

**Organic Chemistry II - 2849
CHEM 2452 Section 2
Winter Quarter, 2021**



Instructor: Ogar Ichire (Leo) Ph.D.

E-mail: ogar.ichire@du.edu

Phone: 303.871.2985

Office: F.W Olin 205A

Lecture: T and Th 8:00 a.m. – 9:50 am (Online)

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.

The Help Center in the library has four other textbooks to provide you with a pool of resources and problem sets. Reading and solving problems from these textbooks will aid your understanding of the concepts taught in class. Check the textbooks out.

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

Course Goals:

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

Students at the end of this course will:

- 1) Understand and apply current chemical theories in the following areas:
 - a. Use of the language and terminologies of organic chemist (nomenclature, concepts, and fundamental transformations).
 - b. Use of fundamental concepts to understand and predict structures, properties, reactivity, and mechanisms of organic reactions.
 - c. Use of molecular models and/or modeling software to explain reactivity, stability, and function.
- 2) Communicate an understanding of organic principles
 - . In writing exams, quizzes, and assignments.

- 3) Develop critical thinking skills by:
 - a. Applying your knowledge to new findings in chemical science.
 - b. Posing questions and answering questions on multiple cognitive levels
- 4) Develop awareness of modern issues in chemistry by:
 - a. Understanding the impact of organic chemistry in our daily lives and your professional development.
 - b. Examining ethical issues that relate to applied organic chemistry.

Getting the most out of this class:

- Review your organic chemistry I lecture notes and take the class reading seriously - preferable, read the whole chapter before class and solve problems after each class.
- Conduct searches after each class to find applications of the chemistry covered in class
- Solve as many problems as possible instead of memorizing. The concepts taught in class will be tested in the form of applied problems. So, solve problems to show you an understanding of chemistry.
- Seek help early. Do not allow confusion on concepts to pile up – ask questions as you read and study.

Lectures: Our lectures will generally follow the progression of the textbook with several supplemental materials to aid understanding and assessment of concepts. Our standard will be that of the American Chemical Society (ACS) and we will review ACS problems during the lecture.

Lectures will be synchronous and video lectures will be uploaded to Canvas each week.

Problems You should solve as many problems as possible in the Loudon text. The exams will focus on several types of problems: structures, reactions, mechanisms, syntheses, and concept-based questions. The **exam questions are mostly applied problems**. I expect you to know the concepts in the material first and then apply your knowledge to solve problems including practical and applied problems. **I expect you to be consistent at solving problems - practice, practice, and practice.** The recommended question types can be found in your text, and additional problems will be presented during recitation. **The key is to solve ten problems for every concept covered in class.** Remember solving problems is key to your success in organic chemistry.

Worksheets (WS): Worksheets are designed to help you practice standardized questions and exercises from different textbooks. It is essential that you complete the worksheets to measure your understanding of class material and apply your knowledge to solve challenging problems. You learn organic chemistry through practice and worksheets is a good way to practice – take them seriously. **Note: late submissions will not be graded,**

and a zero score will be awarded. Also, no worksheet score will be dropped. Worksheets are worth 50 points of your final grade.

Sapling Online Homework (SOH): Apart from the weekly worksheets, Sapling homework will be another opportunity to work on problems. Sapling provides unique online homework questions with drawing tools to assist you in practicing and learning organic chemistry. And we will use Sapling this quarter for the course. As soon as you register and get access to Sapling Learning, learn how to use all the drawing tools, and how to navigate the site. Information about registration will be posted in Canvas. SOH is worth 50 points of your final grade. No homework will be dropped. **Note: late submissions will not be graded, and a zero score will be awarded - complete your homework within the allowed timeframe.**

Exams: There will be two midterm, worth 100 points each, and a final exam also worth 100 points. If your final exam score is higher than either of the midterms score, the lowest score will be replaced with your final exam score. Note, every exam is equally important. Note: no practice exams before the midterms or final

Final Grade: Your final grade will be determined out of the 400 available points on exams, SOH, 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 of your total grade.** 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

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 day of class. For further information, please see the University Disability Services' website at <http://www.du.edu/disability/dsp/index.html>. Remember you must register with the DSP ahead of time (at least a week) if you wish to take exams with them.

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'21	Topic	Reading	Due
Wk1 01/11		Chemistry of Alcohol and Thiol	Ch10	
		Alcohol and Thiol		
Wk2 01/18		Ethers, Epoxides, Glycols, and Sulfides (E2 GS)		<i>HW1</i> <i>WS1</i>
		Chemistry of Alkynes	Ch11	
Wk3 01/25		Chemistry of Alkynes		HW2 WS2
		Introduction to Spectroscopy (IR)	Ch14	
Wk4 02/01			Ch12	HW3 WS3
	02/05	Exam 1		
		IR		
Wk5 02/08		IR		HW4 WS4
		Mass Spectrometry (MS)	Ch12	
		MS		
Wk6 02/15		MS		
		MS		
		UV-Vis Spectroscopy	Ch15.2	
Wk7 02/22		UV-Vis		<i>HW5</i> <i>WS5</i>
		Nuclear Magnetic Resonance Spectroscopy (NMR)	Ch13	
		NMR		
Wk8 02/01		NMR		<i>HW6</i> <i>WS6</i>
	02/26	Exam 2		
Wk9 02/08		Dienes, Resonance, and Aromaticity (DRA)	Ch15	<i>HW7</i> <i>WS7</i>
		DRA		
		Chemistry of Benzene and its Derivatives (BD)	Ch16	
Wk10		BD		<i>HW8</i> <i>WS8</i>
		Review		
		Final Exam 8:00 am – 9:50 am		

Canvas and Class Notes: Both worksheet assignments and PowerPoint notes will be uploaded in Canvas. For the Sapling homework, login to Sapling Learning to complete the assigned homework each week. Also, zoom links and recorded lectures will be posted in Canvas.