

Organic Chemistry II – 2848
CHEM 2452 Section 1
Winter Quarter, 2021



Welcome to Organic Chemistry II! This is the second 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. through Zoom

Recitation: T 9:00 a.m. – 9:50 a.m. through Zoom

Office Hours: By appointment on 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. All exams will be posted and submitted electronically through Canvas. Directions will be provided on the cover page of each exam. 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 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 may be curved appropriately based on overall class performance. ***[This grading policy is subject to change]***

Lectures: I will cover most material on the ChemDraw and the whiteboard through Zoom. Class will be offered synchronously and will also be recorded and posted on Canvas for asynchronous access. ***I may need to supplement class time with additional asynchronous sessions to ensure we cover all the material for the quarter.*** 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. See <http://portfolio.du.edu/sec> for a complete schedule. 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: 01/11/21	Chapter 10: Alcohols and Thiols Chapter 10: Oxidation and Chemical Synthesis	pp 452 – 476 pp 476 – 504
2: 01/18/21 01/18/21 (M)	Chapter 11: Ethers, Epoxides, Glycols, Sulfides <i>Martin Luther King, Jr Day – Holiday – No Class</i> Chapter 11: <i>Continued</i>	pp 511 – 536 pp 536 – 560
3: 01/25/21 01/29/21 (F)	Chapter 12: Introduction to Spectroscopy EXAMINATION I (material from Chapter 10.1 through 11.11)	pp 569 – 585
4: 02/01/21	Chapter 12: <i>Continued</i> Chapter 13: NMR Spectroscopy	pp 585 – 605 pp 611 – 645
5: 02/08/21	Chapter 13: <i>Continued</i> Chapter 14: Alkynes	pp 645 – 672 pp 681 – 708
6: 02/15/21 02/17/21 (W)	Chapter 15: Dienes, Resonance, Aromaticity EXAMINATION II (material from Chapter 10.1 through 14.10) Chapter 15: <i>Continued</i>	pp 712 – 741 pp 741 – 780
7: 02/22/21	Chapter 16: Benzene and Derivatives Chapter 16: Electrophilic Aromatic Substitution	pp 789 – 810 pp 810 – 830
8: 03/01/21	Chapter 17: Allylic and Benzylic Reactivity Chapter 17: <i>Continued</i>	pp 836 – 851 pp 851 – 870
9: 03/08/21 03/10/21 (W)	Chapter 18: Aryl Halides EXAMINATION III (material from Chapter 10.1 through 17.6)	pp 879 – 901
10: 03/15/21	Chapter 18: <i>Continued</i> Finish Course Material and Review	pp 901 – 935
<u>03/18/21 (R)</u>	<u>FINAL EXAMINATION (material from Chapter 10.1 through 18.11) Due: 3/19/21</u>	