Structure Model Kit W.H. Freeman & Co. ISBN: 0716748207

Grading: The course will be graded on the basis of total points earned on homework assignments (100 points), midterm exams (600 points), and the final exam (300 points).

Homework: homework using the online program Ace Organic. Points for homework will be awarded based on the average percent score for all homework assignments weighted equally. *The first homework assignment is to register for Ace Organic and to answer the questions by August 29, 2011 at 11:59 P.M.* <http://epoch.uky.edu/ace/>

Exams Dates:

Exam 1: Sept 20 (12:30pm - 1:45pm)

Exam 2: Oct 18 (12:30pm - 1:45pm)

Exam 3: Nov 15 (12:30pm - 1:45pm)

Final: Dec 13 (8:30–10:30 pm) (CP-139)

To prevent your email message from going to my spam folder, all email correspondence related to this course should be sent via your @uky.edu email account, and the subject of all emails should begin with "CHE 230." Additional text may follow.

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Attendance: Attend every lecture. If you skip classes, poorer performance on exams will be your penalty.

Course Resources

1. *Organic Chemistry*, by Janice Smith (3rd Edition, suggested). The author also offers a Study Guide/Solutions Manual (optional). Smith's 2nd edition is also fine to use instead, and it is also reasonable if you'd like to use a different organic chemistry textbook altogether (McMurry, Jones, etc.). However, reading assignments will be based on the Smith textbook chapter and section numbers, so you'll just have to make sure you find the right sections in your textbook if you choose a different book.
2. The Internet is filled with free videos and tutorials. Some links will be posted on the *course website* and *Blackboard*. You are also encouraged to seek out your resources.
3. *A set of molecular models*, for example: Prentice Hall Molecular Model Set For Organic Chemistry ISBN 0205081363

Course Website: <http://www.chem.uky.edu/courses/che230/SAO/>

Grading: The course will be graded on the basis of total points earned on homework assignments, midterm exams, and the final exam. Students will be provided with a Midterm Evaluation by October 21, 2011, showing your course performance.

Coursework Points

ACE Organic Assignments	100	<i>Grades assignments</i>
Exam 1	200	A: 900-1000 points
Exam 2	200	B: 800-899 points
Exam 3	200	C: 700-799 points
<u>Final Exam</u>	<u>300</u>	D: 600-699 points
Total Points Possible	1000	E: 0-599 points

Note these exceptions to the grading policy described above:

- (1) If you have obtained 650 points or more *before* the final examination, you will receive an A for the course, no matter your grade on the final (you don't even have to take it!)
- (2) If you receive a 285 or higher on the final exam and your total score is below 900, your letter grade will be raised to the next higher letter grade. For example, a course total of 750 points then become a B if you receive a score of 285 or higher on the final exam. A course total of 888 points for the course would become an A. However, a course total of 888 points will *not* become an A if the score on the final exam is less than 285 points.

There will be no individual exceptions to this grading policy. If a curve is applied, it will only be used to raise your score, not lower it. However, do not count on a curve as it is highly unlikely.

Ace Organic: homework using the online program Ace Organic (<http://epoch.uky.edu/ace/>). The first homework will be to register for Ace Organic and to successfully answer one question, with a due date of August 29, 2011 at 11:59 P.M. Future due dates will be every Monday, Wednesday, and Friday at 11:59 P.M. unless a homework assignment has not been posted by 2:00 PM on the homework's due date. No Ace Organic homework assignments will be assigned for a grade during dead week or finals week, although optional practice exercises may be posted. Points for homework (100 points maximum) will be awarded based on the average percent score for all homework assignments weighted equally, whether or not the length or difficulty of the individual assignments was similar or not.

Exams: The exams will emphasize material covered since the last exam, but since new chemistry builds on old chemistry, command of the older material will be necessary. All exams will be cumulative.

Exam 1: Sept 20 (12:30pm - 1:45pm) Exam 2: Oct 18 (12:30pm - 1:45pm)
Exam 3: Nov 15 (12:30pm - 1:45pm) Final: Dec 13 (8:30–10:30 pm) (CP-139)

Be prepared to show your student identification card at the exams. A state-issued ID will not be counted as an acceptable form of identification instead of a student ID. If you forget your student ID, we will take your photograph as you turn in your exam to check it against your student ID photograph.

If you believe an exam was misgraded, mark the number of the problem in question on the front page of the exam and return it to me within one week from the day the exam was returned. Exams can be returned for regrading for one week from the day the exam was available to be picked up. Changing an answer, then asking that the problem be regraded is cheating and will result in a *minimum* penalty of an E in the course, in accord with University rules. Selected exams will be scanned in order to minimize the temptation for this. All graded work must be entirely your own. Attempts to claim another person's work as your own, in any form or under any guise, is forbidden and will be dealt with in accord with University regulations.

Molecular models and writing utensils are permitted at exams. Notes, books, calculators, or other electronic devices are not permitted.

Alternative/Makeup Exams: Students who have academic conflicts (i.e. conflicts with University classes, participation in athletic teams, etc.) will be offered either an alternate exam time. Please contact me as soon as possible if you will be unable to attend one of the scheduled examinations. A student who has legitimately missed an exam because of a documented, excused absence that conforms to the University Senate Rules will be allowed the opportunity to take a make-up exam. Makeup exams must be completed within one week of the original exam date. If an exam is missed without an excused absence, a '0' will be recorded as the score for that exam. The University Bulletin and the manual "*Student Rights and Responsibilities*" describe what is a valid excuse for a missed exam.

Disabilities: If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

Drop/Withdraw Dates - <http://www.uky.edu/Registrar/AcademicCalendar.htm>

- September 14 - Last day to drop a course without it appearing on the your transcript
- November 4 - Last day to withdraw from the course

Content: The first part of the course will concentrate *on the structure of organic compounds and on how we study those structures.* (Specific reading assignments will be given in class.)

Chapter 1 Structure and Bonding

Chapter 3 Introduction to Organic Molecules and Functional Groups

Chapter 4 Alkanes

Chapter 5 Stereochemistry

Chapter 16 Conjugation, Resonance, and Dienes

Chapter 17 Benzene and Aromatic Compounds

Chapter 13 Mass Spectrometry and Infrared Spectroscopy

Chapter 14 Nuclear Magnetic Resonance Spectroscopy

The last part of the course will concentrate on the reactivity of organic functional groups.

Chapter 2 Acids and Bases

Chapter 6 Understanding Organic Reactions

Chapter 7 Alkyl Halides and Nucleophilic Substitution

Chapter 8 Alkyl Halides and Elimination Reactions

Chapter 9 Alcohols, Ethers, and Epoxides

Course Policies, Advice, and Study Habits: All email correspondence related to this course should be sent via your @uky.edu email account. The subject of all emails should begin with "CHE 230." Additional text may be provided after "CHE 230" but nothing should precede it. This is for organizational purposes (it will help us find and keep track of your emails). Email messages received from any other account cannot be authenticated and may not be recognized by email filters.

We will make a reasonable effort to convey the concepts of organic chemistry to you.

We expect you to take an independent role in your own education and to be responsible for your study and learning habits. We will generally respond to emails within 48 hours. Please do not email questions for which the answer can be found in the syllabus or course website. This will allow us to spend more time helping you with unique problems and information.

Attend **every** class session. We will be going over material and problems that are not necessarily in the text. Read and think about each topic before the lecture. DO NOT FALL BEHIND. *Remember, you cannot cram for an organic exam!* Organic chemistry is best learned by engaging the material every day and in parts. Waiting until the last minute to study will leave an overwhelming amount of material to be learned in too little time. Consistency and discipline are the keys to success. If you're having trouble with a concept, stop by for office hours or send an email to schedule an appointment.

We encourage you to work together. Working together on homeworks can be very beneficial. You can learn how your fellow students think about approaching a problem, which can be valuable to you. Of course it won't help if you just copy their answers. We will not track down this behavior, but strongly discourage copying homework answers instead of figuring them out yourself. The homeworks are meant to encourage you to regularly think about the course material. Additionally, the penalty for getting an answer incorrect and resubmitting it is quite small (minimal point deductions will be taken for incorrect answers, the details for which will be posted in the instructions for each assignment), allowing you to have multiple attempts at figuring out the correct answer without losing all credit. The homework has been assigned to 10% of your grade because this will require most of you to complete the homework in order to obtain a high grade, but it is not meant to punish you while you're learning the material. Consider this your practice that gives you some easy points toward your final grade!

Finally, organic chemistry can be quite a challenging course. It requires the development and use of critical thinking skills that are distinctively unique from other courses you will have encountered. In my opinion, organic chemistry should not be about you can memorize but instead should be about how you use the information around you to better predict, analyze, and understand the reactivity of organic compounds. Organic chemistry has relevance in medicine, pharmacology, engineering, environmental science, and many other fields outside of chemistry itself. A thorough understanding of the behavior of organic compounds will enable you to make better decisions in your personal life and in your career, no matter what your major or career goals are.

We are committed to making this course a positive experience for everyone. Your feedback and suggestions for improvement are always greatly appreciated. We wish you a fantastic semester!