

Organic Chemistry II
Chemistry 3521
Spring 2016

Mondays and Wednesdays 9:30 – 10:45 AM, Room 2310 Ingersoll

Instructor: Prof. Ryan Murelli

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Office Hours: Mondays and Wednesdays 11-1, 437 Ingersoll Extension

Course Description:

Organic chemistry is a required class for so many related fields of study because it requires a student to: 1) think about structures in 3-dimensions, and 2) analyze data using his/her understanding of basic principles to solve a problem. Think about it: the skills you use to propose a structure for an unknown compound from a set of ^1H NMR peaks are the same skills you will use to diagnose a patient with an unknown illness from a set of symptoms.

This course, in conjunction with Chemistry 3511, will provide students with an introduction to organic chemistry concepts. Specifically, this course will cover organic reactions, mechanisms and principles that are relevant to many other sciences and that provide us with a greater understanding of how the natural world works. The prerequisite for this course is Chemistry 51 or Chemistry 3510 or Chemistry 3511 and 3512; Chemistry 3522 is a prerequisite or corequisite.

Course Objectives:

Upon completion of the course, students should be able to:

- Explain and/or apply selected fundamental principles of organic chemistry
- Provide reactants, reaction conditions or reaction products for certain key reactions
- Illustrate the mechanism of certain key reactions

Required Texts and Materials:

1. Brown, William H., Christopher S. Foote, Brent L. Iverson, and Eric V. Anslyn. *Organic Chemistry*. 5th ed. Belmont, CA: Brooks/Cole Cengage Learning, 2009. (other additions are fine. Just pay attention to the material we cover in class and that it matches what you are reading)

Recommended Texts and Materials:

1. Molecular Model Set for Organic Chemistry, Prentice Hall

Course Evaluation:

Recitation Attendance: 5%

Quiz Grade: 20% (Average of top 4 quizzes)*

Lecture Exams: 40% (20% each)**

Final Exam: 35%

*** Missed Quizzes:** *The reason that I drop a quiz is because I recognize that you all have lives outside of school and most students will miss at least one quiz due to traffic, construction on the Q line, illness... maybe on the Q line, family emergency or crisis, or alien abduction. Scheduling make-ups is not feasible in such a large group while still maintaining fairness to the overall process. Thus, there are NO MAKE-UP QUIZZES FOR ANY REASON with two exceptions:*

1. *If you know or suspect that you might miss a quiz in advance for a religious holiday, family commitment, or pretty much any reason besides "I want more time to study", you can schedule to take the quiz in a difference recitation section. In this instance, the responsibility is on you to identify the alternative recitation sections that would work and email them (CC'ing myself and your recitation instructor) asking if they can accommodate you. This must be done 48 hours prior to the first quiz of that series of quizzes, but it is highly recommended that you schedule it ASAP since there is a possibility you may have to ask multiple instructors if they have space for you.*
2. *If you miss more then one quiz with reasonable excuses, please let me know after you miss the 2nd and if I view them as reasonable I will work with you to make sure that a zero is not and this may involve a makeup quiz.*

**** Missed MidTerm Exams:** *No makeups will be given for the midterms. If you miss one of the two midterms with a valid excuse, your grade will be weighted based upon your completed assignments as I see fit based upon the circumstances. Without a valid excuse, you will get a 0. Hopefully no one will miss both midterms.*

**** Missed Final Exams:** *In the event of an excused absence from the final exam, you will need to apply at the academic advisement center (3207 Boylan) for permission to take the make-up final exam given the following semester.*

Assigning Letter Grades for Exams and for the Course: I do not have a formal curve for the course. Based upon past experiences I anticipate the average course grade to be a C+. I will provide "approximate" letter grade breakdowns after each exam.

Policy for Re-grades: Re-grade requests can be made in one of two ways depending on the type of re-grade necessary.

1. If, after looking through your exam or quiz, you find an egregious error (ie, 100% correct answer marked wrong, adding mistake), please show to your recitation instructor. If they agree with you, ask them to put it in my mailbox with a letter and if I agree I will make the change.
2. Any regrade requests that aren't as concrete (ie, shouldn't I have gotten more points for this?, My friend got 4/5 and I got a 2/5 and we had the same answer!), please fill out a regrade request form. In these instances I will regrade the entire exam and it is possible you might end up with a lower grade if I find other questions that were misgraded in your favor. Regrade request forms can be found on Prof. Horowitz' website and turned into the chem. office: <http://userhome.brooklyn.cuny.edu/ghorowitz/index.htm>

3. **University Policy on Academic Integrity:** The faculty and administration of Brooklyn College support an environment free from cheating and plagiarism. Each student is responsible for being aware of what constitutes cheating and plagiarism and for avoiding both. The complete text of the CUNY Academic Integrity Policy and the Brooklyn College procedure for implementing that policy can be found at this site: <http://www.brooklyn.cuny.edu/bc/policies>. If a faculty member suspects a violation of academic integrity and, upon investigation, confirms that violation, or if the student admits the violation, the faculty member **MUST** report the violation.

Tentative Schedule

Mon. Feb. 1	Intro and Mechanism Review	Chapter 4 Review
Wed. Feb. 3	Alcohols	Chapter 10
Mon. Feb. 8	Alcohols	Chapter 10
Wed. Feb. 10	Ethers, Epoxides and Sulfides	Chapter 11

Quiz #1 – Mechanisms and Chapter 10 (Feb 16-22 in recitation)

Wed. Feb. 17	Ethers, Epoxides and Sulfides	Chapter 11
Mon. Feb. 22	Aldehydes and Ketones	Chapter 16

Quiz #2 – Chapter 11 (Feb 29 – Mar 4 in recitation)

Mon. Feb. 29	Aldehydes and Ketones	Chapter 16
Wed. Mar. 2	Aldehydes and Ketones	Chapter 16
Mon. Mar. 7	Carboxylic Acids and Derivatives	Chapter 17/18
Wed. Mar. 9	Carboxylic Acids and Derivatives	Chapter 17/18
Mon. Mar. 14	Exam 1 Review	

Wed. Mar. 16 Exam # 1 Chapters 10,11, 16-18

Mon. Mar. 21	Amino Acids and Peptide Synthesis w/ Dr. Gerona-Navarro*	Chapter 27.1, 27.5
Mon. Mar. 28	Enolates and Enamines	Chapter 19
Wed. Mar. 30	Enolates and Enamines	Chapter 19

Quiz #3 – Chapter 27 and 19 (Apr 4-8 in recitation)

Mon. Apr. 4	Conjugation and Aromaticity	Chapter 20, 21
Mon. April 6	Reactions of Benzene	Chapter 22
Wed. Apr. 13	Reactions of Benzene	Chapter 22

Quiz #4 – Chapters 20-22 (Apr 15-21 in recitation)

Mon. Apr. 18	Amines	Chapter 23
Wed. Apr. 20	Amines	Chapter 23
Mon. May 2	Exam 2 Review	

Mon. May 4 Exam # 2 Chapters 19-23, 27

Mon. May 9	C-C Bond Formation	Chapter 24
Wed. May 11	C-C Bond Formation	Chapter 24
Mon. May 16	Polymer Chemistry	Chapter 29
Wed. May 18	Final Exam Review	

Quiz #5 – Chapters 24, 29 (May 5 – 13)

Mon. May 23 FINAL EXAM (Cumulative, Location TBA)

*Prof. Gerona-Navarro will be filling in for me while I attend to a family obligation, and will be covering peptide synthesis, which he is an expert in. I will post exam grade breakdowns electronically on my website.

Homework – There are no assigned problems. The more homework you do the better off you'll be.

Read the chapter. Re-watch my videos. Do my problem sets (on my website). Do Horowitz's problem sets. Do the book questions (as many as you can). Do old quizzes and exams on my website. Participate in class. Participate in recitation. Find a study group. Work.

Important Dates

Thursday, February 4 - Last day to add a course

Tuesday, February 9 – Conversion Day: Classes to follow a Friday schedule

Thursday, February 18 - Last day to drop a course without a grade of 'W'

Wednesday, March 23 - Conversion Day: Classes follow Friday schedule

Monday, April 11 - Last day to withdraw from a course with a W (non-penalty) grade