Advanced Organic Chemistry Part A — Chemistry 241

Instructor: Severin T Schneebeli
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Office Hours: 9:00–10:00 AM TR and 5:00–6:00 PM M
Class Meetings: 8:30–9:20 AM, MWF, Waterman Bldg. 457
Meeting Dates: 31 Aug – 9 Dec 2015
UVM Holidays: Classes will not be held on: 7 Sept and 23–27 Nov 2015

Learning Objectives: Being able to (i) predict the 3d-structures and reactivities of molecules, (ii) understand how molecules interact with each other in 3d-space and (iii) use this knowledge to derive reaction selectivities.

Recommended Texts / On reserve at the UVM Bailey/Howe Libray:

(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) Grossman, R. B. *The Art of Writing Reasonable Organic Reaction Mechanisms*, 2nd ed., ISBN: 978-1-4419-3016-3.

500-Point Grading Scale:

Problem Sets	150 points	10 sets — assigned weekly
Examination 1	100 points	8:00–9:20, 9 Oct 2015, Waterm. 457
Examination 2	100 points	8:00–9:20, 20 Nov 2015, Waterm. 457
Final Examination	150 points	10:30–13:15, 18 Dec 2015, Waterm. 457

Please note: The final examination will be cumulative!

Problem Sets:

Ten problem sets will aid you in learning the class material and will prepare you better for the exams. They will be handed out weekly on Mondays and are due **IN CLASS** the following Monday. No problem sets will be assigned with a due date of Labor Day (7 Sept), the Monday of Thanksgiving week (23 Nov) or the Mondays after exams (12 Oct and 23 Nov).

Course Grading:

Course grading will be structured according to the 500-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 dot-cam 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:

1. Review of Bonding and Reactivity
2. Principles of Stereochemistry
3. Frontier Molecular Orbital Theory
4. Stereoelectronic Effects
5. Conformational Analysis
6. Pericyclic Reactions
7. Olefin Addition Reactions
8. Acid-Base Properties of Organic Molecules
9. Organocatalysis
10. Carbocations
11. Carbenes

Please note: Lectures and topics will be adjusted according to time considerations.

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.