

Drexel University
Organic Chemistry I
CHEM 241
Summer 2014 Syllabus

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CLASS SCHEDULE

Lecture: M W 3:00 – 4:50 pm Randell 121

Office Hours: M 1:00 – 3:00 pm Stratton 410
Also available by appointment

COURSE DESCRIPTION

This course is an introductory course in organic chemistry. It is the first of a series of courses. The course will emphasize the nomenclature, structures, and reactions of organic molecules. Considerable time will be devoted to reaction mechanisms as a key to understanding the reactivity of molecules. To aid in this objective, a review of kinetics and thermodynamics is included in the course. Also included is a discussion of spectroscopy. An introduction to organic synthesis is presented early in the course.

COURSE OBJECTIVES

- Know how to name alkanes, alkenes, and alkynes.
- Know how to draw the structures of acyclic, cyclic, bicyclic, and spiro compounds.
- Know how to predict the products of free radical and nucleophilic substitution reactions.
- Be able to complete elimination and addition reactions
- Know how to analyze the conformations and configurations of substituted alkanes and cycloalkanes
- Be able to show the mechanisms for all reactions covered in the course
- Be able to devise simple synthesis sequences

PREREQUISITES

- CHEM 102 Minimum Grade: D or CHEM 122 Minimum Grade: D or (CHEM 162 Minimum Grade: D and CHEM 164 Minimum Grade: D)

COURSE MATERIALS

Required Textbook:

- Wade, L. G. *Organic Chemistry 8th ed.*; Prentice Hall, 2013. ISBN 9780321768414

Optional Materials:

- Wade, L. G. *Organic Chemistry Solutions Manual 8th ed.*; Prentice Hall, 2013. ISBN 9780321773890
- Organic Molecular Model Kit

Web: The “Drexel Learn” course website will be used extensively throughout the course. Lecture notes, course announcements, in-class assignments and solutions, and exam information will be regularly posted. Emails will also be sent to your Drexel email account. Students are responsible for checking the course website and email on a regular basis.

COURSE EXPECTATIONS

Lecture: Lecture will primarily be conducted through PowerPoint lectures as well as through worked examples on the board, in-class demonstrations, and in-class activities. The PowerPoint lectures will be posted on the course website, typically immediately following class. Though lecture is the major portion of the course, students must also refer to outside material to gain a full understanding of the curriculum. Relevant readings and additional problems can be found in the Wade textbook (see “*practice problems*” below). ***Remember regular work on problems is ESSENTIAL to your mastery of the topics presented in Chemistry 241.***

Attendance: Although an attendance grade will not be given in this course, you are expected to attend all lectures. If you do miss class, be sure to go over the corresponding PowerPoint slides and consult a fellow classmate for any additional notes given in class. You are also expected to arrive on time and remain to the end of class. Arriving late or leaving early puts the student at a disadvantage as well as interrupts the rest of the class. If you must arrive late or leave early, please notify me beforehand.

In-class Activities: A significant portion of class time will also be spent completing worksheets pertaining to lecture material in small groups. These worksheets will be posted on the course website prior to class, and students will be expected to bring copies to lecture. Answer keys will typically be posted online as well.

Practice Problems: A list of textbook problems pertaining to the lecture topics will be posted on the course website periodically throughout the term. These problems will not be collected for grading. ***However, at least 1 of the suggested textbook problems will be included on each exam!*** Answers to these problems will typically not be posted, but can be found in the textbook solutions manual.

Exams: There will be two in-class exams during the term and a comprehensive final exam. The exam dates for the in-class exams can be found on the class schedule at the end of the syllabus. The date, time, and place of the final exam will be announced later in the term so ***do not make any travel arrangements until you know your final exam schedule.*** All exams, including the final, will be closed book. If you miss an in-class exam, a make-up exam will be given at the end of the term

(date, time, and place of the make-up exam are TBA). You do not need an excuse to take the make-up if you miss an in-class exam, but you *MUST* attend the make-up or receive a score of zero. You may make-up only one exam, and only because of an absence. **NO MAKE-UP EXAMS WILL BE GIVEN FOR THE FINAL EXAM!**

Please let me know as soon as possible if you require extended time for exams or have any additional needs. Proper paperwork is required and must be filled out through the Office of Disability Resources. Students with disabilities should see material under the “health and disability services” tab at the following link: http://drexel.edu/studentaffairs/community_standards/studentHandbook/

Electronic Devices: Students may use computers, laptops, and electronic tablets to follow along with the lecture notes. The use of computers, laptops, and electronic tablets for *any other purposes*, as well as the use of cell phones, iPods, mp3 players etc., will be **strictly prohibited** during class! If students are unable to abide by these rules, all electronic devices will be prohibited!

GRADING

Tentative grade cutoffs are shown below. The instructor reserves the right to lower some or all of the grade cutoffs.

Final Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	F
%	100-93	92-90	89-87	86-83	82-80	79-77	76-73	72-70	69-67	66-65	Below 65

The grading rubric for the course is as follows:

2 In-class Exams	200 pts
Final Exam	200 pts
Total Course Points	400 pts

Academic Integrity: Discussion of lecture material among class members is encouraged, but all final work turned in for grading must be your own, unless otherwise explicitly stated. Academic dishonesty in any form (plagiarism, cheating, copying homework, or use of unauthorized answer keys) will not be tolerated and will result in an **AUTOMATIC ZERO** on the given assignment. Subsequent incidents of academic dishonesty will result in automatic failure of the course. For more information, see material in “academic dishonesty” under the “academic policies” tab at the following link: http://drexel.edu/studentaffairs/community_standards/studentHandbook/

Course Withdrawal: If you are registered and wish to drop or withdraw from this course, see the following link: http://www.drexel.edu/provost/policies/course_drop.asp. Also, please note the following important dates from the University registrar:

- Last day to drop/add: Monday July 7th
- Last day for withdrawal: Friday August 8th

TENTATIVE SCHEDULE

The instructor reserves the right to change the schedule of topics, readings, homework assignments, etc., if necessary. Appropriate advance notice will be given by in-class announcement and on the course website. The dates of in-class exams and the final exam will not change.

Week	Lecture Dates	Lecture Topics	Notes
1	M 6/23 W 6/25	<ul style="list-style-type: none">• Introduction• Chemical Bonding• Organic Compounds	<i>Chapters 1 & 2</i>
2	M 6/30 W 7/2	<ul style="list-style-type: none">• Alkanes, cycloalkanes, bicycloalkanes, spiroalkanes	<i>Chapters 3 & 5</i>
3	M 7/7 W 7/9	<ul style="list-style-type: none">• Stereochemistry	<i>Chapters 5</i>
4	M 7/14 W 7/16	<ul style="list-style-type: none">• Exam 1 Review	Exam 1 W 7/16
5	M 7/21 W 7/23	<ul style="list-style-type: none">• Chemical reactivity• Alkyl Halide Preps	<i>Chapters 3, 4, & 6</i>
6	M 7/28 W 7/30	<ul style="list-style-type: none">• Substitution and Elimination Reactions	<i>Chapter 6</i>
7	M 8/4 W 8/6	<ul style="list-style-type: none">• Exam 2 Review	Exam 2 W 8/6
8	M 8/11 W 8/13	<ul style="list-style-type: none">• Alkenes and Reactions of Alkenes	<i>Chapter 7 & 8</i>
9	M 8/18 W 8/20	<ul style="list-style-type: none">• Alkynes	<i>Chapter 9</i>
10	M 8/25 W 8/27	<ul style="list-style-type: none">• Final Exam Review	
11		FINAL EXAM: Date, Time, and location TBA	