

**Organic Chemistry III - 1325
CHEM 2453 Section 1
Summer Quarter, 2019**



Instructor: Ogar Ichire (Leo) Ph.D.

E-mail: ogar.ichire@du.edu

Phone: 303.871.2985

Office: F.W Olin 205A

Lecture: MTWRF 9:20 a.m. – 11:20 am (OLIN 103)

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 organic chemistry problems to solve and resources to help you understand the concepts taught in class. Make sure you visit the library and take advantage of this resource.

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 mission of the chemistry department and the department's learning outcomes (see 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, modeling software, and chemistry database to explain reactivity, stability, and function.
- 2) Communicate understanding of organic principles
 - a. In writing on exams, quizzes, and assignments.

- 3) Develop critical thinking skills by:
 - a. Applying their knowledge to new findings in chemical science.
 - b. Posing and answering chemistry questions at 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 which relate to applied organic chemistry.

Getting the most out of this class:

- Review your organic chemistry I & II 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 understand the chemistry.
- Seek help early. Do not allow confusion of concepts to pile up.
- Learn the concepts first and then solve problems.

Lectures: The lectures will generally follow the textbook sequence and a lot of added materials for better understanding. Most lectures will be presented on the board. ***Attending every class and taking meaningful notes (or summaries) is incredibly important for this complex subject.*** Staying up with the reading will help you to understand the lecture better and take meaningful notes. We will solve problems during class. Working problems is key to your success in organic chemistry and by working through these together I hope to provide you with some insights and techniques on how analyze and solve organic chemistry problems.

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 the textbook, in-class problems, and additional problems will be presented in class and during recitation (if applicable). These problems represent a bare minimum of problems to be completed. Check the textbooks in the library for more problems.

The problems interspersed within the chapter will help you test your proficiency in the individual topics you read and should be solved as you review your lecture notes for the section. The end-of-chapter problems are used to pull the individual topics and concepts 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 review 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, which can add to your toolbox of problem-solving skills. Also, helping to teach the subject to your mates is one way to understand the material yourself.

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

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 score, the lowest score will be switch with your final exam score. Note, every exam is equally important.

Final Grade: Your final grade will be determined out of the 400 available points on exams and worksheets (plus all earned extra 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.**

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

Extra Credit: If you want extra credit, keep a dedicated notebook of all your solved problems. This notebook can be used to negotiate 6 -10 extra points, that is, if you have solved numerous problems including all the in-class problems.

Every lecture will have multiple quiz questions, and those that get the correct answers will write their names on the yellow-sheet provided at the end of the lecture. You can also earn another 6 extra points if your name appears more than 80% on the yellow-sheet at the end of the quarter.

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 (that is, please don't text or 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 of our lectures will require far too much structural drawing for effective notes to be taken on a laptop so please leave these devices in your bags 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 day 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	7/29	Review of Reactions	Ch1-18	
		Aldehydes and Ketones	Ch 19	
		Carboxylic Acids	Ch 20	
		Carboxylic Acid Derivatives	Ch 21	
	Fri, 8/02	Exam 1 Carboxylic Acid Derivatives		<i>WS1</i>
Wk2	Mon8/05	Carboxylic Acid Derivatives	Ch 21	
		Enolates, enols α,β-unsaturated compounds	Ch22	
		Amines	Ch23	
	8/9	Exam 2 (cumulative) Carbohydrates		<i>WS2</i>
Wk3	8/12	Carbohydrates	Ch 24	
		Amino Acids, Peptides and Proteins	Ch 27	
	8/16	Final Exam (cumulative)		<i>WS3</i>

Canvas and Class Notes:

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.