Chemistry 25b Organic Chemistry II

Summer 2019 Syllabus
(July 8 - August 9, M, T, TH, and F @ 8:30 - 11 am)
Brandeis University

Professor
Dr. Mustafa Yatin (Email: myatin@brandeis.edu and myatin@salemstate.edu)

Course description
CHEM 25B is a continuation of CHEM 25A. This course meets the second half of the organic chemistry requirement for chemistry, biology, premedical, and pre-dental majors when taken in conjunction with the laboratory course CHEM 29B. The course will build upon concepts of structure and reactivity from CHEM 25A. Much emphasis will be placed on the chemistry of carbonyl compounds, and other biologically relevant molecules such as carbohydrates. Organic compounds of chemical, medicinal, and biological interest will be examined through current literature examples. We will particularly emphasize the green chemistry principles in the context of organic reactions and experiments.

Prerequisite: A satisfactory grade (C- or better) in CHEM 25A or the equivalent.

Learning goals and objectives
In CHEM 25B emphasis is placed on understanding fundamental concepts and applying to problems, rather than memorizing. You will learn how basic concepts connect diverse chemical reactions and develop confidence in understanding and analyzing problems. You will also learn the relevance of organic chemistry to biological systems, medicine, environmental science, and industry.

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 TBD.
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)
- Course handouts and supplemental material 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.

Quizzes will be given every Friday (July 12th, 19th, 26th, and August 2nd)

Exam 1: Monday July 22nd;

Exam 2: Monday August 5th.

Final exam: Summer Session II final exam period is August 8-9. The CHEM 25B final exam date and time will be set by the Summer School Office. Do not make travel plans until this date is finalized.

Makeup exams and quizzes

Due to the nature of summer classes 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, otherwise they will be counted as zero.

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. Yatin 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 this practice is prohibited during exams and quizzes. If you require special accommodations for electronic use not addressed above, please notify Dr. Yatin.

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. Yatin 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>Week 1</th>
<th>Monday       July 8</th>
<th>Tuesday      July 9</th>
<th>Thursday     July 11</th>
<th>Friday          July 12</th>
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<tbody>
<tr>
<td></td>
<td>Orgo 1 Review</td>
<td>Chp 15: Dienes, Resonance, and Aromaticity</td>
<td>Chp 16: Chemistry of Benzene and Its Derivatives</td>
<td>Quiz 1 - July 12</td>
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<td>Week 2</td>
<td>Monday     July 15</td>
<td>Tuesday      July 16</td>
<td>Thursday    July 18</td>
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<td>Chp 17: Allylic and Benzylic Reactivity (Chp 17 continues)</td>
<td>Chp 19: Chemistry of Aldehydes and ketones: Carbonyl Addition Reactions</td>
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<td>Quiz 2 - July 19</td>
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<td>Week 3</td>
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<td>Tuesday      July 23</td>
<td>Thursday   July 25</td>
<td>Friday     August 1</td>
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<td>Chp 20: Chemistry of Carboxylic Acids (Chp 20 continues)</td>
<td>Chp 21: Chem. of Carboxylic Acid Derivatives (Chp 21 continues)</td>
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<td>Exam 1 – July 22</td>
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<td>Week 4</td>
<td>Monday      August 5</td>
<td>Tuesday     August 6</td>
<td>Thursday   August 8</td>
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<td>Chp 22: Chemistry of Enolate Ions, Enols, and α,β – Unsaturated Carbonyl Compounds</td>
<td>Chp 23: Chemistry of Amines (Chp 23 continues)</td>
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<td>Quiz 3 – July 26</td>
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<td>Week 5</td>
<td>Monday       August 5</td>
<td>Tuesday     August 6</td>
<td>Thursday   August 8</td>
<td>Friday   August 9</td>
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<td></td>
<td>Chp 24: Carbohydrates SESSION REVIEW</td>
<td>Summer Session II Final Exam Period</td>
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<td>Exam 2 – August 5</td>
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*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 and unforeseen conditions that mat occur. Instructor reserves the right to adjust the schedule if needed. 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.*