

SUNY/Oneonta
Department of Chemistry & Biochemistry

PROSPECTUS
CHEMISTRY 226 - ELEMENTARY ORGANIC CHEMISTRY

Spring Semester 2004

Professor in charge: Dr. Bruce Knauer

Office/Phone/E-mail: Physical Science Rm. 213/ (607) 436-3434/ knauerbr@oneonta.edu

Office Hours: Wednesdays: 2-3:50 pm; Fridays: 11 - 11:50 am; or by appointment.

Course URL: <http://employees.oneonta.edu/knauerbr>

Required texts and materials:

- 1) John McMurry, "Fundamentals of Organic Chemistry," Fourth Edition, Brooks Cole, 1998.
- 2) A set of molecular models.
- 3) Splashproof goggles for laboratory (available in bookstore).

Course Content: Course work in Chem 226 will generally follow the order of topics in McMurry. We will likely cover chapters 1- 10, 12, 15, and, possibly, parts of 14. Lecture / classroom discussion of topics will usually lag behind homework assignments so that you will already be familiar with topics (and perhaps have questions) when they are discussed in class.

Grading:

Attendance and homework credit*	= 150 points
*Deductions from this credit:	
unexcused absence beyond 2 nd	= 5 points,
homework late up to 1 week	= 5 points,
homework later than 1 week	= 10 points.
(You can lose more than 150 points.)	
Four examinations @ 100 points each	= 400 points
Final examination	= 200 points
Laboratory	= <u>250 points</u>
Course total	=1000 points

Class Participation: In order to participate you need to be here. Consequently, attendance will be taken. If you are absent **and provide a good reason, in writing, in timely fashion**, your absence will be excused. If you accrue more than two unexcused absences, you will be penalized 5 points for each absence beyond the first two. If you are excessively absent at any time during the first half of the semester you are liable to be involuntarily withdrawn from the course.

Homework:

Each homework assignment will consist of a substantial number of problems. Unfortunately, there is no shortcut to learning organic chemistry. Working (and reworking) the problems is critical for success. Reading the assigned material and attending classes *without working the problems will lead to disastrous results on quizzes, examinations and in class participation*. Homework assignments will be collected; you should hand in your work even if it is not complete. These assignments will not usually be checked for accuracy; however, solutions to problems will be posted at the course web site. You should study the posted solutions even if you're pretty sure you've gotten correct answers because (a) you could be mistaken and (b) the answers often include an analysis of the problem which can help clarify your own understanding of the subject. Further information about any problem may be obtained from the instructor [His willingness to respond to your questions is why – at least in part – he draws a munificent salary from the state.]. *Those assignments which are handed in up to one week late will result in a loss of 5 points from your course total; those which are not handed in within one week of the due date will result in a loss of 10 points*. Losing points by virtue of not handing in assignments on time is a case of shooting yourself in the foot.

You should keep current with your work. Most students need to devote about two hours a day to organic chemistry to be reasonably successful; this is probably best done in two one-hour blocks. Cramming is a highly *ineffective* way to study for this course.

You may cooperate with other students in solving homework problems. Some people find studying in a group to be effective. However, you should bear in mind that, to the extent solving homework problems is practice for taking the next examination, it may be counterproductive to depend too heavily on assistance from other students since such help, if detected during an examination, will result in harsh penalties (see below).

Further suggestions for studying organic chemistry can be found at these web sites:

<http://employees.oneonta.edu/knauerbr/chem226/226study.html>

<http://www.towson.edu/~sweeting/enrich/5steps.htm>

http://www.augustana.edu/users/chjensen/ch311_files/howtostudy.pdf

<http://www.sunysb.edu/healthed/organic.html>

Examinations:

Each of the four examinations will emphasize material which has been covered in class or assigned reading since the previous exam; however, it is the nature of organic chemistry that it is not possible to completely segregate more recent material from earlier material. Questions on these exams will range in difficulty from those which merely require memorization of facts or the application of simple rules to those which require mastery of the facts and concepts as well as mature and critical

thinking. You may use your molecular model kit for all examinations. A periodic table will be provided for each exam where it would be of use.

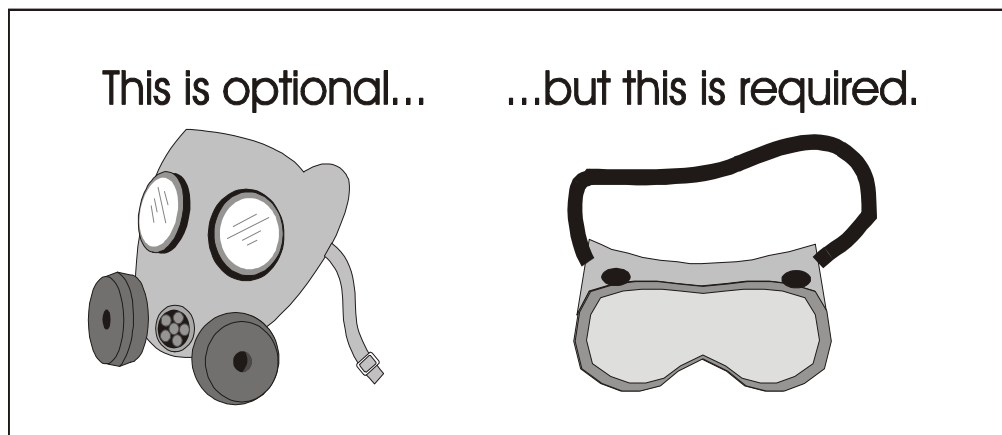
Examinations will be held in class on the following Mondays: February 16th, March 15th, April 19th, May 10th. **There will be no makeup examinations.** **If you are unable to attend one of the examinations because of illness or other valid reason, and inform the instructor, in writing, in timely fashion, the final examination will be used as a makeup exam.** Questions concerning the grading of an examination will be considered only until the next examination is given.

Final Exam: The final examination is cumulative and is scheduled for Friday May 14th, at 8AM. You may use your textbook and molecular model kit for this examination. If you are unable to take the final because of illness or other valid reason you will need to take a makeup.

Laboratory: Physical Science Rm. 210. Weekly attendance in the laboratory section for which you are registered is mandatory. Excused absences are at the option of your laboratory instructor, but will generally be allowed for illness, religious holidays, and participation in varsity sports meets, if you provide appropriate documentation. For each experiment you should download and print out the experimental details from the course web site at least 24 hours before you are to start the experiment.

Your laboratory grade will depend on your performance on laboratory experiments and your success on prelab quizzes, which will be based on the material you have downloaded. There are 12 experiments. Each is worth 20 points, with 15 points deriving from your experimental results and 5 points from the prelab quiz. This accounts for 240 of the 250 laboratory points; the remaining 10 points are earned by checking out.

THE SAFETY GOGGLES MUST BE WORN AT ALL TIMES IN THE LABORATORY



Course Grading Scale:	<u>Total points</u>	<u>Grade</u>	<u>Total points</u>	<u>Grade</u>
	900-1000	A	600-649	C
	850- 899	A-	550-599	C-
	800- 849	B+	525-549	D+
	750- 799	B	500-524	D
	700- 749	B-	475-499	D-
	650- 699	C+	< 475	E

The grade of incomplete is assigned only in the rarest of circumstances. In no case will it be used as a substitute for a withdrawal after the withdrawal deadline has passed.

Cheating/plagiarism: If you represent the work of another as your own, or you provide unauthorized assistance or receive unauthorized help on an assignment, quiz or examination, or use an unauthorized aid during a quiz or examination you are guilty of academic dishonesty. The *minimum* penalty for such behavior is a 0 on the assignment, quiz or examination.

Laboratory Schedule

☞ SAFETY GOGGLES MUST BE WORN AT ALL TIMES IN THE LABORATORY ☞

Prepare yourself for each laboratory experiment by studying the material relating to the experiment *before* you arrive in the lab. You will get a *lot* more out of the laboratory experience if you are prepared. In addition, you will be able to work more quickly and safely.

<u>Date</u>	<u>Experiment</u>	<u>Read Before Lab</u>
1/23, 1/26	Check In, Safety Melting Points	Safety Rules. Experiment 1
1/30, 2/2	Synthesis and Recrystallization of Dibenzalacetone	Experiment 2
2/6, 2/9	Hydrocarbons	Experiment 3
2/13, 2/16	Determination of Vitamin C	Experiment 4
2/20, 2/23	Polymers	Experiment 5
3/12, 3/15	Isolation of Caffeine from Tea Leaves	Experiment 6
3/19, 3/22	Preparation of Aspirin	Experiment 7
3/26, 3/29	Properties of Alcohols and Phenols	Experiment 8
4/16, 4/19	Identification of Aldehydes and Ketones	Experiment 9
4/23, 4/26	Properties of Carboxylic Acids and Esters	Experiment 10
4/30, 5/3	Chromatographic Separation of Amino Acids	Experiment 11
5/7, 5/10	Carbohydrates Check Out	Experiment 12