

Syllabus for Organic Chemistry CHEM 220, Summer 2017

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: 160 Sterling Chemistry Lab
Discussion Sections: M, W, F: 11:00 a.m. -noon * ROOM: 160 SCL
*Subject to change to accommodate exam review sessions

Instructor Session A: Christine DiMeglio, Ph.D., christine.dimeglio@yale.edu
Office 213 Sterling Chemistry Lab

TAs: Julie Guthrie (julie.guthrie@yale.edu); Rob Brunstad (charles.brunstad@yale.edu)

Required Materials: A) Textbook: Wade, L.G. Organic Chemistry. 8th ed. Pearson, 2013. ISBN-13: 978-0-321-76841-4

B) Corresponding Solutions Manual **ISBN-13:** 978-0-321-77389-0 **The ninth edition just came out, but I recommend buying the 8th edition used on AMAZON! Cheaper! The books store also has about 30 copies.**

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 Chapters
May 29***, 30	Communicating as Chemists Review of General Chemistry Concepts: Lewis Structures, Electronegativity, Bond Polarity, Acids/Bases	1, 2 (**double lecture, no discussion)
May 31	Resonance Theories of Chemical Bonding	
June 1	Alkanes, Cycloalkanes	3
June 2	Studying Chemical Reactions	4A
June 5	Studying Chemical Reactions	4B
June 6	Stereochemistry-Enantiomers	5A
June 7	Stereochemistry-Diastereomers	5B
June 8	Exam 1: CH 1-5A	
June 9	Alkyl Halides: Properties	6A
June 12, 13	Alkyl Halides: Properties, Reactions Mechanisms	6B, C
June 14	Alkenes: Structure, Properties, Preparation	7A
June 15, 16	Alkenes: Reactions	8A, B
June 19	Alkenes: Reactions	8C
June 20	Exam 2: CH 5B -8B	

June 21	Alkynes	9
June 22, 23	Alcohols: Structure, Properties, Preparation	10A, B
June 26, 27	Alcohols : Reactions	11A, B
June 28	Ethers, Epoxides Discussion section review	14
June 29	Exam 3 Comprehensive: CH8C-11 and 14 And CH 1-8B	
July 30	Exams Returned Review	

Exam 1 (25%) and Exam 2 (25%) will each be 1 hour in length, beginning at 9:30 a.m. on their scheduled lab day. The lowest of the first two exams may be dropped. **Exam 3 (40%) will be 2 hours long beginning at 9:30 am.**

Letter Grades:

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

Participation points are based on attendance and problem solving journal entries . During each lecture session, and occasionally as homework, students record problem solving efforts in a class journal, which are collected and evaluated to provide feedback.

Example scoring

Exam 1	Exam 2	Exam 3	Attendance/Participation	Letter Grade
85x0.3	85x0.3	85x0.3	100x0.1	86% B+
85x0.3	85x0.3	85x0.3	50x0.1	82% B-
85x0.3	85x0.3	85x0.3	0x0.1	77% C+

After scale (as 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)