

Organic Chemistry III – 2993  
CHEM 2453 Section 1  
Spring Quarter, 2020



Welcome to Organic Chemistry III! This is the third and final edition of a three-quarter series in organic chemistry. The scope of this course broadly focuses on the chemistry of carbon and its compounds. We will discuss basic principles regarding chemical bonding, structure, and classification of organic molecules. We will then apply these concepts to study the chemical reactivity of such compounds. Understanding how molecules interact with others will allow for appreciation of chemical synthesis for the production of compounds useful for society, including pharmaceuticals, agrochemicals, plastics, pesticides and other materials.

**Instructor:** Professor Bryan J. Cowen

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**Office:** Seeley G. Mudd, Room 132 (Zoom)

**Lecture:** MWF 9:00 a.m. – 9:50 a.m. in Zoom

**Recitation:** T 9:00 a.m. – 9:50 a.m. in Zoom

**Office Hours:** By appointment through Zoom. Please e-mail me at least one day in advance.

**Textbook:** *Organic Chemistry, Sixth Edition*, by Marc Loudon and Jim Parise (Required)

**Study Guide:** *Study Guide and Solutions Manual to Accompany, Organic Chemistry, Sixth Edition*, by Marc Loudon and Jim Parise (Required)

**Molecular Models:** Molymod #62053 Organic Chemistry Molecular Model Set by Indigo Instruments or Darling Models from DU Bookstore (Required)

**Exams:** There will be three 50-minute exams during the quarter worth 100 points each. The final exam will also be worth 100 points. If your final exam score is higher than any 50-minute exam score, the lowest score will be dropped and the final will count for 200 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. [This exam policy is subject to change]***

**Online Homework through Sapling:** There will be weekly problem sets to be completed online through the Sapling system. Please go to [www.saplinglearning.com/login](http://www.saplinglearning.com/login) to register for an account.

Detailed registration instructions can be found here: <https://community.macmillan.com/docs/DOC-5972-sapling-learning-registering-for-courses>

Technical support information can be found here:  
<https://community.macmillan.com/docs/DOC-6915-students-still-need-help>

These problems are intended to help you understand the lecture material and reading assignments more thoroughly. We will review the problems during Tuesday morning recitation sections. Homework will be due Monday nights by 11 pm. The online problems will be graded and are worth 50 *total points* for the course. The lowest weekly homework score will be dropped. Late submissions receive no credit.

**Final Grade:** Your final letter grade will be determined out of 450 points and will be curved appropriately based on overall class performance. ***[This grading policy is subject to change]***

**Lectures:** I will cover most material on the Zoom white board using three (or maybe more!) different colors. I would recommend using at least 3 colored pens/pencils while I draw in Zoom. ***Lectures will be synchronous (live) and uploaded for asynchronous (recorded) access through Canvas/Zoom.*** If PowerPoint slides are periodically incorporated in lecture they will be posted afterwards on Canvas.

**Canvas:** The University of Denver uses Canvas as its learning management system. You may log in to <https://du.instructure.com> with your DU ID number and PioneerWeb password to access the course. Please ensure your settings allow for e-mail announcement notifications. Here are some helpful Canvas resources to get you started:

Canvas Student Quickstart Guide: <http://guides.instructure.com/m/8470>

Canvas Student Guide: <http://guides.instructure.com/m/4212>

**Academic Integrity:** I have high expectations for each and every one of you as students at the University of Denver. While I encourage group study sessions outside of class, I expect you to work independently during in class examinations. Any deviations from this policy will not be tolerated. For more information, please see the University of Denver's official Honor Code at: <http://www.du.edu/studentlife/studentconduct/>

**Science and Engineering Center:** Need extra help? The Science and Engineering Learning Center is a collaborative space staffed by undergraduate and graduate learning assistants (LAs) trained to assist students with some first and second year biology, chemistry, physics, computer science and engineering courses. Our goal is to help students grow as problem solvers by assisting with homework sets, lab reports, and preparing for exams. Students can access help by going to <http://portfolio.du.edu/SEC> & viewing the schedule for each discipline. Students can access LAs by clicking on the Zoom "room" link at the top of each discipline schedule.

Preliminary Course Schedule – Subject to Change

Week #: Start Date	Topic	Reading
1: 03/30/20	Chapter 19: Aldehydes and Ketones Chapter 19: <i>Continued</i>	pp 946 – 970 pp 970 – 997
2: 04/06/20	Chapter 20: Carboxylic Acids Chapter 20: <i>Continued</i>	pp 1004 – 1018 pp 1018 – 1036
3: 04/13/20	Chapter 21: Carboxylic Acid Derivatives Chapter 21: <i>Continued</i> <b>EXAMINATION 1 (material and date TBD)</b>	pp 1044 – 1071 pp 1071 – 1094
4: 04/20/20	Chapter 22: Chemistry at the $\alpha$ -Carbon Chapter 22: <i>Continued</i>	pp 1103 – 1141 pp 1141 – 1172
5: 04/27/20	Chapter 23: Amines Chapter 23: <i>Continued</i>	pp 1183 – 1203 pp 1203 – 1224
6: 05/04/20	Chapter 24: Carbohydrates Chapter 24: <i>Continued</i> <b>EXAMINATION 2 (material and date TBD)</b>	pp 1232 – 1253 pp 1253 – 1277
7: 05/11/20	Chapter 26: Aromatic Heterocycles Chapter 26: <i>Continued</i>	pp 1327 – 1341 pp 1341 – 1366
8: 05/18/20	Chapter 27: Amino Acids and Peptides Chapter 27: <i>Continues</i>	pp 1372 – 1409 pp 1409 – 1441
9: 05/25/20	No Class Monday – Memorial Day <b>EXAMINATION 3 (material and date TBD)</b> Chapter 25: Thioesters	pp 1409 – 1441 selected pages
10: 06/01/20	Chapter 28: Pericyclic Reactions Finish Course Material and Review	selected pages
<hr/> <b>FINAL EXAMINATION (material and date TBD)</b> <hr/>		