Advanced Organic Chemistry, Part II — Chemistry 242

Instructor: Severin T Schneebeli
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Office Hours: 1:00 PM–2:00 PM MWF
Class Meetings: 1:15–2:30 PM, TR, Old Mill A304
Meeting Dates: 14 Jan – 3 May 2019
UVM Holidays: Classes will not be held on: 5 March (Town Meeting Day Holiday) and 11 – 15 March (Spring Recess)

Learning Objectives: Being able to devise efficient syntheses of complex organic molecules, based on reaction mechanisms and stereochemical considerations.

Textbooks

(1) Carey, F. A., and Sundberg, R. J. *Advanced Organic Chemistry, Part A: Structure and Mechanism*, 5th ed., ISBN: 978-0-387-68346-1.

(2) Carey, F. A., and Sundberg, R. J. *Advanced Organic Chemistry, Part B: Reactions and Synthesis*, 5th ed., ISBN: 978-0-387-68354-6.

(3) Kürti, L., and Czako, B. *Strategic Applications of Named Reactions in Organic Synthesis*, ISBN: 978-0-12-369483-6.

500-Point Grading Scale:

Problem Sets	150 points	5 Sets — Assigned Biweekly
Named Rxn Quizzes	150 points	10 Quizzes — Three NEW Name Rxns/Quiz
Examination 1	100 points	1:15–2:30 PM, 14 Feb 2019, Old Mill A304
Examination 2	100 points	1:15–2:30 PM, 11 Apr 2019, Old Mill A304
Final Examination	150 points	10:30–1:15 PM, 6 May 2019, Old Mill A304

Please note: The weekly name reaction quizzes as well as the final examination will be cumulative!

Problem Sets:

Five problem sets will aid you in learning the class material and will prepare you better for the exams. They will be handed out bi-weekly on Tuesdays and are due **IN CLASS** the following Tuesday two weeks later.

Course Grading:

Course grading will be structured according to the 650-point scale (*vide supra*). Failure to complete an assignment in a timely fashion will result in a numerical score of zero. Proposals for "extra credit" will not be considered.

Note-taking:

Skeleton notes and handouts from the literature will be provided in class and/or uploaded to blackboard. It is YOUR responsibility to fill in the missing key information discussed on the board or on the iPad during the lectures.

Academic Conduct:

Cheating or plagiarism will be condisered grounds for failing the course (a numerical score of zero). All graded assignments must be your own work. Cases of cheating or plagiarism will lead to further disciplinary action, which may include dismissal from the University according to the rules set forth in the University of Vermont's Code of Academic Integrity:
http://www.uvm.edu/~uvmppg/ppg/student/acadintegrity.pdf

Course Topics:

A. Retrosynthetic Analysis (Carey & Sundberg, Part B, Ch. 13)
B. Functional Group Interconversions and Protecting Groups (Carey & Sundberg, Part B, Ch. 3)
C. Organocatalysis including Visible Light Photoredox Catalysis
D. Carbocations and Carbenes (Carey & Sundberg, Part B, Ch. 10)
E. Transition-metal Catalyzed Transformations (Carey & Sundberg, Part B, Ch. 7–9)
F. Free Radical Reactions (Carey & Sundberg, Part A, Ch. 11)
G. Photochemistry (Carey & Sundberg, Part A, Ch. 12)

Please note: Lectures and topics will likely be adjusted as the semester progresses.
Religious Holidays:

Students have the right to practice the religion of their choice. If you need to miss class to observe a religious holiday, please submit the dates of your absence to me in writing by the end of the second full week of classes. You will be permitted to make up work within a mutually agreed-upon time.

Student Learning Accommodations:

In keeping with University policy, any student with a documented disability interested in utilizing accommodations should contact ACCESS, the office of Disability Services on campus. More information (including contact information) can be found online at www.uvm.edu/access. ACCESS works with students and faculty in an interactive process to explore reasonable and appropriate accommodations via an accommodation letter to faculty with recommended accommodations as early as possible each semester.