

CHM 227-01 Fall 2003
ORGANIC CHEMISTRY I
Room 114 Chemistry
Lecture: 8:30-9:45 AM T-R

COURSE INFORMATION

- Instructor: Prof. Matthew J. Mio
Office: Chemistry Building Room C215A
Phone: 313.993.1188
E-mail: miomj@udmercy.edu
Office Hours: 12 – 1 PM M-T-W-R-F or anytime by appointment
- Prerequisites: CHM 108 – unit conversions, classifications of matter and change, ionic and covalent bonding, chemical formulas, moles, molar mass, equation balancing, stoichiometry, solubility, concentration, oxidation, reduction, periodic size trends, valence, electronegativity, Lewis structures, supramolecular interactions, chemical thermodynamics, enthalpy, entropy, Gibbs' free energy, reaction coordinate diagrams, chemical kinetics, chemical equilibria, acid/base theory
- Course Description: First in a two course series covering organic chemical structure and reaction mechanisms.
- Course Objectives: Students will learn how to apply general chemical concepts to the analysis of organic molecules' structure and reaction behavior. In a larger sense, students will be expected to exercise logic, attention to detail, memorization and critical thinking in the solving of organic chemical problems.
- Course Outcomes: Upon successful completion of this course, students will be able -
1. To communicate in the conventions and nomenclature of organic chemistry.
2. To understand the concepts of constitutional, conformational and stereochemical isomerism.
3. To apply the qualitative methods of mass spectrometry, infrared spectroscopy, and nuclear magnetic resonance in the determination of organic chemical structure.
4. To determine the general modes of organic reaction and employ this knowledge in the solving of mechanistic problems.
- Primary Resource: Ege, S. N. *Organic Chemistry: Structure and Reactivity, 5th ed.*; Houghton-Mifflin: Boston, MA, 2003. (required) Handouts. (supplied by Prof. Mio)
- Molecular Models: *Molecular Visions* by Darling Models. (required)
- Course Outline: *Readings in Ege must be completed prior to class.*

Tuesday	Thursday
2 Sept. – 1.1-1.9	4 Sept. – 5.9-5.10
9 Sept. – 2.1-2.6	11 Sept. – 2.7-2.11; PS #1 out
16 Sept. – 1.7, 5.1-5.3, 5.5-5.6; PS #1 due	18 Sept. – 5.8, 5.11
23 Sept. – 6.1-6.3, 6.5-6.7	25 Sept. – 6.8-6.10; PS #2 out
30 Sept. – 5.4, 5.7; PS #2 due	2 Oct. – 12.3
7 Oct. – 12.2	9 Oct. – 11.1-11.4; PS #3 out
14 Oct. – 11.5-11.6; PS #3 due	16 Oct. – 4.1-4.4
21 Oct. – 3.1-3.4	23 Oct. – 3.5-3.7; PS#4 out

28 Oct. – 7.1-7.4; PS #4 due	30 Oct. – 7.5-7.7
4 Nov. – 21.1-21.2	6 Nov. – 9.1-9.3, 8.1-8.3; PS #5 out
11 Nov. – 8.4-8.5, 8.8, 8.6; PS #5 due	13 Nov. – 8.9, 9.4-9.5
18 Nov. – 13.1-13.4	20 Nov. – 13.5; PS #6 out
25 Nov. – CATCH-UP; PS #6 due	27 Nov. – THANKSGIVING
2 Dec. – 13.7	4 Dec. – REVIEW
9 Dec. – PS #7	

Grading:

- I. Problem Sets (PS) – 105 pts \times 7 = 735 pts total
 - A. Seven questions per PS, fifteen points per question
 - B. First six PS can be group efforts, but each student must turn in an individual set of answers by 8:30 AM on the due date
 - C. First six PS will be handed out **Thursdays**, due the following **Tuesdays**
 - D. PS #7 will take place during the Final Exam time slot (**9 December 8–9:50 AM**) and will be an individual effort, though students may use notes, models and the text
 - E. Rigorous grading standards will be used in evaluating your work
- II. Quizzes – 100 pts banked; 10 pts \times 13 = 130 bonus pts total
 - A. Quizzes will occur at random times and have a length of 5 min
 - B. Each quiz will have two multiple choice problems
 - C. Each student receives 100 points to begin the term
 - D. Miss any three quizzes and you lose 100 points
 - E. Points earned on a quiz are bonus points
- III. Grading Scale (835 pts possible) – A = 100-93%, A- = 92-90%, B+ = 89-88%, B = 87-83%, B- = 82-80%, C+ = 79-78%, C = 77-73%, C- = 72-70%, D = 69-60%, F = 60-0%

Study Requirements:

1. **Thursday 11 September** will be an abbreviated (**8:30–9:20 AM**) lecture.
2. Cell phone or pager activity during lecture, a quiz or the final exam period will result in the student being asked to leave class for that day or a zero.
3. With regard to attendance/turning in work: Early is on time. On time is late.
4. You will be expected to follow the assignment schedule given in the course outline above. Read the text prior to class.
5. Studying in a group is fine, but Problem Set #7 must be accomplished individually. If you choose to study as a group, do not let one person do all the work. If you do not think for yourself, it will show on the last problem set.
6. Plan a study schedule and adhere to it strictly. Careful, attentive, daily work is the route to success. Consult the grade sought/study habits table for more information.
7. Get help as often as you need it! At any given moment I am not lecturing, I am available between the hours of 6 AM - 5 PM, six days a week, in my office (Chemistry Building Room 215A).
8. Cheating or plagiarism will not be tolerated. Students are expected to adhere to the highest standards of academic integrity. For further information, see the UDM Undergraduate Catalog or the Engineering and Science Student Handbook.