

Syllabus for Organic Chemistry CHEM 220, Summer 2018

Important Notice Regarding O-Chem Lab:

At Yale, O-Chem Lab is a separate course, with its own unique course summer, syllabus and cost. Please see summer session course, CHEM 222L, for more information

Lectures: M, T, W, T, F: 9:30-10:45 a.m. ROOM: TBA
Discussion Sections: M, W, F: 11:00 a.m. -noon * ROOM: TBA
*Subject to change to accommodate exam review sessions

Instructor Session A: Christine DiMeglio, Ph.D., christine.dimeglio@yale.edu
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TAs: TBA

Required Materials:

- A) Textbook: Organic Chemistry by Marc Louden and Jim Parise, Roberts and Company publishers, 2016 6th ed. ISBN 978-1-936221-34-9
- B) Corresponding Solutions Manual: ISBN 978-1-936221-86-8

Suggested Materials: Organic molecular modeling kits at amazon.com for inexpensive options (by Mega Molecules as an example; *Organic Chemistry as a Second Language*; David Klein, ISBN-13: 978-1118010402

Lecture Schedule

	Topics	Textbook Chapter
May 28*, 29	Lewis Structures, Electronegativity Bond Polarity, Resonance, Bonding Theories	1A, B and C (*double lecture, no discussion)
May 30	Alkanes	2
May 31	Acids and Bases	3A
June 1	Acids and Bases	3B
June 4	Alkenes	4A
June 5, 6	Studying Chemical Reactions	4B, 4C
June 7	Exam 1: CH 1-4B	
June 8	Reactions of Alkenes	5A
June 11	Reactions of Alkenes	5B
June 12	Stereochemistry-Enantiomers	6A
June 13	Stereochemistry-Diastereomers	6B
June 14	Cyclic Compounds	7
June 15	Intermolecular Interactions Properties of alcohols, alkyl halides thiols, ethers and sulfides	8

June 18	Reactions of Alkyl Halides Equilibria and Rate	9A
June 19	Exam 2: CH 4C -8	
June 20	Second Order Reaction Kinetics	9B
June 21	First Order Reaction Kinetics	9C
June 22	Reactions of Alcohols and Thiols	10 A

June 25	Reactions of Alcohols and Thiols	10 B
June 26	Reactions Ethers, Epoxides and Glycols	11 A/Review session to follow
June 27	Reaction of Ethers, Epoxides and Glycols	11 B/Review session to follow
June 28	Exam 3: CH 9A-11 and CH1-8	
June 29	Exams returned and review	

Exam 1 (25%) and Exam 2 (25%) will each be 1 hour in length, beginning at 9:30 a.m. on their scheduled day. **Exam 3 (40%)** will be 2 hours long beginning at 9:30 am on its scheduled day

Letter Grades

Exam 1 (25%) + Exam 2 (25%) + Exam 3 (40%) + Participation (10%)

Students earn participation points based on attendance and entries into a problem solving journal. If you are more than 15 minutes late, you do not get the participation points.

Missed Exam Policy: Should a student miss Exam 1 or Exam 2, Exam 3 will count 65% toward the final grade. For that student, Exam 3 will include additional questions from Exam 1 or Exam 2 and the student will be given appropriate extra time to complete Exam 3.

Poor Performance on an Exam Policy: Should a student earn below 75% on Exam 1 and/or Exam 2, the student will have an opportunity to earn additional points by answering additional questions from Exam 1 and/or Exam 2 during Exam 3. The additional points earned will be added to Exam 1 and/or 2, up to a score of 75%, but not above. **Students scoring above 75% on the original Exam 1 and/or Exam 2 do not have this option.**

Missed Exam 3 Policy: A student that missed Exam 3 will have need to contact Dean Follansbee regarding make-up Exam arrangements.

Missed Exams 1 AND 2 Policy: A student who missed both early exams will be referred to Dean Follansbee.

After scale, if necessary

93+ = A; 89+ = A-; 86+=B+; 83+=B; 80+=B-; 77+=C+; 74+=C

Useful websites:

<http://www.chem.wisc.edu/areas/organic/index-chem.htm>

<http://www.organic-chemistry.org/>

<http://www2.chemistry.msu.edu/faculty/reusch/VirtTxtJml/intro1.htm> (some practice problems with answers)

http://www.departments.bucknell.edu/chemistry/courses/chem211/problem_sets/ (practice problems with answers for org. chem I)

<http://www.aceorganicchem.com/organic-chemistry-practice-exams.html> (test bank of questions and answers in organic chemistry)

<https://legacyweb.chemistry.ohio-state.edu/flashcards/> (organic chemistry flash cards)

http://evans.harvard.edu/cgi-bin/problems/search2a_selectKeywords.cgi (challenging problems in organic chemistry)