

CHEMISTRY 345 – Section 2 – Fall 2012
Tu/Th 9:30 – 10:45 AM, Room 1361 Chemistry

Instructor:	Professor Jennifer M. Schomaker 8108 Shain Tower, Chemistry schomakerj@chem.wisc.edu
Office Hours:	Schomaker: Fridays from 1-2 PM; 8108 Shain Alicia Phelps: Mondays, 8:50 AM and 9:55 AM; B317 Cale Weatherly: M, W 1:20 PM; B317
Website:	Learn@UW The Chem 345A Facebook page (linked on Learn@UW) http://www.facebook.com/jennifer.schomaker.1?ref=tn_tnmn

I. INTRODUCTION

Chemistry 345 is the second semester of a two-semester organic chemistry sequence. The first course in the sequence is Chem 343, and successful completion of 343 or its equivalent with a grade of C or higher is a prerequisite for enrollment in 345. The lab course associated with the sequence is Chem 344, which may be taken concurrently with 345 or in a subsequent semester.

II. COURSE MATERIALS

Textbooks:

Required:

Organic Chemistry (5th edition), M. Louden

**All texts will be available on reserve in the Chemistry library. Louden and its solution guide will also be available at College and Steenbock libraries.*

Recommended:

Solution Manual for Louden, *Organic Chemistry*

On reserve:

Organic Chemistry, M. Jones, Jr.

Organic Chemistry, Solomons & Fryhle

Other materials:

Recommended:

Molecular model kit

**These materials are available from the UW Bookstore. AXΣ also sells model kits in the lobby during the first few weeks of class.*

Course websites: This course makes extensive use of Learn@UW. Lecture notes, handouts, problem sets, reading assignments, and announcements will be posted to the course website regularly. You will also use Learn@UW to view your grades.

There is also a Facebook page for our section of Learn@UW that can be used to ask questions and start discussions of the course material. The URL for this site is posted on Learn@UW, as well as the top of this page.

III. LECTURE AND DISCUSSION

Preparation: Chem 345 will cover Ch 12–13 and 16–27 of Louden. Ch 1–11 and 14–15 were covered in Chem 343. Because of the cumulative nature of the organic chemistry sequence, you must be comfortable with all of the material covered in Chem 343. If you are not, I would strongly suggest that you seek help through the Chemistry Learning Center, on-line tutorials or a private tutor. I cannot help you catch up on material you missed from Chem 343, as much as I would like to. There is simply too much to cover in Chem 345.

Lecture: Attendance is a good idea for success in this course. There are 250 students in this course and even a 70% attendance rate means I could end up repeating myself 75 times, which I guarantee I don't have the time to do. I love teaching organic chemistry and am pulling for everyone to get an "A" because 1) I am a nice person and like others to be happy and 2) I think organic chemistry is totally cool and I want you to appreciate it. I am always willing and happy to help you if you are trying! Lectures are designed to highlight the important concepts, provide supplemental examples in addition to examples from your textbook, help you understand broad themes of chemical reactivity and connect the basic science to advances that have greatly benefited modern society. The best approach is to read the material prior to lecture and then use lecture to clarify issues and "connect the dots" so to speak. The lecture notes posted to Learn@UW are meant to alleviate occasional absences due to illness or other unavoidable conflicts; they cannot replace the lecture itself.

Reading: Reading assignments will be posted to the front page of the Learn@UW course site. The textbook provides more detailed information than the lecture can cover; all information covered in the assigned reading is fair game for exams. However, I will de-emphasize some of the reading material and I will tell you why in lectures- this material will not appear on exams.

Discussion sections: The main purpose of the discussion section is to get guided help on problem-solving. To get the most out of section, come prepared with specific questions on concepts, problems, and reading material that you find most challenging. The two TA's for your course, Alicia Phelps and Cale Weatherly, are both accomplished and experienced. They may choose to run their discussion sections differently, but both will be valuable to you in better understanding the course material. Worksheets, class discussion and going over suggested and assigned homework all are possibilities. There are no quizzes planned at the current time.

Etiquette: Please turn your cell phone off during lecture and discussion. Using your cell phone or computer to surf the web, text, IM, etc., during class is distracting and rude, both to the instructor and to the people around you. Just because I don't say anything to you directly doesn't mean I won't remember who you are ☺

IV. ASSIGNMENTS AND GRADING

Homework: Five problem sets will be assigned over the course of the semester. These are to be turned in at the beginning of lecture on their due dates. Problem sets turned in up to one day late will receive a 35% penalty; problem sets turned in beyond this point will not be accepted. Each problem set will be worth 20 points and count a total of 100 points towards your final grade.

Suggested problems from the textbook will also be posted to Learn@UW at the beginning of each chapter. These will not be collected or graded, but they are an invaluable source of practice problems. Either myself or your discussion TA's will be happy to help you if you get stuck on any of the problems.

Study groups: Learning is more enjoyable and more effective when problems are worked collaboratively. Studying and working problems in groups is strongly recommended. Collaboration on graded problem sets is allowed, but all work you turn in must be your own. Please put the name of your collaborators on the top of your homework when you turn it in.

Midterm exams: There will be four midterm exams (100 points each). Exams will be given during the normal lecture period. Makeup exams will not be given- if you miss an exam, your grade will be calculated using Formula 2. It has been necessary to institute this policy due to abuse of “make-up” exams in the past. However, if you work with the McBurney Resource Center and need alternate accommodations for the exams, please speak with me as soon as possible to make the necessary arrangements.

Re-grade requests: Re-grade request forms can be downloaded from Learn@UW and attached to your exam booklet. These are due the day of the lecture after the exam is handed back. Do not write on your exams. Exams that have been modified in any way are not eligible for re-grading. We will scan all exams prior to grading. If you plan on changing answers after the exam has been returned, don't bother to submit a re-grade. You'll be caught and neither of us will be happy with the outcome (see the Academic Misconduct discussion below).

Final exam: The final exam is currently scheduled for Tuesday, December 18, 2:45pm – 4:45 pm. The final will be cumulative and be worth 200 points.

Grades: A maximum of 720 points can be earned during the semester. Your final score will be computed using one of the following formulae, depending on which results in the highest numerical value:

Formula 1:	Exam 1	100	Formula 2: Top 3 midterm exam scores:	
	Exam 2	100		300
	Exam 3	100		
	Exam 4	100		
	Problem Sets	100	Problem Sets	100
	Molecule assign.	20	Molecule assign.	20
	Final	200	Final	300
	TOTAL	720	TOTAL	720

I will discuss what the “Molecule” assignment entails during the first day of class.

Letter grades are not assigned until the end of the course. There is no fair way to offer additional “extra credit” assignments at the end of the semester without unfairly disadvantaging everyone else in the course, so my policy is not to offer them at all. The number of points you have accumulated through your work during the semester will be the only factor in determining your final grade. I may elect to curve the course, but my willingness to do so will be based on the attitude, participation and hard work of the students in the course.

ACADEMIC MISCONDUCT

All scientific fields, including the engineering and health professions, demand strict standards of professional integrity. I have the same expectations for students in my courses and take all instances of academic misconduct very seriously. If the teaching staff and I determine that you have cheated in Chem 345, you will receive an F for the semester, and your case will be recommended to the Dean of Students for further sanction.

Tentative agenda (subject to change depending on the pace at which topics are covered)

Week	Date	Chapter	Lecture material	Assignments
1	Sept 4 Sept 6	Intro/Review/Ch 12 Ch 12	IR Spectroscopy IR Spectroscopy	
2	Sep 11 Sep 13	Ch 13 Ch 13	NMR Spectroscopy NMR Spectroscopy	PS #1 out
3	Sep 18 Sep 20	Ch 13 Ch 16	NMR Spectroscopy Electrophilic Aromatic Substitution	
4	Sep 25 Sep 27	Ch 16 Ch 17	Electrophilic Aromatic Substitution Allylic and Benzylic Reactivity	PS #1 due
5	Oct 2 Oct 4	MIDTERM EXAM 1 Ch 17/18	IN LECTURE (Ch. 12, 13, 16) Allylic and Benzylic Reactivity	PS #2 out
6	Oct 9 Oct 11	Ch 18 Ch 18	Aryl and Vinyl Halides Aryl and Vinyl Halides	
7	Oct 16 Oct 18	Ch 19 Ch 19	Aldehydes and Ketones Aldehydes and Ketones	PS #2 due
8	Oct 23 Oct 25	Ch 20 MIDTERM EXAM 2	Carboxylic Acids IN LECTURE (Ch. 17-19)	PS #3 out
9	Oct 30 Nov 1	Ch 20 Ch 21	Carboxylic Acids Carboxylic Acid Derivatives	
10	Nov 6 Nov 8	Ch 21 Ch 22	Carboxylic Acid Derivatives Enols and enolates	PS #3 due
11	Nov 13 Nov 15	MIDTERM EXAM 3 Ch 22	IN LECTURE (Ch. 20, 21, 22 pt. 1) Enols and enolates	PS #4 out
12	Nov 20 Nov 22	Ch 22 THANKSGIVING	Enols and enolates NO LECTURE	
13	Nov 27 Nov 29	Ch 23 Ch 23	Amines Amines	PS #4 due
14	Dec 4 Dec 6	Ch 27 Ch 27	Pericyclic Reactions Pericyclic Reactions	PS #5 out
15	Dec 11 Dec 13	Ch 25 MIDTERM EXAM 4	Aromatic heterocycles IN LECTURE (Ch. 22 pt. 2, 23-24, 27)	PS #5 due
			POSSIBLE REVIEW SESSION	
FINAL EXAM: Tuesday, December 18, 2:45 pm – 4:45 pm				

Strategies for success in this class from Professor Yoon.

1. **Don't fall behind!** This class asks you to absorb a lot of information at a rapid pace, and each successive chapter builds upon principles in the previous chapters. Cramming just doesn't work in this class. Instead, you should set aside a little time every day (30 minutes or so) to study and keep caught up.

2. **Practice, practice, practice.** This is the most important key to success in this course.

It's a truism among endurance athletes that you train for the event that you're racing. That is, you can't train for a marathon without running, and you'll never win a bike race if you don't ever climb on the bike. The same is true of your classes. In this course, the exams that make up the majority of the points you earn ask you to solve problems. Therefore, you should train for exams by working problems, and the more problems you do the better off you are. This is why I ask you to do so many problems, between the problem sets and the clicker questions and the suggested problems from the book. Louden is a great textbook, and one of the reasons we selected it is the quality of the problems at the end of each chapter. I have also put last year's textbook (Solomons) on reserve in the Chemistry library, which is also a good source of problems.

3. **Read the book.** Each unit has more information than I can reasonably cover in a one-hour lecture. The textbook is your primary source of information, and any information in the assigned reading is fair game for exams. I strongly recommend reading the chapter twice – once before the corresponding lectures, so that you can follow the key points in the lecture, and then once again afterwards, so that all of the details have a chance to sink in. Work the in-text problems as you go.

4. **Come to lecture.** The purpose of lecture is to highlight the most important material in each unit, to help you organize the information in a way that's logical and easy to remember, and to show how certain important themes run throughout the entire course. From a completely GPA-centric point of view, it makes sense to come to lecture because it helps identify what I think is most important to know, which is likely also to be what I focus on when writing exams. It's also your best opportunity to ask me questions about the material and the structure of the course.

5. **Take good notes and copy them over.** The key to managing all of this information is to organize it well in your head. The book presents the material in a way that makes sense to the author; I'll present it in a way that makes sense to me. But your brain is likely to work in a different way. It's a really good idea to take notes on your reading, take notes in lecture, and re-organize them into a master set of notes that works for you.

6. **Study in groups.** Studying with your friends makes studying seem less like a chore and more like a social occasion, and it'll help you keep up with the class. It's also a great way to identify the material that's the trickiest to grasp, so that you can ask better questions during lectures and office hours.