

CHEMISTRY 341

THE UNIVERSITY OF LOUISVILLE

DEPARTMENT OF CHEMISTRY

CHEM 341, Organic Chemistry 1 (3 Credit hours) (Spring 2008)

Course description

Fundamental principles and theories of organic chemistry. Prereq: CHEM 202 and 209; 341 is prerequisite for 342

Course Information

- Lecture Times: TTh 9:30–10:45 a.m. in Humanities Building 205
- Instructor: Dr. Syed Raziullah Hussaini
- Office: Room 334, Chemistry Building
- Tel.: 502-852-7499
- Email: srhuss01@louisville.edu
- Office hours: MW 11:00 a.m. –12:00 p.m. At other times by appointment.
- Textbook: Organic Chemistry by Joseph M. Hornback, (second edition) and a set of molecular models.
- Recommended: Study Guide and Solutions Manual for Hornback.

Recitation

TA's Name: Marek Wlodarczyk (mtwlod01@gwise.louisville.edu)

Meeting times : 341-01A Th 1-1:50 PM Life Sciences Building 130

341-01B Tues 1-1:50 PM Natural Sciences Building 130

341-01C Mon 1-1:50 PM Natural Sciences Building 130

341-01D Th 12-12:50 PM Chemistry Building lower level 16

Even though recitation is not graded, you are strongly advised to attend it. Some of the problems that you will discuss in the recitation will most likely come in the exam.

The Course

This course is the first of a two-part introduction to the principles of organic chemistry, the chemistry of the compounds of carbon. The content can be classified as *structure, reactivity, and synthesis*. You will learn how atoms are joined together in organic compounds, how their structure affects their bulk properties, how we can gain information about the structure of unknown organic compounds, and how organic compounds are transformed into other organic compounds. Attendance is not mandatory, however, it is strongly advised, as much of the exam material will come directly from lecture notes.

Tentative lecture schedule

Date	Topic	Section in Text
Jan 08	A Simple Model for Chemical Bonds	Chapter 01
Jan 10	Organic Compounds: A First Look	Chapter 02
Jan 15	Orbitals and Bonding	Chapter 03
Jan 17	Orbitals and Bonding	Chapter 03
Jan 22	Nomenclature I	Chapter 05
Jan 24	Exam I	
Jan 29	The Acid-Base Reaction	Chapter 04
Jan 31	The Acid-Base Reaction	Chapter 04
Feb 05	Stereochemistry I	Chapter 06
Feb 07	Stereochemistry I	Chapter 06
Feb 12	Stereochemistry II	Chapter 07
Feb 14	Stereochemistry II	Chapter 07
Feb 19	Exam 2	
Feb 21	Nucleophilic Substitution Reactions	Chapter 08
Feb 26	Nucleophilic Substitution Reactions	Chapter 08
Feb 28	Elimination Reactions	Chapter 09
March 04	Elimination Reactions	Chapter 09
March 06	Uses of SN and E Reactions	Chapter 10
March 18	Uses of SN and E Reactions	Chapter 10
March 20	Exam 3	
March 25	Addition Reactions	Chapter 11
March 27	Addition Reactions	Chapter 11
April 08	Nomenclature II	Chapter 12
April 10	IR Spectroscopy	Chapter 13
April 15	NMR Spectroscopy	Chapter 14
April 17	NMR Spectroscopy	Chapter 14
April 28	Final Exam	

Homework

ACE Organic, a web-based organic chemistry homework program will be used. This program asks you to draw organic structures in response to a question. If your answer is incorrect, you are given some feedback, but you are not told the correct answer. You need to keep trying until you get the right answer.

Your performance on the electronic homework problems (percentage of problems answered correctly, excluding the tutorials) will contribute 10% to your overall grade. You will be allowed an infinite number of tries to answer most questions, so there is no reason any person cannot score 100% on the electronic homework.

Visit <http://www.prenhall.com/aceorganic/> for instructions on gaining access to ACE Organic.

The Access code for each student is provided in the grade book on blackboard. Please add PSABO- before your code.

Exams

- Exam 1: Thursday, January 24, in class
- Exam 2: Tuesday, February 19, in class
- Exam 3: Thursday, March 20, in class
- Final exam: Monday, April 28, 8–10:30 am.

You may bring neither your molecular model kit nor a calculator to the exams. (This is partly for your own benefit, since model-making is time-consuming. Any math that you need to do will be simple arithmetic.) All exams are cumulative. Any subject covered on an earlier exam may reappear unexpectedly on any later exam.

Grading Policies

Each of the in-class exams will contribute 20% to your final grade and the final will contribute 30%, and the electronic homework will contribute 10%. The final assignment of letter grades will be based *approximately* on the following schedule: A= 85+, B= 65–85, C= 50–65, D= 40–50. I reserve the right to lower these divisions depending on the difficulty of exams and where breaks in the distribution occur. Grades are assigned on the basis of student performance, not proportions; in other words, students are not competing against each other for grades.

Students may miss one exam if they have a documented, excused absence that conforms to the University Rules. The documents must be presented within a week of the missed exam. Make-up exams will not be given; the student who misses an exam for a legitimate reason will have the two other hourly exams each count for 25% of their grade and the final count for 40%. (Remember, all exams are cumulative; if you miss one exam, it doesn't mean that you don't have to learn the material!) Students with two documented, excused absences will have their final exam count for 65%. Students who miss three or more exams or the final exam for any reason will receive an "F". Students who miss an exam without an excuse will receive a zero for that exam at my discretion. If you miss an

exam for any reason, even an undocumented one, please discuss the circumstances with me.

All exams will be returned to you after they have been graded. Please check them over for addition mistakes. If you were marked down for an answer that you think was correct, submit it to me with a brief written argument. Oral requests for regrading will not be entertained. Requests for regrading must be received within one week of the return date. A student who has changed an answer and presented it for regrading has cheated. He or she will accordingly receive an F in the class and may be subject to further disciplinary action. In order to remove any temptation to do this, some exams will be photocopied before they are returned.

You must have a valid photo ID at the exams. All graded work must be entirely yours. Attempts to claim another person's work as your own will be dealt with in accord with the university regulations.

The blackboard for this class is an essential resource. Check it often!

Useful Web Site

<http://www.chem.uky.edu/courses/che230/SRH/welcome.html>

<http://louisville.edu/a-s/chemistry/syllabi.htm>

I reserve the right to make changes in the syllabus when necessary in order to meet the learning objectives, to compensate for missed classes, or for other similar reasons.