

Syllabus Chem 28A Organic Chemistry J. Dekker  
Reedley College Fall 1999

Office : PHY 78 Phone 559.638.3641 ext. 3353  
email: jan.dekker@d01.scccd.cc.ca.us  
Office hours : M 3:00- 4:00, T and Th 9:00-10:00, F 12:00-1:00  
Chem 28A meets : T Th 11:00-12:15 in FEM 4E  
Textbooks : - Solomons Organic Chemistry (7th ed)  
- Traynham Organic Nomenclature (5th ed)

Course objectives : Chem 28A is an organic chemistry course designed for biology and biological science majors. Chemical engineering, pre-med and pre-pharm professional majors will also need and enjoy this course. Students will acquire a solid base to study biochemistry, pharmacology and other biology and chemistry related fields in medical school, pharmacy school etc. In this class we make a thorough study of the reactions of principal functional groups with emphasis on theory and mechanism. Everything we do in this class is geared to a successful transfer for you to reputed four year institutions such as the UC system, UOP, USC etc.

Quizzes and exams: There will be three quizzes during this semester. 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.

A no show for a quiz or exam without prior notice is graded with a zero (0). This grade is also used for fraudulent behavior.

To resume, the percentage that each type of test counts towards your final grade is as follows:

Average of the exams	50.00%
Average of the quizzes	33.33%
Average of the homework and popquizzes	16.67%

Grading: The average of graded homework and popquizzes is worth the weight of one exam score. If the student's attendance is 95% and he/she 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 crucial to your success that you do your homework, with the emphasis on readings in McMurry's text. Homework will sometimes be collected and selected problems from McMurry or Traynham will be graded. Sometimes a popquiz will be given to check the homework assignment.

Drop date: The final date to drop this class is Friday, October 15 1999. After that day a letter grade must appear on your transcript. Friday September 3, 1999 is the last day to drop the class and avoid a W on your transcripts.

Attendance: In accordance with Community College policy attendance is mandatory. Always let me know in advance during one of my office hours 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 are all considered disruptive behavior and are punished with an absence.

Lecture topics.

Each topic will require about two weeks.

1. Carbon Compounds and Chemical Bonds.
2. Representative cCarbon Compounds: Functional Groups, Intermolecular Forces.
3. An Introduction to Organic Reactions: Acids and Bases.
4. Alkanes: Nomenclature, Conformational Analysis, and an Introduction to Synthesis.
5. Stereochemistry: Chiral Molecules.
6. Ionic Reactions- Nucleophilic Substitution and Elimination Reactions of Alkyl Halides.
7. Alkenes and Alkynes I: Properties and Synthesis.
8. Alkenes and Alkynes II: Addition Reactions.
9. Nuclear Magnetic Resonance (NMR) and Mass Spectrometry (MS): Tools for Structure Determination.  
Computer simulation programs will be used to actually analyze IR and NMR spectra.
10. Radical Reactions.
11. Alcohols and Ethers.
12. Alcohols from Carbonyl Compounds. Oxidation-Reduction and Organometallic Compounds.
13. Conjugated Unsaturated Systems.

There is no class on the Thursdays 11/11 and 11/25.

Lecture Quizzes and Exams:

Quiz 1 Thursday 9/2

Exam 1 Thursday 9/23

Quiz 2 Thursday 10/14

Exam 2 Thursday 11/4

Quiz 3 Tuesday 11/30

Final Exam: Thursday 12/16 at 10:30 am in FEM 4E.

Recommended readings and computer programs.

1. Matta, Biological and Organic Chemistry.
2. Luceigh, Chem TV Organic Chemistry I and II. CD-ROM.
3. Lampman, Organic Nomenclature. Trinity Software.
4. Zubay, Biochemistry.
5. Vollhardt and Schore, Organic Chemistry Structure and Function (3rd ed).