

# Basic Principles of Organic Chemistry

## CHM 5224, Fall Semester 2014

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Organic chemistry is an art form at the heart of the pharmaceutical and materials-based industries.  
Why Organic Chemistry? See: Macoss, M.; Baillie, T. A. *Science*, **2004**, 303, 1810

### When:

- Classes/Lecture: MWF, Leigh Hall 0242, 8:30 – 9:20 Aug 25 – Dec. 10 2014
- Q&A and Mechanisms: Thursdays, Leigh Hall 0242, 6:15 – 8:10 PM
- Exams: Select Thursdays (see Dates, below), Leigh Hall 0242, 6:15 – 8:10 PM (no class Fridays after exams)
- Quizzes: Commonly Friday's of weeks w/o exams.

### Key Dates:

Aug 25 (first day of class, begin exam one topics), ~ 10 lectures → **Sept 18/19 (Exam one / no class)**  
Sept 22 (begin exam two topics), ~11 lectures → **Oct 16/17 (exam two / no class)**  
Oct 20 (begin exam three topics), ~10 lectures → **Nov 13/14 (exam three / no class)**  
Nov 17 (begin exam four topics), ~ 8 lectures → Dec 10 (last day of class) → **Dec 19 (exam four)**

\*\*\*No class on UF sanctioned holidays

Office Hours: Tuesdays and Thursdays, 8:30 – 9:30 am, open door policy, & by appointment

Course Objective: To learn fundamental principles pertinent to organic synthesis with special emphasis on reactivity, electron-pushing, and reactions/named reactions.

Course Content: (We'll see how far we get starting from the top down)

- Review and introduction to synthesis-relevant physical organic chemistry principles
- Various reactions under acid and basic conditions
- Pericyclic: electrocyclizations, cycloadditions, sigmatropic rearrangements, and ene reactions
- Radical reactions and photochemistry
- Introduction to transition-metal catalysis

### Grading:

- 10 Quizzes, 2 lowest dropped, 30% of overall grade
- 4 Exams, 60% of overall grade
- Participation\*: 10% of overall grade
- Grading will done on a curve

\*Participation in classroom, Q&A, "going to the board," etc.

Teaching Philosophy: The course will be a blend of lectures (developed from the text books listed below) and interactive problem sets and Q&A.

Lectures will be developed from the following textbooks:

## Required

- *The Art of Writing Reasonable Organic Reaction Mechanisms*, 2<sup>nd</sup> Ed., Robert Grossman, online edition available [free of charge through the UF Library website](#).
- *Advanced Organic Chemistry, Part A*, 5<sup>th</sup> Ed., Francis A. Carey and Richard J. Sundberg. Online edition available [free of charge as a pdf through the UF Library website](#).

## Recommended

- *Modern Physical Organic Chemistry*, Eric V. Anslyn and Dennis A. Dougherty (~\$110 online)
- *Strategic Applications of Named Reactions in Organic Synthesis*, Laszlo Kurti and Barbara Czako (~\$45 used online)

Canvas Course Website: <https://lss.at.ufl.edu>

### UF Policies:

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES: Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

UNIVERSITY POLICY ON ACADEMIC MISCONDUCT: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>.

\*\*NETIQUETTE: COMMUNICATION COURTESY: All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. [Describe what is expected and what will occur as a result of improper behavior] <http://teach.ufl.edu/docs/NetiquetteGuideforOnlineCourses.pdf>

Getting Help: For issues with technical difficulties for E-learning in Canvas, please contact the UF Help Desk at:

- [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu)
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

\*\* Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

Other resources are available at <http://www.distance.ufl.edu/getting-help> for:

- Counseling and Wellness resources
- Disability resources
- Resources for handling student concerns and complaints
- Library Help Desk support

Should you have any complaints with your experience in this course please visit <http://www.distance.ufl.edu/student-complaints> to submit a complaint.