

CHEMISTRY 152 (CRN 80906)
Survey of Organic and Bioorganic Chemistry (3 credits)
Course Syllabus and Lecture Schedule
Spring 2006

Instructor: Adele Casaschi, PhD, Assistant Professor of Chemistry

Office 1: Bilger 213, 2545 McCarthy Mall, University of Hawai'i at Manoa, Honolulu, HI 96822

Office 1 Hours: MWF 9:30 am – 10:15 am;
MWF 11:30 am – 12:15 pm, or by appointment.

Office 1 Phone: 808-956-5905

Office 2: Biomed C-204/C-205, J. Burns School of Medicine, University of Hawai'i at Manoa,
1960 East-West Road, Honolulu, HI 96822

Office 2 Hours: WF 4:00 pm – 5:00 pm, or by appointment.

Office 2 Phone: 808-956-9084

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Class: MWF 10:30 am – 11:15 am in Bilger 150.

Class is cancelled if, without prior notice, the Instructor is fifteen minutes late.

Prerequisites. Chemistry 151, 162, or 171

Course Materials:

- Required text: "Organic & Biological Chemistry" by Karen C. Timberlake, ISBN: 0-8053-2983-8.
- Recommended text: "Student Study Guide and Selected Solutions for Organic and Biological Chemistry" by Karen C. Timberlake, ISBN: 0-8053-2986-2.

Course Description. Chemistry 152 is a one-semester survey course in Organic and Bioorganic Chemistry. This course is intended primarily for students pursuing a career in nursing or allied health fields. Fundamental concepts in organic chemistry will be introduced in the first half of the spring semester, and biological chemistry will be taught in the second half.

Course Structure. The course is composed of four units. You are required to master the skills in each unit. Learn how to solve the problems in the book, and the problems done in class. You will be given

an exam on the material covered in each of the first three units as they are completed. The final exam will consist of 2 parts. Part 1 will cover unit 4, and part 2 will cover the whole book. Each exam and each part of the final is worth 100 points.

Grading. The lowest exam score on the four units, will be discarded. This does not apply to the final comprehensive exam (i.e., part 2).

The grading scale will be based on the following:

85-100%	A
70-84 %	B
50-69 %	C
35-49 %	D
0 -34 %	F

Missing an exam can have serious consequences. Do not wait until after the exam is given to try to make up an exam. If you know that you have a scheduling conflict you must make arrangements with the Instructor prior to the exam. In the case of an unexpected illness or problem you must still notify the Instructor before the exam is given, and be prepared to present a doctor's note or similar evidence to provide a valid excuse.

Student Responsibility. The job of the Instructor is to provide the best possible presentation of the material that he can, and to provide the best learning environment that is possible. It is not the Instructor's job to make the student study or to accommodate the student by making the standards of the course lower so that they can pass. It is the student's responsibility to put forth the effort required to learn the material and to become competent with it. This means mastering the problems in the text and using good study habits. The Instructor will be happy to help you achieve these goals.

The student should:

- preview the lecture material before coming to class;
- attend every class and take notes for later review;
- bring the text to class to follow the lecture;
- do problems from the text until you are competent - the first step to learning is to find out what you don't know;
- make a list of what you don't understand and bring it to class and/or office hours;
- realize that this is a skills building course and so will require considerable study outside of class.

What is Chemistry ? Chemistry is the study of how matter and energy behave. It is also a scientific method for observing the world and all of life. Knowledge of chemistry is used to make new discoveries about the world (research) and to change some aspects of the world by the invention of new materials and methods (technology). Chemistry is used by most other scientific disciplines making it a basic or universal science. There are hundreds of different fields and subfields of chemistry with very specific journals dedicated to each. Finally, chemistry is a practical science that can be applied in everyday life. For example, you use chemistry when you clean your house and when you read the food labels in the grocery store.

What is Organic Chemistry ? Organic chemistry is the study of the chemical and physical properties of organic compounds. Organic compounds are those which contain carbon and represent over 95% of known compounds. Some organic chemists isolate new compounds from natural sources and determine the structural formulas. These new compounds may have important pharmacological functions such as anti-cancer and other medications. Some try to synthesize compounds which have known structures and which are difficult or expensive to obtain from natural sources. Other organic chemists try to determine how organic compounds react so that we can gain a greater ability to synthesize compounds that we may want in the future.

What is Biochemistry ? Biochemistry is the application of chemical principles to biology. Science has progressed to the point that almost every type of biological research requires some aspect of chemistry and you will find that biochemistry covers a very wide range of subjects. Biochemists are usually involved in what is called basic research, for example in the search for the exact cause of cancer. Fewer biochemists are involved in applied research, for example the testing of a particular drug in cancer patients for the remission of cancer. Biochemists would be involved in the development of the drug rather than its clinical trials.