Syllabus Chemistry 3B Organic and Biological Chemistry
J. Dekker Kings River Community College

Fall 1997	Lecture MW 1:00 pm	FE4E
	Lab W 2:00-4:50 pm	PS 77
Office	PS 78 # 209.638.3641 ext.353	
Office Hours	M 2:00-3:00, T Th 2:30 - 3:30 or by appointment.	

Course objectives. Chemistry 3B is an elementary survey course in organic and biological chemistry including lab work designed to give the student a background for a wide variety of fields such as nursing, physical therapy, nutrition and other biological and health related areas.
The structure and behavior of organic and biochemical compounds, their metabolism and regulation are the general topics of this course. Chem 3B will require a considerable amount of time outside the classroom for studying, reading and homework assignments.
The textbooks used in this course include
1. Matta et al, Introduction to Organic and Biological Chemistry
2. Bettelheim/Landesberg, Laboratory Experiments for Organic and Biochemistry (2nd ed).

Lecture notes. The ability to listen effectively and to take good lecture notes represents an essential college skill. Taking notes in this class is not only mandatory but also required to know what topics are emphasized, and what will be asked to reproduce on quizzes and exams.

Laboratory work. Lab work will provide experiments as close and parallel as possible to the material covered in lecture. The student will have to perform all the assigned experiments. The lab instructor might deem it necessary to give a pop quiz, which will count as a lab report.
50% of the final lab grade will include the average of the graded lab report sheets, the efforts to reach the goal of the experiment, the accuracy of measurements and calculations, and the lab technique shown during the experiments. The other 50% of your lab grade is determined by the average of the three lab quizzes.

Homework. Homework will be asigned very often. It is crucial to your success in this class that you do your homework with the emphasis on the readings and homework problems in Matta's textbook. Randomly homework will be collected and selected problems graded. A pop quiz in lecture counts as a homework.

Attendance. Attendance in lecture and lab is mandatory. The student will be dropped automatically if she/he misses two consecutive lab sessions or four consecutive lectures. ALWAYS inform the instructor ahead of time if you have to miss a quiz or exam. Without prior notification your grade is a zero for a no show.

Quizzes and Exams. In lecture: There will be three quizzes covering the material of previous lectures. There will be three exams, the first one after 6 weeks, the second one after 12 weeks and a final, all dealing with more material than the quizzes. Each exam will be equally weighted.
In lab: After every experiment you will have to submit a brief lab report to your lab instructor.
Three quizzes will cover the material in lab. Each lab quiz will be equally weighted. Please refer to lecture and lab schedules.

Drop date. The drop deadline for this semester is Friday, October 17, 1997. This is the last day for the student to notify admissions and the lecture and lab instructor that she/he wants to drop the class, otherwise a letter grade will appear on the transcript.

Grading. The lowest grade obtained for a quiz and a lab will be dropped if you have fulfilled all your assignments properly and submitted to the instructor in time. To achieve this incentive your attendance has to be 90%. The final grade is calculated as follows: Exams 40%, Quizzes 20%, Homework 15%, Lab 25%.
Please be aware of the following rules. Tardiness, leaving early, and sleeping during lecture or lab sessions are considered disruptive behavior and are punished with an absence.
Fraudulent behavior during quizzes and exams is graded with a zero. Copying of experimental data and lab reports is considered fraudulent behavior for the copier and the originator.

Lecture topics. Each topic takes approximately two weeks.
The chapters mentioned here are from Matta's text.

1. Chemical Bonding. Alkanes and Cycloalkanes. IUPAC nomenclature. Isomerism. Ch 1 and 2.
2. Halocarbons, Alcohols and Ethers. Ch 3.
3. Aldehydes and Ketones. Ch 4.
4. Carboxylic Acids and Esters. Ch 5.
5. Amines, Amides Ch 6.
6. Carbohydrates. Stereochemistry. Ch 7.
7. Lipids Ch 8.
8. Amino Acids, Peptides, and Proteins. Ch 9.
9. Enzymes. Catalysis of the Reactions of Life. Ch 10.
10. A choice from the following topics: Nucleic acids, Digestion and Nutrition, Body Fluids, Metabolic Pathways.

There will be no lecture on Monday 9/1.

Quizzes and exams.

W 9/3 Quiz 1
W 9/24 Exam 1
W 10/15 Quiz 2
W 11/5 Exam 2
W 11/26 Quiz 3
T 12/16 Final Exam 1:00 pm in room FE4E

Lab work and lab schedule.

- It is MANDATORY TO USE SAFETY GLASSES AT ANY TIME THAT YOU ARE IN THE LAB. Wearing a lab coat is optional.
- You will have to perform all the experiments assigned by the lab instructor. When you miss an experiment for whatever reason you will have to make arrangements with the lab instructor for a make-up. You have to do this ASAP! A zero grade will be given for a lab that is not made up.
- An overall average F grade for the lab means an F in the class.
- Thoroughly prepare the labs by reading the experiment ahead of time and doing the Pre-lab questions.

Chem 3B Lab Schedule Fall 1997

Wednesday	Lab activity
8/20	Check in desk inventory. Introduction to safety in the lab. Take the Lab Safety Quiz. Sign the Safety Agreement.
8/27	Experiment 1, Structure in organic compounds. The use of the molecular model set.
9/3	Experiment 2, Identification of hydrocarbons.
9/10	Experiment 3, Column and paper chromatography.
9/17	Review of Safety in the lab and review of Experiments 1-3. LAB QUIZ 1.
9/24	Experiment 4, Identification of alcohols and phenols.
10/1	Experiment 5, Identification of aldehydes and ketones.
10/8	Experiment 6, Carboxylic acids and esters.
10/15	Titration of an unknown carboxylic acid. Hand out.
10/22	Experiment 7, Amines and amides.
10/29	Review of Experiments 4-7 and the titration experiment. LAB QUIZ 2.
11/5	Experiment 8, Polymerization reactions.
11/12	Experiment 9, Preparation of aspirin.
11/19	Experiment 10, Isolation of caffeine from tea leaves.
11/26	Experiment 11, Carbohydrates.
12/3	Experiment 12, Preparation and properties of a soap.
12/10	Review of Experiments 8-12. LAB QUIZ 3. Turn in desk inventory in a clean and proper condition.

JD 8/11/1997