

## **Syllabus Chemistry 8. Elementary Organic Chemistry.**

**Reedley College. Spring 2000.**

**Instructor : J. Dekker**

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**Office hours :** M, T and Th 2:30 pm-3:30

**Web site:** <http://www.rc.cc.ca.us> click on Academic Programs, Chemistry Department.

**Chem 8 meets :** M W F 10:00 am-10:50 in PHY 77

**Textbook :** Brown, Introduction to Organic Chemistry, second edition.

**Course objectives :** Chem 8 is an elementary organic chemistry course for pre med, pre pharm, pre dental, pre vet students and forestry and ecology majors. In addition, 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 Infrared (I.R.) Spectra and Nuclear Magnetic Resonance (N.M.R.) Spectra.

**Quizzes and exams:** There will be three quizzes, which will cover the material discussed in the previous lectures. The average score of the quizzes is worth two exam scores, which is equivalent to 33.33% of your final grade. Including the final there will be a total of three exams, typically covering more material than a quiz. The final will be equally weighted as the other exams and the average of all the exams comes down to 50.00% of your final grade.

If you have to miss a quiz or exam please notify the instructor ahead of time by phone or by 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 pop quizzes is worth the weight of one exam score, that is 16.67% of your final grade in the class. 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. The following break off is used for grading:

A > 90%, B 80-89%, C 70-79%, D 60-69%, F < 59%.

**Drop date:** The final drop date is FRIDAY, MARCH 10, 2000. 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.

**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 will be graded. A pop quiz might be given to check the homework assignment. The average of graded homework and pop quizzes is worth as much as one exam (!) score.

**Attendance:** In accordance with Community College policy attendance is mandatory. Please, let me know in advance by phone or email if you are to miss an assignment (homework, quiz or exam). When 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. Covalent Bonding and Shapes of Molecules.
2. Acids and Bases. Alkanes and Cycloalkanes.
3. Chirality.
4. Alkenes and Alkynes.
5. Reactions of Alkenes.
6. Haloalkanes. Nucleophilic Substitution Reactions.
7. Alcohols, Ethers and Thiols.
8. Benzene and Its Derivatives. Structure Determination. M.S., I.R. and N.M.R.
9. Biomolecules.

There will be no class on M 1/17, F 2/18, M 2/21, and during Spring Recess which is from M 4/17 through F 4/21.

### **Quiz and exam dates:**

Quiz 1: F 1/28

Exam 1: We 2/16

Quiz 2: F 3/10

Exam 2: F 3/31

Quiz 3: F 4/28

Exam 3 (= Final Exam): M 5/15 at 10:30 am in PHY 77

**Recommended readings, computer programs and CD ROM's available in**

**PHY 77 and FEM 4E.**

1. Solomons, Organic Chemistry, seventh edition.
2. McMurry, Organic Chemistry, fourth edition.
3. Luceigh, Organic Chem TV I and II. A very instructive CD ROM developed at UCLA with graphic visualizations of hybridizations and organic reactions.
4. Lampman, Organic Nomenclature. An introduction to the IUPAC System. An excellent computer program including a tutorial.