Organic Chemistry II (Chemistry 242) completes the two-term sequence in introductory organic chemistry begun with Organic Chemistry I.

The course begins with further development of spectroscopic methods with coverage of nuclear magnetic resonance spectroscopy. This is followed by discussion of the descriptive chemistry of ethers, epoxides, and thioethers. The course then takes a theoretical turn with development of the concepts underlying current understanding of conjugated systems, including aromaticity and the use of orbital symmetry in interpreting cycloaddition reactions. This section of the course also completes coverage of spectroscopic methods with ultraviolet spectroscopy.

The course then addresses the extensive chemistry of amines and carbonyl compounds, including aldehydes and ketones, carboxylic acids, various carboxylic acid derivatives (acyl halides, esters, anhydrides, and amides), plus condensation reactions of carbonyl compounds at the α-carbon. Finally, much of this chemistry is brought together with coverage of the chemistry of carbohydrates.

Prerequisites:
Completion of Chemistry 241 or equivalent with a passing grade.

Required Course Materials
2. Solutions Manual to accompany text
3. Darling Molecular Model Set
The UP Bookstore stocks all these items as a package.

Instructional Staff:
Instructor: Joseph Karpinski, Chemistry Lecturer, jkarpins@sas.upenn.edu
Office hours: M-F 10:00-10:30 location TBA (probably in the classroom)

Teaching Assistants: TBA

Lecture Schedule: M-F 8:15-10:00 location Chemistry Building B13

Recitation Schedule: TBA (but probably M 10:00-11:00 and F 10:00-11:00, optional and locations TBA)

Examination schedule:
Midterm examinations
Thursday July 13 8:15-10:00
Monday July 24 8:15-10:00

Final examination
Friday Aug 4 8:15-10:00

COVERAGE

Part I: June 29-July 11 (No classes Tuesday, July 4th)
Chapter 13: "Nuclear Magnetic Resonance Spectroscopy" (except Section 13-12F)
Chapter 14: "Ethers, Epoxides and Thioethers"
Chapter 15: "Conjugated Systems, Orbital Symmetry, and Ultraviolet Spectroscopy"
Chapter 16: "Aromatic Compounds"

First Midterm Examination: July 13

Part II: July 12-July 21
Chapter 17: "Reactions of Aromatic Compounds"
Chapter 18: "Ketones and Aldehydes"
Chapter 19: "Amines"

Second Midterm Examination: July 24

Part III: June 15-June 27
Chapter 20: "Carboxylic Acids"
Chapter 21: "Carboxylic Acid Derivatives"
Chapter 22: "Condensations and Alpha Substitutions of Carbonyl Compounds"
Chapter 23: "Carbohydrates and Nucleic Acids"

Final Examination: Aug 4

Lecture format
Lectures will primarily be PowerPoint presentations supplemented by some chalkboard explanations. You may access the PowerPoint slides on Canvas and print them out to facilitate note taking.

Ground rules for taking examinations
If extenuating personal or medical circumstances compel you to miss an examination, it is essential that you inform Mr. Karpinski before the examination. In such cases the reason for the absence must be established. Individual arrangements will then be made for completion of the course.

During examinations, you will be asked to sign in and show your Penn ID card.

You may use your set of molecular models on all examinations.

For each examination you will be provided with a copy of the periodic table if there is not one displayed in the classroom. During examinations involving IR and NMR, you will be provided with a table of IR frequencies and 1H and 13C chemical shifts. Note that you will not be provided with coupling constants.

Note that no examinations are dropped, and each student is expected to take all examinations on schedule.

Coverage of final examination:
The final examination will be comprehensive covering all the material in the course.

Makeup final examination
All students are expected to take the final examination on schedule. Requests to miss the final examination and to take a makeup must be approved in consultation with an advisor in your school office.

Practice Quizzes
A practice quiz for each chapter will be placed in Canvas.

Grading
Grades will be based on two midterm examinations worth 100 points each and a final worth 200 points. Raw scores will be scaled to 100 and 200 points, respectively. No examinations are dropped. The average for each examination will correspond approximately to the lowest B-. Normally the sum of A’s and B’s is expected to be somewhere between 50% and 60%. However, the strengths of individual classes do vary, and this percentage may be somewhat above or below this range.
Regrading of midterm examinations

Answer keys, including grading criteria, will be posted on Canvas. Electronic photocopies of all examinations will be kept on file.

If your examination of the answers and criteria prompts you to request a regrade, you may do so in two different ways.

(1) The fastest way to get a response to your request is to bring your exam and with your request on a separate sheet of paper to a regrade session to be held after each exam where you may consult directly with the Mr. Karpinski and the graders. The midterm regrade schedule is:

Midterm 1: Monday July 24th, 10:00-11:00AM
Midterm 2: Monday July 31st, 10:00-11:00AM
(locations TBA but probably in the classroom)

(2) Alternatively, you may email your request to Mr. Karpinski no later than the Monday after examinations have been returned. The request must be made by email and must be sent to Mr. Karpinski.

You should, of course, also submit a request if an error has been made in adding up your score.

Regrading of final examinations

The answer key, including grading criteria, will be posted on Canvas. Electronic photocopies of all exams will be kept on file. You may pick up your exam at the regrade session on Aug 7th (described below).

As with midterm examinations, you may request a regrade in two different ways, i.e., either by emailing the request or attending a regrade session.

Final regrade session: Monday, Aug 7th, 10:00-11:00AM, location TBA.

Regrade requests submitted by email will be accepted through Thursday, Aug 10th, 2017.

Policy on drops, withdrawals, or incompletes

The drop and withdrawal deadlines for LPS are as follows:

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<th>Date</th>
<th>Deadline/Policy</th>
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<tr>
<td>Friday, July 7th</td>
<td>Last day to drop, no financial obligation</td>
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<td>Friday, July 14th</td>
<td>Last day to drop, 50% financial obligation</td>
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<td>Friday, July 14th</td>
<td>Last day to change grade status</td>
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<td>Friday, July 28th</td>
<td>Last day to withdraw, full financial obligation</td>
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A grade of incomplete (I) will not be given for failure to meet these deadlines or for a less than desirable performance.

Note in particular that the practice of obtaining an incomplete and taking the course informally in a subsequent term to obtain a grade which replaces the I is not an option.

Policy on violations of the Code of Academic Integrity:

The Code of Academic Integrity is taken seriously. Any case of suspected cheating will be reported to the Director of the Office of Student Conduct.
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<td>Aug</td>
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<td>3 lecture part III: chapters 20-23</td>
<td>4 Final Exam</td>
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<td>7 regrade session for final exam</td>
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<td>10 deadline for email requests for regrade of final</td>
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