Chemistry 25a Organic Chemistry Lectures, I
Summer 2015 Syllabus
Brandeis University

Lecturer
Dr. Kristen Mascall (Email: kmascall@brandeis.edu)
Office: SSC 00-08B (Telephone: 6-2545)

Course description
Organic chemistry is the study of carbon-containing compounds. Chem 25a is the first module of a two-semester course that introduces you to fundamental topics of organic chemistry such as structure, function and reactivity of organic molecules. In this course we will explore how and why organic reactions occur, and the relevance of organic chemistry to biological systems, medicine, environmental science, and industry will be emphasized through current literature examples. This course meets the first half of the organic chemistry, biology, premedical, and pre-dental majors when taken in conjunction with the laboratory course Chem 29a.
Prerequisite: A satisfactory grade (C- or better) in Chem 11b or Chem 15b or the equivalent.

Learning goals and objectives
In Chem 25a, emphasis is placed on understanding fundamental concepts and applying to problems, rather than memorizing. You will develop problem-solving skills and learn how to think logically through questions to derive an answer. Your greatest benefit in learning the material will come from practicing many problems continually. By the end of this course, you should (1) understand the structures and notations of organic compounds; (2) know how to write reasonable reaction mechanisms; and (3) be familiar with the reactivity of certain functional groups.

Class times and office hours
Lectures: Mon, Tues, Thurs, Fri 8:30 – 10:50 am.
Office hours: Mon, Tues, Thurs, Fri 11:00 am – 12:00 pm in SSC 00-08B, and other times by appointment.
Examinations and quizzes will be given during lectures.

Required materials
- Molecular Model Kit: Darling organic and inorganic molecular models ISBN 978-09648837-1-0 (or any other organic chemistry model kit)
- All course handouts will be available on LATTE.

Academic credit
Grades will be distributed as follows:
- Four quizzes 20%
- Two examinations 40%
- Final examination (cumulative) 40%
Course grades will be determined based on the class average and student distributions around the average.
Examinations and quizzes
Examinations and quizzes will be held during lecture times.
Exam 1 (June 15); Exam 2 (June 29); Final exam (July 2).
Quizzes (June 5th, 12th, 19th, 26th)

Makeup exams and quizzes
There will be NO makeup examinations or quizzes. If you arrive late to an exam or quiz, no additional time will be given. If you miss an exam or quiz with a documented medical excuse, your grade will be based on the average of the other 3 quizzes and/or 1 exam and the final.

Regrades
You may request that an exam or quiz be regraded if you suspect errors in grading. The graded document, along with a note explaining the nature of the grading dispute, must be submitted to Dr. Mascall no later than two days after the graded document is returned. Please note that the entire document will be regraded.

Homework:
You are expected to be reading the chapter before or while we cover it. Practice problems from the textbook will be suggested for each chapter, with the answers available in the solutions manual. Homework will not be collected or graded; it is in your best interest to practice as many questions as possible.

Use of electronics
The use of cellular phones and laptops during lectures and exams is prohibited. The use of tablets is allowed during lectures for taking notes, but is prohibited during exams and quizzes. If you require special accommodations for electronic use not addressed above, please see me.

Disabilities
If you are a student with a documented disability on record at Brandeis University and wish to have a reasonable accommodation made for you in this class, please present your letter of accommodation to Dr. Mascall as soon as possible. Please note that accommodations cannot be granted retroactively.

Academic Integrity
You are expected to be familiar with, and to follow, the University's policies on academic integrity. Please consult the Brandeis University Handbook on Rights and Responsibilities for all policies and procedures (pay particular attention to section 4). All policies related to academic integrity apply to in-class and take home assignments, exams and quizzes. Any work submitted by a student for academic credit will be the student’s own work. Students may only collaborate on assignments with permission from the instructor. Allegations of alleged academic dishonesty will be reported to the Brandeis Student Rights and Community Standards Office. A first offense may result in zero assignment credit for all involved, and a repeat offense may result in suspension or dismissal from the University.
## Course schedule

<table>
<thead>
<tr>
<th>June</th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
<th>Tentative topics</th>
</tr>
</thead>
</table>
| 1    | 2   | 3    | 4   | 5     | Quiz 1 | Ch. 1: Chemical bonding and chemical structure  
|      | Lec | Lec  | Lec | Lec   |       | Ch. 2: Alkanes  
| 8    | 9   | 10   | 11  | 12    | Quiz 2 | Ch. 7.1 – 7.6: Cycloalkanes  
|      | Lec | Lec  | Lec | Lec   |       | Ch. 3: Acids and bases  
|      |     |      |     |       |       | Ch. 4: Introduction to alkenes  
|      |     |      |     |       |       | Ch. 5: Addition reactions of alkenes  
| 15   | 16  | 17   | 18  | 19    | Quiz 3 | Ch. 6: Principles of stereochemistry  
| Lec  | Lec | Lec  | Lec | Lec   |       | Ch. 7.7 – 7.9: Stereochemistry of chemical reactions  
|      |     |      |     |       |       | Ch. 14: Chemistry of alkynes  
| 22   | 23  | 24   | 25  | 26    | Quiz 4 | Ch. 8: Intro to alkyl halides, alcohols, ethers  
|      | Lec | Lec  | Lec | Lec   |       | Ch. 9: Chemistry of alkyl halides  
|      |     |      |     |       |       | Ch. 10: Chemistry of alcohols  
| 29   | 30  | 1    | 2   | 3     |       | Ch. 11: Chemistry of ethers, epoxides  
| Exam 2 | Lec | Lec  |      | Final exam |       | Ch. 15: Dienes, resonance, aromaticity  

The tentative topics list is designed to give you an idea of the order and timeline of coverage of course material. This list is subject to change and will be dependent somewhat on student response. Less time will be spent on topics that are well understood by the class, and more time will be spent on topics that the class is struggling with.