

Syllabus Chem 8 Elementary Organic Chemistry

Spring 1998 Kings River Community College Reedley

Instructor : J. Dekker

Office : PS 78 Phone 209.638.3641 extension 353
email jdekker@mail.mobynet.com

Office hours : M T Th 2:30-3:30 pm

Chem 8 meets : M W F 10:00-10:50 am in PS 77, [and occasionally
in FE-4E]

Textbooks 1. Brown, Introduction to Organic Chemistry
2. Traynham, Organic Nomenclature (5th ed)

Course objectives : Chem 8 is an elementary organic chemistry course for pre-med and pre-vet students and forestry and ecology majors. Also, dietetic majors and students that would like to have a better background in organic chemistry before entering the advanced organic chemistry class (Chem 28 AB) might want to take this course. In this class we make a study of the reactions of principal functional groups with emphasis on theory and practical applications. We will study some basic reaction mechanisms and using computer programs we will learn how to analyze simple Infrared (I.R.) Spectra and Nuclear Magnetic Resonance (N.M.R.) Spectra.

Quizzes and exams: There will be four quizzes, which will cover the material discussed in the previous lectures. The average score of the quizzes is worth two exam scores.

Including the final there will be a total of three exams, typically covering more material than the quizzes. Each exam including the final will be equally weighted.

If you have to miss a quiz or exam please notify the instructor ahead of time by phone mail or email. Without prior notification a no show for a quiz or exam is graded with a zero (0). This grade is also used for fraudulent behavior.

Grading: The average of graded homework and popquizzes is worth the weight of one exam score. If the students' attendance was 90% and she/he has fulfilled all the assignments properly and submitted **in time**, the lowest grade of the quizzes will be dropped. Break-off for grading A > 90%, B 80-89%, C 70-79%, D 60-69%, F < 59%.

Homework: Homework will be assigned often. It is essential to your success in this class that you do your homework, with the emphasis on readings in Brown's text. Homework will sometimes be collected and selected problems from Brown or Traynham will be graded. A popquiz might be given to check the homework assignment. The average of graded homework and popquizzes will count as one exam score.

Drop date: The final drop date is FRIDAY, MARCH 13, 1998. After that day a letter grade must appear on your transcript. If you are dropped from the class before the drop deadline you will receive a W.

Attendance: In accordance with Community College policy attendance is mandatory. Always let me know in advance by phone mail or email if you are to miss an assignment (homework, quiz or exam). If you miss two weeks or four consecutive lectures without prior notice you will be dropped automatically. Tardiness, leaving early, sleeping during class and poor class participation are all considered disruptive behavior and are punished with an absence.

Lecture topics.

Each of these topics will take approximately two weeks.

1. Structure and Bonding. The Nature of Organic Compounds. Alkanes.
2. Alkenes. The Nature of Organic Reactions. Alkenes and Alkynes.
3. Aromatic Compounds.
4. Stereochemistry. Alkyl halides.
5. Alcohols, Ethers, and Phenols.
6. Aldehydes and Ketones: Nucleophilic Addition Reactions.
7. Carboxylic Acids and Derivatives.
8. Amines. Structure Determination. M.S., I.R. and N.M.R.
9. Biomolecules.

There are no classes on M 1/19, F 2/13, M 2/16, and during Spring recess from 4/6 through 4/10.

Quizzes and exams:

Quiz 1 F 1/23

Exam 1 F 2/6

Quiz 2 F 2/27

Exam 2 F 3/20

Quiz 3 F 4/17

Quiz 4 F 5/8

Exam 3 (=Final Exam): Th 5/21 at 10:30 am in PS 77

Recommended readings, computer programs and CD-ROM's available in the Organic Chemistry Lab PS 77 or Math and Science Lab FE 4.

1. Solomons, Organic Chemistry [6th ed].
2. McMurry, Organic Chemistry [4th ed].
3. Luceigh, Organic Chem TV I and II. A very instructive CD-ROM developed at UCLA with a graphic visualization of hybridizations and organic reactions.
4. Lampman, Organic Nomenclature. An introduction to the IUPAC System. Computer program.
5. Smith, Organic Chemistry. Chemistry Review Series. Computer program.

JD/1/8/1998