

Department of Chemistry & Biochemistry
State University of New York
Oneonta, New York 13820

PROSPECTUS
CHEMISTRY 221 - ORGANIC CHEMISTRY I
Fall Semester 2004

Professor in charge: Dr. Bruce Knauer

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

Office Hours: Mondays: 1 - 1:50 pm; Wednesdays: 11 - 11:50 am;
Thursdays: 4 - 4:50 pm; or by appointment.

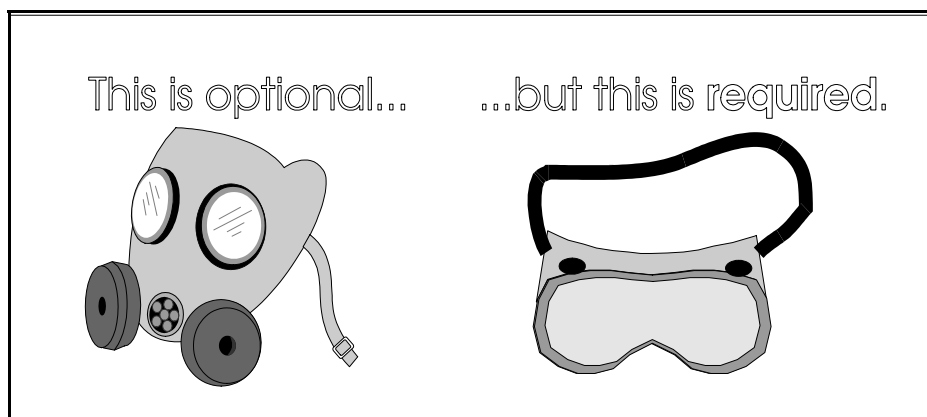
Required texts and materials:

- 1) John McMurry, "Organic Chemistry," Fifth Edition, Brooks Cole, 2000, ISBN: 0-534-37366-6.
- 2) Susan McMurry, "Study Guide and Solutions Manual for McMurry's Organic Chemistry, 5th edition", Brooks Cole, 2000, ISBN: 0-534-37192-2.
- 3) Set of molecular models.
- 4) Bruce Knauer, "Chem 221 - Organic Chemistry Laboratory Experiments," Third Edition, 1998.
- 5) Splashproof goggles for laboratory (available in bookstore).

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

Lab Instructor: Dr. Bruce Knauer, PS 213, (607) 436-3434
Sect. 1, Thursdays 12-3:50pm (CRN 873),
Sect. 2, Wednesdays 1-4:50pm (CRN 877),
Sect. 3, Tuesdays 12-3:50 (CRN 1249).

Lab:



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. In any event, if feasible, it is your responsibility to make up missed work.

- Course Content: Lectures in the Chem 221-322 sequence will generally follow the order of topics in McMurry and it is likely we will cover the first 14 chapters this semester.
- Course Web-site: Go to <http://employees.oneonta.edu/knauerbr> and follow the Chem 221 link. Among other things, lecture notes are available here. You will need to print out, and bring to class, the notes for the topic that is being discussed in class.
- Grading:
- | | |
|-------------------------------------|---------------------|
| Class participation | = 50 points |
| Four examinations @ 125 points each | = 500 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. The penalty will be 2 points per unexcused absence starting with the third such absence. If you are absent for more than 25% of the lectures, it is likely you will be involuntarily withdrawn from the course.
- 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.
- Examinations will be held on the following Mondays: September 20th, October 18th, November 8th, and December 6th. **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 Monday, December 13th at 8AM.
- Laboratory: Your laboratory grade will depend on your performance on laboratory experiments (200 pts.) and your understanding of the theory and practical aspects of laboratory work (written lab final, 50 pts.). The lab final will be given when your lab section meets the week of November 15th.

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 examinations*. Homework assignments will be collected. These assignments will not usually be checked for accuracy; however, solutions to problems may be found in the "Study Guide and Solutions Manual" and 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 that are handed in up to one week late will result in a loss of 5 points; those that are not handed in within one week of the due date will result in a loss of 10 points*. 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. Some additional suggestions relating to studying organic chemistry are available at the course web site.

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 or quiz, 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).

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 in the laboratory manual *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 in Lab Manual Before Laboratory</u>
8/31-9/2	Check In, Melting Point Determinations	Laboratory Safety (Lab manual, inside front and back covers), Expt. #1
9/7-9/9	Recrystallization of Impure Benzoic Acid, Preparation and Recrystallization of Dibenzalacetone	Expts. #2 & #3
9/21-9/23	Extraction: Separation of a Benzoic Acid, <i>p</i> -Nitroaniline, Naphthalene Mixture	Expt. #4
9/28-9/30	Distillation, Fractional Distillation, Gas Chromatography	Expt. #5
10/5-10/7	Preparation of Cyclohexene	Expt. #6
10/12-10/14	Preparation of <i>cis</i> -Norbornene-5,6- <i>endo</i> -dicarboxylic Anhydride, Preparation of Ferrocene	Expt. #7, Expt. #8, part 1
10/19-10/21	Preparation of Acetylferrocene from Ferrocene	Expt. #8, part 2
10/26-10/28	Preparation of Methyl Benzoate, Complete Unfinished Experiments	Expt. #9, part 1
11/2-11/4	Grignard Synthesis: Preparation of Triphenylmethanol	Expt. #9, part 2
11/9-11/11	Liquid Crystals: Preparation of Cholesteryl <i>p</i> -Nitrobenzoate, TLC: <i>Syn</i> - and <i>Anti</i> -azobenzene	Expts. #10 & #11
11/16-11/18	Kinetics of Methyl Iodide Hydrolysis, Laboratory Final Exam.	Expt. #12
11/30-12/2	Keto-Enol Tautomerism: Determination of Enol Content of Certain Ketones by Modified Kurt Meyer Titration and NMR	Expt. #13