

Syllabus Chem 28A Organic Chemistry  
Kings River Community College Fall 1997

Instructor : J. Dekker

Office : PS 78 Phone 209.638.3641 ext. 353

Office hours : M 2:00- 3:00 pm, T Th 2:30 - 3:30 pm or by  
appointment

Chem 28A meets : T Th 9:00-10:15 am in FE 4E

Textbooks : McMurry Organic Chemistry (4th 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. The students will develop a level of learning skills, vocabulary and critical thinking skills which will enable them to successfully transfer to four year institutions.

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 pop quizzes 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 a class is Friday, October 17 1997. After that day a letter grade must appear on your transcript.

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. Structure and Bonding in Organic Chemistry. Hybridization.
2. Alkanes and Cycloalkanes.
3. Introduction to Stereochemistry. Molecular modelling.
4. Overview of Organic Reactions. Alkenes: Structure and Reactivity.
5. Reactions and Synthesis in Organic Chemistry.
6. Alkynes.
7. Stereochemistry, an in-depth Study.
8. Alkylhalides. Nucleophilic Substitutions and Eliminations.  
The  $S_N2$  and  $S_N1$  Reaction in Comparison with the  $E_2$  and the  $E_1$  Reaction. Competition between the Different Types of Reactions.
9. Structure Determination. Introduction to Spectroscopy.  
Mass spectrometry, IR and NMR. Computer simulation programs will be used to actually analyze IR and NMR spectra.

There is no class on Tuesday 11/11 and Thursday 11/28.

Lecture quizzes and exams:

Quiz 1 Thursday 9/4

Exam 1 Thursday 9/25

Quiz 2 Thursday 10/16

Exam 2 Thursday 11/6

Quiz 3 Tuesday 11/25

Final: Thursday 12/18 at 8:00 am in FE 4E