

Organic Chemistry I – 1017  
CHEM 2451 Section 1  
Summer Quarter, 2020



*Welcome to Organic Chemistry I! This is the first 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 and Recitation:** MTWRF 9:00 a.m. – 10:50 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 two exams posted after class on Friday, June 26 and Thursday, July 2 worth 100 points each. They will be due that day by 5 pm (MDT). The final exam will also be worth 100 points.

**Final Grade:** Your final letter grade will be determined out of 300 points.

**Lectures:** I will cover most material on the ChemDraw and the whiteboard through Zoom. Class will be offered synchronous and will also be recorded and posted on Canvas for asynchronous access. ***It is likely I will 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: 06/22/20	Chapter 1: Chemical Bonding and Structure	pp 01 – 41
	Chapter 2: Chemistry of Alkanes	pp 45 – 68
	Chapter 2: <i>Continued</i>	pp 68 – 83
	Chapter 3: Curved-Arrow Notation / Acids and Bases	pp 87 – 96
	Chapter 3: <i>Continued</i>	pp 96 – 120
2: 06/29/20	Chapter 4: Structure and Reactivity of Alkenes	pp 125 – 152
	<b>EXAMINATION 1 (material from Chapter 1.1 through 4.5)</b>	
	Chapter 4: <i>Continued</i>	pp 152 – 177
	Chapter 5: Addition Reactions of Alkenes	pp 181 – 198
	Chapter 5: <i>Continued</i>	pp 198 – 223
3: 07/06/20	Chapter 6: Principles of Stereochemistry	pp 229 – 250
	Chapter 6: <i>Continued</i>	pp 250 – 267
	Chapter 7: Conformational Analysis and Reaction Stereochemistry	pp 272 – 293
	<b>EXAMINATION 2 (material from Chapter 1.1 through 6.10)</b>	
	Chapter 7: <i>Continued</i>	pp 293 – 317
07/10/20 (F)	Chapter 8: Alkyl Halides and Chalcogens	pp 324 – 349
	Chapter 8: <i>Continued</i>	pp 349 – 377
	Chapter 9: Reactions of Alkyl Halides	pp 382 – 405
	Chapter 9: <i>Continued</i>	pp 405 – 445
	Finish Course Material and Review	
<b>FINAL EXAMINATION (material from Chapter 1.1 through 9.8) – 9:00 – 10:50 am</b>		