Course Requirements:
Prerequisites for Chem 252.4: C or better in Chem 251.4 and 251.1
Pre or corequisite: Chem 252.1 (C or better if prerequisite)

Note: a C- in any pre or corequisite will not permit you to take 252.4/252.1!

You must earn a C or better in Chem 252.4 and 252.1 to take upper-level chemistry courses.

You will need access to Blackboard for handouts, including this syllabus and the textbook. It is your responsibility to provide a valid e-mail address that you monitor. Announcements will be made via Blackboard and e-mail.

Lecture: Tu, Th 4:20 - 6:10 PM, Rm 101 Remsen Hall
Professor William H. Hersh, 109 Remsen Hall
Office Hour: Tuesday, 2:00 PM - 3:00 PM and by appointment
Telephone: 718-997-4144
E-mail: william.hersh@qc.cuny.edu - best way to contact Prof. Hersh

LECTURE TEXT: Organic Chemistry, Baker, Rizzo, and Engel. Download the zip file from Blackboard under Course Materials, unzip the file (it may unzip automatically upon downloading), and in the resultant TEXTBOOK folder, open the file “TEXT.doc.” If you order the files by size or date it will be first. Keep an alias of this file on your computer desktop, as there are 4600 documents in the TEXTBOOK folder. You can print or just use it from your computer. All figures open in a new window when you click on a link, and problems and answers are accessed from the text as well. There is no charge, and the book is for your personal use only.

The text contains many problems similar to those that will be given on exams. You should do the problems that appear in the body of the text and at the end of each chapter. These problems will not be graded. These problems should be done together with the required on-line problems (see below); the on-line problems are not enough by themselves to prepare you to do well in this course.

REQUIRED ON-LINE PROBLEMS: You are required to purchase access to the Sapling Learning on-line problem web site for this course. The cost is $40. Enroll at: http://bit.ly/saplinginstructions. It will be available starting on 8/11/2016. Sapling Learning offers a grace period on payment (14 days from the first day of class, 8/25/2016). During sign up or throughout the term, if you have any technical problems or grading issues, send an email to support@saplinglearning.com explaining the issue. The course is listed under “CUNY Queens College - CHEM 2524 – Fall16 - Hersh.” For each problem there are hints and answers, and for most there is explanatory reading material that you can access at the right hand side of the page in the Resources box under “Help with this topic” linking you to another organic textbook (labeled “Loudon – Organic Chemistry”), so if you are having trouble with the problems, there is a wealth of information available to help you. There is a training module (with extra credit) that you should complete before you start on the chapter problems.

While studying organic with other students is recommended, you will get the maximum benefit from these problems by doing them on your own.

Recommended: Molecular model kit (available on-line, about $20-60; the ~$30 kits on Amazon look good)


Grading:  
3 Midterm Exams 60%  
On-line Homework 10%  
Final Exam (Comprehensive*) 30%  
Total 100%

Exams will stress lecture material and recitation problems.

Midterm Exams are 70 min and will start at 5 PM for Exams 1 & 2. There will be a ½ hr class before those two exams. Exam 3 will start at the beginning of class.

Bring photo ID to exams.

You **will** be permitted to use molecular models during mid-term exams **but not on the final exam.** You will **not** be permitted to use books, notes, computers, or calculators during exams. Cell phones are strictly prohibited for class and exams. If you have any questions concerning the grading, see Dr. Hersh within 10 days following the exam. All re-grade requests must be made in writing and attached to the exam; do not under any circumstances write anything on the exam itself. **Exams are scanned prior to being returned.** There are no make-up exams. Written verification of your reason for missing an exam is required; your grade will be based on the exams you have taken.

Cheating of any kind will not be tolerated. Your entire exam grade will be zero, and you will be brought up on charges of academic dishonesty to the College.

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### Approximate Lecture and Examination Schedule

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<thead>
<tr>
<th>Date</th>
<th>Chp</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Aug. 25</td>
<td>15</td>
<td>Dienes and Alkynes</td>
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<td>Aug. 30</td>
<td>16</td>
<td>Conjugated $\pi$ Systems and Aromaticity</td>
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<td>Sept. 6</td>
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<td>NMR and IR</td>
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<td>Sept. 15</td>
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<td>Benzene and its Derivatives</td>
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<td>Sept. 27</td>
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<td>Aldehydes and Ketones</td>
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<td><strong>Sept. 29 Exam 1 Chapters 15 - 18</strong></td>
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<td>Oct. 14 (Fri)</td>
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<td>Amines</td>
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<td>Oct. 20</td>
<td>21</td>
<td>Carboxylic Acids</td>
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<td>Nov. 1</td>
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<td>Derivatives of Carboxylic Acids</td>
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<tr>
<td>Nov. 8</td>
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<td>Enamines, Enolates, and $\alpha,\beta$-Unsaturated Carbonyls</td>
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<td><strong>Nov. 10 Exam 2 Chapters 19 - 22</strong></td>
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<td>Carbohydrates</td>
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<td>Nov. 28</td>
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<td>A Brief Intro to UV and MS</td>
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<td>Dec. 1</td>
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<td>Amino Acids, Peptides, and Proteins</td>
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<td><strong>Dec. 8 Exam 3 Chapters 23 – 26</strong></td>
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<td>Dec. 13, 15, or 20 (tentative), 4:00-6:00 PM Final Exam: ACS Final Exam Chapters 1 - 26</td>
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**Classes follow a Monday schedule on Thursday Oct. 6.**

**Classes follow a Tuesday schedule on Friday Oct. 14.**

**No classes Oct. 4, 6 (Monday schedule), 11, and Nov. 24.**

**Course Preparation and Advice:** Understanding the basic concepts from Organic Chemistry I is critical. Read the book before lecture; take seriously the instructions that you really do need to know and understand every reaction (no exceptions). Do problems in the text, and do the on-line problems on your own and not at the last minute – take your time and understand them. Understanding mechanisms will help you remember the reactions. In most cases hiring a tutor will not help and most likely will be a hindrance because you will rely on the tutor rather than yourself.

**Course Objectives:** Students will complete their initial one year course in organic chemistry, with topics including alkynes, dienes and aromatic compounds, the chemistry of the carbonyl and related functional groups, amines, and an introduction to the chemistry of some of the important classes of biological molecules, including carbohydrates and proteins. At the conclusion, students will have a solid foundation in organic chemistry that will enable them to carry out organic chemistry research and understand the molecular basis of biochemical processes.
**Assessment:** Contrary to its reputation, success in organic chemistry depends far more on understanding of course material than on rote memorization. Problem solving ability will be tested on exams, and representative problems will be discussed in lecture recitations and will be found in the textbook, on the Blackboard course site, and in graded on-line problems for each chapter. Careful reading of the textbook prior to lectures, and attendance at all lectures, is strongly recommended.

Understanding of the course material will be assessed via three 1 hour midterm exams and one final exam; the final exam will include the American Chemical Society exam and will be comprehensive for both semesters. Since organic chemistry is a cumulative subject, it is not possible to succeed in this course without knowing the first semester material, so any exam is in effect cumulative. The ACS exam is nationally normed, allowing comparison to students at other schools.

**GRADE KEY.** This course is not graded on a curve. Everyone in the class can get an A, or everyone can get an F. There is no predetermined percentage of the class that will get any particular grade. The key for all exams is shown below, except for + and – cutoffs. For instance, while “A” is shown as 80-100, an average of 80 will be an A-, and while “B” is shown as 60-79, the cutoffs are approximately 1/3 in each range, i.e. around 60-66 B-, 67-73 B, 74-79 B+. The exact ranges will not be given out except for the C cutoff, since you need a C to go on to further chemistry courses.

80-100 A
65-79  B
55-64  C
50-54  C-
40-49  D
0-39   F