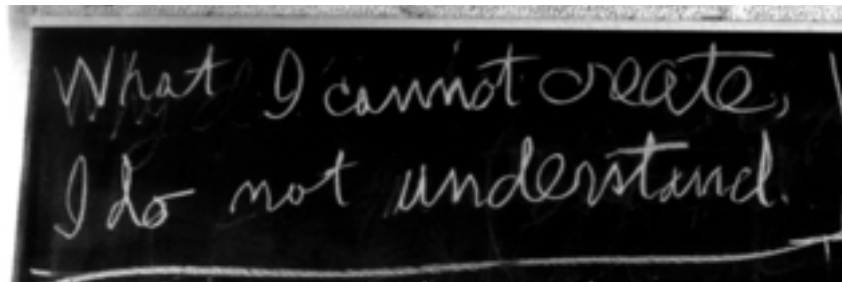


Advanced Organic Chemistry – Course Overview



**on Richard Feynman's office blackboard
at the time of his death (CalTech 1988)**

Course Instructor	Jonathan R. Scheerer Integrated Science Center 2045 (office), 2072 (lab) Office hours TBA and by appointment (or just stop by... If my office door is open, I am somewhere in the building).		jrscheerer@wm.edu (757) 221-2551
Course Objectives	To better understand structure and reactivity of organic molecules. Though vast numbers of reactions are known, most fall into a small number of mechanistic classes. We will focus on these most common reactive intermediates and how knowledge of the stereoelectronic interactions that govern the behavior of these reactive intermediates leads to predictable understanding of the way molecules behave—what rules of engagement are possible when molecules encounter one another and react. Working reaction mechanisms are the key exercise that we will use to develop and advance our understanding of structure and reactivity.		
Course Eligibility	Students must have taken the second semester of the organic sequence (Chemistry 209) or an equivalent course.		
Course Meetings TR 11:00–12:20 PM	Lecture is scheduled for ISC 2280.		
Course Evaluation	Exam 1	125 points (21%)	<i>Subtotal: 450 pts (75%)</i>
	Exam 2	125 pts (21%)	
	Final exam (semi-cumulative)	200 pts (33%)	
	Problem Sets (9 of 10, 15 pts ea):	135 pts (23%)	
	Workshop day participation (2-3)	15 pts (3%)	
	Total Points*	600 points	
	<i>*503 students will have an additional assignment and the point totals will differ</i>		

There will be two mid-term exams and a final. Portions of mid-term exams and final will be take-home (~25-35%). Take-home exam portions are open-book, but must be completed independently. You may not consult your peers for exams. Use of the computer for reaction searching is not permitted unless explicitly indicated. The final exam will be completed during the scheduled time.

Problem Sets

Problem sets (10 total) will be available approximately a week in advance and will be due Fridays (at 4 pm) in my office. Each problem set will be worth 15 points. You are allowed to drop your lowest homework score (thus total homework points are 135 (15x9). Generally, around half the points are awarded for completion and satisfactory effort. The remaining points are awarded based on detailed grading of a problem (or two) of my choosing. No late problem sets will be accepted without advance agreement with me. No problem sets will be due during an exam week. *Detailed answer keys are posted.* You are to assess your own work and review your answers relative to the key. You are highly encouraged to work with each other (or anyone else) on problem sets, but make sure you are thinking about topics independently before sharing.

Workshop day participation

There will also be at least 2 workshop days. In these sessions, participation (problem solving at the board and explaining your answers) is required. 15pts are awarded for active participation in these days.

Grading

Final grades will be determined by the sum of your points throughout the semester by the following scale:

A 90–100%
A– 80–89.9%
B+ 75–79.9%
B 65–74.9%
B– 60–64.9%
C–/C/C+ 45–59.9%

Due to exam curving these thresholds may go down; they will not go up.

Class Attendance

In accord with College policy, class attendance is expected. See undergraduate catalog for more information. Please notify me of any absences by email.

Disability Services

Students with disabilities or seeking accommodations must contact the Dean of Students office.

Honor Code

All students are bound by the Honor Code. Incidences of cheating will be reported to the Honor System. See the student handbook for more information on the Honor Code.

Textbook:

Advanced Organic Chemistry, Part A (reactions and synthesis) 5th Ed. Carey and Sundberg.

Any edition will work. I don't think it has changed much at all from 4th. I highly recommend a used desk copy (~\$30), especially if you are considering graduate school. A PDF electronic copy of the book is also available. You can access by searching for it (Google) or at the following address (as of 8/20):

<https://chemistlibrary.files.wordpress.com/2015/07/advanced-organic-chemistry-4ed-2000-part-a-structure-and-mechanisms-carey-sundberg.pdf>

Model Kits:

Model kits are recommended and may be used on exams.

Any model kit will work (and if you still have yours from orgo 1 keep it handy), but if you want to purchase one (and if you want to go on to grad school in organic chemistry), then I suggest the smaller Bio-organic set from Maruzen (cat no 5000; ~\$50) <http://www.maruzen.info/hgs/catalog/>