

**Organic Chemistry I – 2271
CHEM 2451 Section 2
Winter Quarter, 2013**

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

e-mail: bryan.cowen@du.edu

Phone: (303) 871-2559

Office: Seeley G. Mudd, Room 232

Lecture: T/R 8:30 a.m. – 9:50 a.m.

Recitation: W 8:00 a.m. – 8:50 a.m.

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 60-minute exams during the quarter worth 100 points each. The final exam will be worth 200 points. If your final exam score is higher than either 60-minute exam score, the lowest score will be dropped and the final will count for 300 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 300 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 450 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 Blackboard.

Preliminary Course Schedule – Subject to Change

Date	Topic	Reading
01/08/13	Chapter 1: Introduction	<i>pp 01 – 29</i>
01/09/13	Chapter 1: Chemical Bonding and Structure	<i>pp 29 – 43</i>
01/10/13	Chapter 2: Chemistry of Alkanes	<i>pp 46 – 67</i>
01/15/13	Chapter 2: <i>Continued</i>	<i>pp 67 – 83</i>
01/17/13	Chapter 3: Curved-Arrow Notation	<i>pp 87 – 96</i>
01/22/13	Chapter 3: Acids and Bases	<i>pp 96 – 117</i>
01/24/13	Chapter 4: Structure and Reactivity of Alkenes	<i>pp 122 – 147</i>
01/29/13	Chapter 4: <i>Continued</i>	<i>pp 147 – 174</i>
01/31/13	EXAMINATION I (material from Chapter 1.1 through 4.5)	
02/05/13	Chapter 5: Addition Reactions of Alkenes	<i>pp 178 – 196</i>
02/07/13	Chapter 5: <i>Continued</i>	<i>pp 196 – 220</i>
02/12/13	Chapter 6: Principles of Stereochemistry	<i>pp 226 – 246</i>
02/14/13	Chapter 6: <i>Continued</i>	<i>pp 246 – 263</i>
02/19/13	Chapter 7: Conformational Analysis	<i>pp 268 – 290</i>
02/21/13	Chapter 7: Stereochemistry of Reactions	<i>pp 290 – 316</i>

02/26/13	Chapter 8: Alkyl Halides and Chalcogens	pp 323 – 355
02/28/13	EXAMINATION II (material from Chapter 1.1 through 7.9)	
03/05/13	Chapter 8: <i>Continued</i>	pp 355 – 373
03/07/13	Chapter 9: Reactions of Alkyl Halides	pp 377 – 400
03/12/13	Chapter 9: <i>Continued</i>	pp 400 – 429
03/14/13	<u>FINAL EXAMINATION (material from Chapter 1.1 through 9.8)</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>
- 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.