# Advanced Organic Chemistry: Reactions & Mechanisms
# CHEM 395/425, Spring 2015

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**Class Meets:** Monday & Wednesday 4:00 – 5:15 PM Flanner 105

**Office Hours**
Dr. Becker Tuesdays 4:00-5:00 p.m.
Dr. Eichman Wednesdays 10:30-11:30 a.m.

*Required Text:* "Modern Methods of Organic Synthesis" by William Carruthers and Iain Coldham, 4th Edition, by Cambridge Press, paperback, ISBN-13: 978-0521778305 ISBN-10: 0521778301.

*Other Advanced Organic Chemistry Texts focusing on Synthesis:*

- Francis A. Carey and Richard J. Sundberg, "Advanced Organic Chemistry, Part B: Reactions and Synthesis", 5th Ed., Springer, 2008. ISBN-13: 978-0387683546, ISBN-10: 0387683542.
- Michael B. Smith, "March's Advanced Organic Chemistry: Reactions, Mechanisms, and Structure", 7th Ed. Wiley, 2013. ISBN-13: 978-0470462591, ISBN-10: 0470462590.
- Laszlo Kurti and Barbara Czako, "Strategic Applications of Named Reactions in Organic Synthesis", 1st Ed. Elsevier Academic Press, 2005. ISBN-13: 978-0124297852, ISBN-10: 0124297854.

*Other Advanced Organic Chemistry Texts focusing on Physical Organic Chemistry:*

- Francis A. Carey and Richard J. Sundberg, "Advanced Organic Chemistry, Part A: Structure and Mechanisms", 5th Ed. Springer Press, 2008. ISBN-13: 978-0387683461, ISBN-10: 0387683461.
- Thomas H. Lowry and Kathleen S. Richardson, "Mechanism and Theory in Organic Chemistry: 3rd Ed., Benjamin-Cummings Publishing Company, 1997. ISBN-10: 0060440848, ISBN-13: 978-0060440848.

Prerequisite: Organic Chemistry CHEM 221/222 or CHEM 223/224

*Course Outcome*
This course will continue the study of synthetic organic reactions and mechanisms, building on the foundation of Organic Chemistry I & II (CHEM 221/222 or CHEM 223/224). Guest lecturers may be invited to demonstrate applications of synthesis.

1. *Syllabus***:** The current syllabus is available on Sakai and is subject to change (date at the top) during the semester. *You are responsible for all changes announced whether or not you are in attendance.*

2. *Exams and Grading:* Exams will be graded and returned to you as quickly as possible, usually by the following class period. All grading questions, points of clarification, and grading errors must be brought to the instructor's attention no later than one week after return of the exam.
There will be two mid-term exams and one 2-hour final exam, plus homework assignments that will be collected and graded throughout the semester. Exams and assignments will be graded on a curve based on the average and the standard deviation.

| | |
|---|---|
| Mid-term exam I | 25% |
| Mid-term exam II | 25% |
| Homework | 25% |
| Final Exam | 25% |
| TOTAL | 100% |

You must bring a form of photo identification, such as your Loyola Student ID or your driver's license, with you to the exam, which you may be asked to show. All exams are closed book and closed notes, unless permission is explicitly given to allow certain resources. When you are finished with your exam, please bring your completed exam to the front, and leave the room quietly without disturbing the other students.

3. *Homework:* Various problem sets will be distributed throughout the semester. The material will be posted on Sakai and will be due at the specified date.

4. *Sakai Materials*: Handouts given in class are mirrored on Sakai so you can access materials and obtain extra copies if you wish.

5. *Academic Honesty:* All students in this course are expected to have read and to abide by the appropriate standard of personal honesty and integrity, drafted by the College of Arts & Sciences, that can be viewed online at:
http://www.luc.edu/cas/pdfs/CAS_Academic_Integrity_Statement_December_07.pdf

For this course, all exams are closed book and closed note unless specifically noted otherwise. Academic dishonesty includes using notes or books during exams, looking at another student's test during the exam period, or talking during an exam. The consequence of academic dishonesty is failure of the course, and the incident will be reported to the Chemistry Department Chair and the Office of the Dean. Additional sanctions including expulsion from the university may be imposed. The Undergraduate Handbook contains a complete description of the University policy regarding academic dishonesty. Anything you submit that is incorporated as part of your grade in this course (quiz, exam, lab report, etc.) must represent your own work. Any student caught cheating will, at the very minimum, receive a grade of "zero" for the item that was submitted. If cheating occurs during a course exam, the incident will be reported to the Chemistry Department Chair and the Office of the CAS Dean. Additional sanctions may be imposed.

8. The Tutoring Center offers free small group tutoring and lab (drop-in) tutoring for Loyola students. The groups meet once a week through the end of the semester and are led by a student who has successfully completed study in the course material. To learn more or request tutoring services, visit the Tutoring Center online at www.luc.edu/tutoring.

9. Please note that CAS has accommodations for students with disabilities (SSWD), including a testing center in the Sullivan Center. For more information see http://www.luc.edu/sswd/.

**Chemistry 395/425 Tentative Schedule (subject to change)**

| Week | Professor | Monday | Wednesday |
|---|---|---|---|
| 1 | Dr. Becker | 1/12 | 1/14 |
| 2 | " | 1/19<br>Martin Luther King Day, no classes | 1/21 |
| 3 | " | 1/26 | 1/28 |
| 4 | " | 2/2 | 2/4 |
| 5 | " | 2/9 | 2/11 |
| 6 | " | 2/16 | 2/18<br>Midterm 1 |
| 7 | " | 2/23 | 2/25 |
| 8 | " | 3/2<br>Midsemester<br>Break – no class | 3/4<br>Midsemester<br>Break – no class |
| 9 | Dr. Eichman | 3/9 | 3/11 |
| 10 | " | 3/16 | 3/18 |
| 11 | " | 3/23 | 3/25 |
| 12 | " | 3/30 | 4/1 |
| 13 | " | 4/6 | 4/8 |
| 14 | " | 4/13 | 4/15<br>Midterm 2 |
| 15 | " | 4/20 | 4/22 |
| 16 | --------- | 4/27 *need to confirm*<br>Cumulative Final Exam | 4/29<br>--------- |