

**Organic Chemistry II - 4401
CHEM 2452 Section 1
Winter Quarter, 2018**



Instructor: Ogar Ichire (Leo) Ph.D.

E-mail: ogar.ichire@du.edu

Phone: 303.871.2985

Office: F.W Olin 205A

Lecture: MWF 9:00 a.m. – 9:50 am (Boettcher Center Auditorium 101)

Recitation: T 9:00 am – 9:50 am (Boettcher Center Auditorium 101)

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 Goals:

Specific course goals have been developed in line with the chemistry department mission and department learning outcomes (see current university catalog).

Students at the end of this course will:

- 1) Understand and apply current chemical theory in the following areas:
 - a. Use of the language and terminology of organic chemistry (nomenclature, reaction names and types, fundamental transformations).
 - b. Use of fundamental concepts to understand and predict the structure, properties, reactivity, and simple mechanisms of organic compounds and reactions.
 - c. Use of molecular models and/or modeling software to explain reactivity, stability, and function.
- 2) Have communicated understanding of organic principles
 - a. In writing on exams and assignments.
- 3) Develop critical thinking skills by

- a. Applying knowledge to new situations, chemicals, and reactions.
 - b. Posing questions and answering question on multiple cognitive levels (see below).
- 4) Develop awareness of modern issues in chemistry by
- a. Understanding the impact of organic chemistry in daily life and professional knowledge.
 - b. Examining ethical issues which relate to applied organic chemistry.

Getting the most out of this class:

- Review your organic chemistry I 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 day before.

Lectures: The lectures will generally follow the textbook and added materials for better understanding. Most lectures will be presented on the board and PowerPoint. ***Attending every class and taking meaningful notes is incredibly important for this complex subject.*** Staying up with the reading will help you to understand the lecture better and take more meaningful notes. Both during the lectures and the recitation session we will work through problems. Working problems is key to succeeding in chemistry.

Problems You should work as many of the text's problems as possible. The exams will focus on problems involving reactions, mechanisms, syntheses, and structure determination. 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. These problems represent a bare minimum of problems to be completed.

The problems interspersed within the chapter will help you to test your mastery of the individual topics. Solve problems as you review your lecture notes for a section. The end-of-chapter problems are used to pull the individual topics together. **A good strategy may be to do all of the odd-numbered problems initially, and then the even ones as part of your exam review.** Keep a dedicated notebook for all solved problems, it will come in handy for quick revision before exams.

Solving problems together can also be very helpful and I encourage you to go over solutions to problems in small groups after working the problems independently. Your peers may have an alternate way of looking at a problem than you or I might, which can add to your toolbox of problem solving skills. Also, helping to teach the subject to your classmates is one way of understanding the materials yourself.

Worksheets (WS): Worksheets are designed to help you practice standardized questions. It is essential that you complete the worksheets to assess your understanding of class material and apply your knowledge to solve challenging problems. Worksheets are worth 100 points.

Exams: There will be two midterm exams, worth 100 points each, and a final exam also worth 100 points. If your final exam score is higher than either midterm exam score, the lowest score will be dropped and the final will count for 200 points.

Final Grade: Your final grade will be determined out of the 400 available points on exams and worksheets.

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.

Grade	Range	Grade	Range
A	100 – 94 %	C-	<74 – 70%
A-	<94 – 90%	D+	<70 – 67%
B+	<90 – 87%	D	<67 – 64%
B	<87 – 84%	D-	<64 – 61%
B-	<84 – 80%	F	<60 – 0%
C+	<80 – 77%		
C	<77 – 74%		

Note: Final grades and percentage ranges are subject to change by the instructor

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	01/03	Revision SN1, SN2, E1 &E2	Ch9	
	01/05	Chemistry of Alcohol and Thiol	Ch10	
Wk2	01/08	Alcohol and Thiol		
	01/10	Alcohol and Thiol		
	01/12	Ethers, Epoxides, Glycols, and Sulfides (E2 GS)	Ch11	
Wk3	01/15	E2 GS	Ch11	WS1
	01/17	Chemistry of Alkynes	Ch14	
	01/19	Introduction to Spectroscopy (IR)	Ch12	
Wk4	01/22	IR		WS2
	01/24	Exam 1		
	01/26	IR		
Wk5	01/29	IR	Ch12	WS3
	01/31	Mass Spectrometry (MS)		
	02/02	MS		
Wk6	02/05	MS		WS4
	02/07	MS		
	02/09	UV-Vis Spectroscopy	Ch15.2	
Wk7	02/12	UV-Vis		WS5
	02/14	Nuclear Magnetic Resonance Spectroscopy (NMR)		
	02/16	Exam 2		
Wk8	02/19	NMR	Ch13	WS6
	02/21	NMR		
	02/23	NMR		
Wk9	02/26	Dienes, Resonance, and Aromaticity (DRA)	Ch15	WS7
	02/28	DRA		
	03/02	Chemistry of Benzene and its Derivatives (BD)	Ch16	
Wk10	03/05	BD		WS8
	03/07	BD		
	03/09	BD		
Wk11	03/12-13	Final Review		
	Fri 03/16	Final Exam 8:00 am – 9:50 am		

Canvas and Class Notes:

For most lectures information will be presented on the board, however, when PowerPoint slides are used they will be posted on Canvas. Suggested problems and worksheets will also be posted on Canvas.