

Organic Chemistry III – 2193
CHEM 2453 Section 2
Autumn Quarter, 2014



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.

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Office: Seeley G. Mudd, Room 132

Lecture: T/R 8:00 a.m. – 9:30 a.m., Olin Hall, Room 105

Recitation: W 8:00 a.m. – 8:50 a.m., Olin Hall, Room 105

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

Textbook: *Organic Chemistry, Fifth Edition*, by Marc Loudon (Required)

Study Guide: *Study Guide and Solutions Manual to Accompany, Organic Chemistry, Fifth Edition*, by Marc Loudon and Joseph G. Stowell (Required)

Molecular Models: Molymod #62053 Organic Chemistry Molecular Model Set by Indigo Instruments (Required)

Exams: There will be two 90-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 either 90-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.

Online Homework through Sapling: There will be weekly problem sets to be completed online through the Sapling system. These problems are intended to help you understand the lecture material and reading assignments more thoroughly. We will review the problems during Wednesday morning recitation sections. Homework will be due Tuesday nights by 11 p.m. 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 350 points and will be curved appropriately based on overall class performance.

Lectures: I will cover most material on the white board using up to three different colors. I would recommend bringing at least 3 colored pens/pencils to class. ***I will not post my lecture notes online. If you miss a lecture, please see a classmate for the notes.*** If PowerPoint slides are periodically incorporated in lecture they will be posted afterwards on Canvas.

Canvas: The University of Denver has transitioned from Blackboard to the Canvas learning management system. You may log in to <https://du.instructure.com> with your DU ID number and PioneerWeb (WebCentral) password to access the course. 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 Learning Center: Need extra help? The Science and Engineering Learning Center is a collaborative space staffed by undergraduate and graduate TAs trained to assist students with first and second year chemistry, physics, and engineering lecture and laboratory courses. Our goal is to help students grow as problem solvers by assisting with homework sets, lab reports, and preparing for exams. The Science and Engineering Learning Center is **not** a one-on-one tutoring center, but is rather a support system where students can get guidance from TAs as well as their peers. This center is open to all DU students. All services are free. Located in the north-west corner of the first floor of the Anderson Academic Commons (west of the writing center).

Preliminary Course Schedule – Subject to Change

Date	Topic	Reading
09/09/14	Chapter 19: Aldehydes and Ketones	pp 888 – 914
09/11/14	Chapter 19: <i>Continued</i>	pp 914 – 939
09/16/14	Chapter 20: Carboxylic Acids	pp 948 – 963
09/18/14	Chapter 20: <i>Continued</i>	pp 963 – 978
09/23/14	Chapter 21: Reactions of Ester Derivatives	pp 986 – 1016
09/25/14	Chapter 21: <i>Continued</i>	pp 1016 – 1037
09/30/14	Chapter 22: Chemistry at the α -carbon	pp 1047 – 1081
10/02/14	EXAMINATION I (material from Chapter 19.1 through 21.12)	
10/07/14	Chapter 22: <i>Continued</i>	pp 1081 – 1105
10/09/14	Chapter 22: <i>Continued and Review</i>	
10/14/14	Chapter 23: Amines	pp 1116 – 1136
10/16/14	Chapter 23: <i>Continued</i>	pp 1136 – 1157
10/21/14	Chapter 24: Carbohydrates	pp 1166 – 1188
10/23/14	Chapter 24: <i>Continued</i>	pp 1188 – 1212
10/28/14	Chapter 25: Aromatic Heterocycles	pp 1220 – 1245
10/30/14	EXAMINATION II (material from Chapter 19.1 through 24.11)	
11/04/14	Chapter 25: <i>Continued</i>	pp 1245 – 1257
11/06/14	Chapter 26: Amino Acids and Peptides	pp 1265 – 1296
11/11/14	Chapter 26: <i>Continued</i>	pp 1296 – 1323
11/13/14	Chapter 27: Pericyclic Reactions	selected pages
11/18/14	<u>FINAL EXAM (material from Chapter 19.1 through 27.6)</u>	



Instructions for Using Sapling: Sapling's chemistry questions are delivered in a web browser to provide real-time grading, response-specific coaching, improvement of problem-solving skills, and detailed answer explanations. Dynamic answer modules enable one to interact with 3D models and figures, utilize drag-and-drop synthetic routes, and draw chemical structures - including stereochemistry and curved arrows. Altogether, Sapling is cheaper than a tutor, provides more value than a solutions manual, and goes beyond a mere assessment exercise to give a learning experience.

Students:

1. Go to <http://saplinglearning.com> and click on US Higher Ed.
- 2a. If you already have a Sapling Learning account, log in then skip to step 3.
- 2b. If you have Facebook account, you can use it to quickly create a SaplingLearning account. Click the blue button with the Facebook symbol on it (just to the left of the username field). The form will auto-fill with information from your Facebook account (you may need to log into Facebook in the popup window first). Choose a password and timezone, accept the site policy agreement, and click "Create my new account". You can then skip to step 3.
- 2c. Otherwise, click "Register here". Supply the requested information and click "Create my new account". Check your email (and spam filter) for a message from Sapling Learning and click on the link provided in that email.
3. Find your course in the list (you may need to expand the subject and term categories) and click the link.
4. Select a payment option (or bookstore) and follow the remaining instructions.

Once you have registered and enrolled, you can log in at any time to complete or review your homework assignments. During sign up, and throughout the term, if you have any technical problems or grading issues, send an email to support@saplinglearning.com explaining the issue. The Sapling support team is almost always more able (and faster) to resolve issues than your instructor.