

Chm 122A - Organic Chemistry I
Summer 2012, Salem Rm 10

Instructor: Dr. M. Wright

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Lecture: MTWR 10am-12pm

Required : J. McMurry, Organic Chemistry 8th ed. Brooks/Cole, 2012

S. McMurry, Study Guide and Student Solutions Manual for McMurry's Organic Chemistry 8th ed., Brooks/Cole, 2012

An organic chemistry model kit (sold in class for \$25)

Optional but Very Helpful: Preparing for Your ACS Examination in Organic Chemistry: The Official Guide (commonly called the Organic Chemistry Study Guide ISBN: 0-9708042-1-0 (~\$25 and cover Organic I and II)

Exam	Tentative Date	Percent of Grade
	Thursdays	%
Exam 1	06/07/10	17.5*
Exam 2	06/14/10	17.5*
Exam 3	06/21/10	17.5*
Exam 4	06/28/10	17.5*
ACS Final Exam	7/2 @ 2-5pm Rm. 10 Salem Hall	30.0

* If only 3 tests are given then each test will count 23.3%.

First class meets on May 24th at (TBA) Salem Hall room 10. All other days are 10am-noon unless agreed upon beforehand.

Please Note we are to meet Saturdays, June 4th and 25th 10am-12pm. These are regularly scheduled class meeting but in past years I have held problem session on Sunday evenings that serve to replace the Saturday classes. These have been well attended and seem to help me gauge student understanding for upcoming tests.

No make-up exams will be given. If you have a valid excuse (illness with doctor's note, death in the family, or university-related travel) for missing a one-hour exam, then the other exams will be worth 20% each. If we only have three

exams then the total number of exams will still be 70% (23.3% per text) of your grade. You will be expected to abide by the Wake Forest Honor Code. All exams and quizzes should reflect only your own work. However, you are free to work in groups on any assigned homework problems. Group study is recommended.

*****MAKE YOUR TRAVEL ARRANGEMENTS AROUND THE EXAM SCHEDULE. YOU HAVE PLENTY OF TIME TO RESCHEDULE OR WORK AROUND LIFE EVENTS.*****

Grading Scale:

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
Required Score	92%	90%	87%	83%	80%	77%	73%	70%	65%	60%	55%	<55%

This scale *may* be adjusted at the end of the semester to your benefit so that grade cutoffs are actually a little lower than indicated in this chart. To be safe though, you should assume that the grade cutoffs are firm and that your score will *not* be rounded up to the next integer when your letter grade is determined.

Regular attendance is expected. The lectures will build on one another. **YOU MUST ATTEND 75% OF THE CLASSES. THIS MEANS YOU CAN ONLY MISS ABOUT 5 LECTURES. CONSIDERING WE COVER ABOUT A CHAPTER A DAY I THINK ITS CLOSE TO IMPOSSIBLE TO DO WELL MISSING THIS MUCH CLASS.**

As a courtesy to me and your classmates, please leave cell phones, pagers, etc. at home or turned off during class.

Quizzes: 10-15 min. quizzes may be administered at the beginning of some class periods. I plan to announce most (but not necessarily all) quiz dates in advance. If you are late to class on the day of a quiz, you will not be allowed to take it. These quizzes are used when the grades are borderline.

Homework: Homework problems will be assigned on a regular basis. Write out your answers to the problems and *then* check the answer guide. If the department provides a grading TA then these will be checked and will be added into the Week's Workbook portion of your grade.

Want to excel in this class? Keep up with the material! ORGANIC CHEMISTRY IS CUMULATIVE. At this point, you should have a good understanding of acid/base chemistry, electron pushing, resonance, formal charges, bond angles, molecular orbital hybridization, and a few synthetic reactions. It is a good idea to review general chemistry.

Flash cards or your own review sheets are also a good idea. Organize the reactions in a way that makes sense to you. You are not trying to simply memorize reactions, but instead, to recognize how different reagents act (for example, nucleophile, oxidizing agent, or acid). You might want to put reagents on one side of a card and products and the name of the reaction (if appropriate) on the other side of the card. You should understand MECHANISMS of reactions as they are introduced. Mechanisms will help you classify reagents (i.e. base/nucleophile) and predict the products of a given synthesis.

If you find that you are having trouble with some of the concepts, please seek help (quickly). You can talk to classmates, students in other sections of Chm223, the lab teaching assistants,

tutors, or me. You can come see me anytime that I'm in the office. Feel free to contact me by phone or e-mail to make an appointment or JUST STOP BY MY OFFICE. The department has a list of recommended tutors as well.

A tentative calendar of when topics will be covered in lecture is posted on my web site. The calendar will be updated as necessary as the course progresses.

Students who finish Chm 122 will be able to:

Name organic compounds using IUPAC rules,
Predict 2- and 3-D structure of molecules from first principles and nomenclature,
Predict chemical reactivity based on 3-D structure,
Illustrate and explain reaction outcomes using arrow-pushing mechanisms,
Analyze and interpret spectra to determine molecular structure,
Relate structure to thermodynamic and kinetic stability,
Utilize basic physical data to explain chemical behavior,
Design and evaluate syntheses of organic compounds.

Chapters covered:

- 1 Structure and Bonding
- 2 Acids and Bases
- 3 Alkenes and Their Reactions
- 4 Cycloalkanes and their Stereochemistry
- 5 Stereochemistry
- 6 Overview of Reactions
- 7 Alkenes Structure Reactivity
8. Alkenes Reactions Synthesis
- 9 Alkynes
- 11 SN1, E1, Sn2, E2
- 12 MS and IR
- 13 NMR
- 14 Conjugated Dienes
- 15 Aromaticity
- 16 Electrophilic Aromatic Substitution

Review
Final Exam