

Organic Chemistry III – 4380
CHEM 2453 Section 1
Spring Quarter, 2018



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Lecture: MWF 9:00 – 9:50 a.m. (F.W. Olin 105)

Recitation: T 9:00 – 9:50 a.m. (F.W. Olin 205)

Office Hours: open door

Required Text: *Organic Chemistry, Sixth Edition*, by Marc Loudon and *Study Guide and Solutions Manual to Accompany Organic Chemistry, 6th Edition*, by Marc Loudon and Joseph G. Stowell

Recommended Model Kit: Molymod #62053 Organic Chemistry Molecular Model Set by Indigo Instruments or other similar kit (typically available on Amazon)

Course Objective: This course is a continuation of organic chemistry I & II and is an intensive survey of the structure, reactions and synthesis of the main classes of organic compounds. Our goal is to provide you with the basic tools and knowledge of organic chemistry, which is important for your success in upper division science classes. We also hope to spark your interest to pursue scientific research and learn how to create and discover new knowledge. The course begins with Nobel winning carbon-carbon coupling reactions and progresses to carbonyl chemistry, which finds many useful applications in biology, medicine, and material science, and then it ends with selected topics in biological molecules including amino acids – one of nature's magnificent building blocks for proteins that give structure and function to most living organism.

In order to get the most out of this course, I would recommend you:

- Review your organic chemistry I & II notes the first week of class and take the class reading seriously. Preferable, read the whole chapter before class.

- Conduct searches after each class to find applications of the chemistry covered in class
- Solve as many problems as possible instead of memorizing. This means that consistent work is required and will pay off much more than cramming for an exam. A good rule of thumb is to *spend at least 9 hours a week outside of class* on organic chemistry.

Lectures: The lectures will generally follow the progression of the textbook. Most lectures will be presented on the board and PowerPoints. *Attending every class and taking meaningful notes is extremely important for this complex subject.* Staying up with the reading will help you to understand the lectures better. We will work on problems during lectures and recitations.

Recitation: Tuesday recitations will give us an opportunity to go over challenging problems from the worksheets or selected book problems. We may use some recitation sections for normal lectures. There may also be short quizzes during this period.

Problems You should work as many of the text's problems as possible. The exams will focus on problems involving reactions, mechanisms and synthesis. The only way to prepare for these problems is to practice, practice, and practice. The recommended problems can be found in your text, and additional problems will be presented in class and during recitation. **The key is to solve ten problems for every one concept covered in class.** Remember solving problems is key to your success in organic chemistry.

Wednesday Worksheets (WS): Worksheets are designed to help you practice standardized questions. It is essential that you complete the assignments to assess your understanding of class material and apply your knowledge to solve challenging problems. Worksheets are due at **4:59 p.m. every Wednesday** as indicated on the schedule. There are 8 worksheets for the quarter and the lowest score will be dropped. The worksheets are worth 100 points in total. **No credit will be awarded for late submissions.**

Exams: There will be two midterm exams and a final for this quarter; each exam is worth 100 points and the final exam is also worth 100 points. If your final exam score is higher than either midterm score, the lowest score will be replaced with your final score.

Final Grade: Your final grade will be determined out of the 400 available points on exams and worksheets (plus all earned in-class quiz points). **There will be no makeup exams.** If you miss an exam for any reason, that exam will be dropped, and the final will count for 200 points. The final exam is not optional.

Cell Phone and Electronic Device Policy:

While I understand that mobile devices have become integral to our lives, they are disruptive to the learning environment. Therefore, I request that all electronic devices be turned off (not muted) during class (i.e.; please don't text/facebook during class). If an emergency arises, and you need to contact the outside world during our lecture or recitation time, I request that you quietly leave the room and conduct your conversation outside. Additionally, most all of our lectures will require far too much structural drawing for effective notes to be taken on a laptop so please leave these devices off during lecture.

Lecture and Testing Accommodations:

I will make every effort to accommodate students diagnosed with a learning disability. I will do this in complete confidence. I do, however, request that any student requiring these accommodations inform me the first week of class. For further information, please see the University Disability Services' website at <http://www.du.edu/disability/dsp/index.html>.

Academic Integrity:

While I advocate collaborative learning and teamwork, I also firmly believe that each individual should maintain the highest ethical standards. As such, I support and will strictly enforce the Honor Code of the University of Denver. www.du.edu/honorcode.

Honor Code Statement.

All members of the University of Denver are expected to uphold the values of *Integrity*, *Respect*, and *Responsibility*. These values embody the standards of conduct for students, staff, faculty, and administrators as members of the University community. These values are defined as:

Integrity: acting in an honest and ethical manner;

Respect: honoring differences in people, ideas, and opinions;

Responsibility: accepting ownership for one's own conduct.

Pioneer Pledge.

As a University of Denver Pioneer I pledge...

- to act with INTEGRITY and pursue academic excellence;
 - to RESPECT differences in people, ideas, and opinions and;
 - to accept my RESPONSIBILITY as a local and global citizen;
- Because I take pride in the University of Denver I will uphold the *Honor Code* and encourage others to follow my example.

Topics to be covered: Tentative Course Schedule – Subject to Change

	Date'18	Topic	Reading	Due
Wk1	3/26	Chapter 18: Aryl Halides	Ch18	
	3/28	Chapter 18: Transition Metal Catalysis		
	3/30	Chapter 18: <i>Continue</i>		
Wk2	4/2	Chapter 19: Aldehydes and Ketones	Ch19	
	4/4	Chapter 19: <i>Continued</i>		WS1
	4/6	Chapter 19: <i>Continued</i>		
Wk3	4/9	Chapter 20: Chemistry of Carboxylic Acids	Ch20	
	4/11	Chapter 20: <i>Continued</i>		WS2
	4/13	Chapter 20: <i>Continued</i>		
Wk4	4/16	Exam 1		
	4/18	Chapter 21: Carboxylic Acid derivatives	Ch21	WS3
	4/20	Chapter 21: <i>Continued</i>		
Wk5	4/23	Chapter 21: <i>Continued</i>		
	4/25	Chapter 22: Enolates, enols, α,β -unsaturated compounds	Ch22	WS4
	4/27	Chapter 22: <i>Continued</i>		
Wk6	4/30	Chapter 22: <i>Continued</i>		
	5/2	Chapter 23: Amines	Ch23	WS5
	5/4	Chapter 23: <i>Continued</i>		
Wk7	5/7	Chapter 23: <i>Continued</i>		
	5/9	Exam 2		WS6
	5/11	Chapter 24: Carbohydrates	Ch24	
Wk8	5/14	Chapter 24: <i>Continued</i>		
	5/16	Chapter 24: <i>Continued</i>		WS7
	5/18	Chapter 25: Select sections	Ch25	
Wk9	5/21	Chapter 25: <i>Continued</i>		
	5/23	Chapter 26: Select sections	Ch26	WS8
	5/25	Chapter 26: <i>Continued</i>		
Wk10	5/28	Chapter 27: Select sections	Ch27	
	5/30	Chapter 27: <i>Continued</i>		
	6/1	Final Review/Catch up		
	6/6	Final Exam (8:00 – 9:50 am)		

Canvas and Class Notes:

Most lecture information will be presented on the whiteboard and PowerPoint slides which will be upload on canvas. Suggested problems and worksheets will be posted on Canvas.