

ORGANIC CHEMISTRY I (CHE 230)

Instructor: Folami Ladipo, CP-109

Tentative Lecture and Reading Schedule*

* This schedule is provided to help guide your reading and preparation for class. I will of course drop and/or introduce additional topics as I understand the strengths and weaknesses of the class.

Homework problems for Chapters 3-12 will be assigned in class while we are covering the material.

Lecture #	Date	Topic	End of Chapter Problems
1	8/25	Syllabus and 1.1-1.3: Atomic Structure and Organic Chemistry	1.30-1.42; 1.48 and 1.49
2	8/27	1.3-1.4: Lewis and Resonance Structures;	
3	8/30	1.5-1.7: Hybridization, Molecular Orbitals, and Bond Strength	
4	9/1	2.1-2.5: Alkanes: Methane and Ethane	2.39-2.50; 2.53, 2.54, 2.57.
5	9/3	2.6-2.10: Higher Alkanes	
	9/6	No Class - Labor day	
6	9/8	2.11-2.15: Cycloalkanes	
7	9/10	3.1-3.5: Alkenes: Structure, Bonding, and Nomenclature	
8	9/13	3.5-3.9: Alkene Stability; Structure and Bonding of Alkynes	
9	9/15	3.10-3.13: Alkyne Stability and Properties	
10	9/17	3.13-3.15: Alkyne Acidity; Degrees of Unsaturation	
11	9/20	4.2-4.4: Chirality and Enantiomers	

12	9/22	4.4-4.8: Diastereoisomers	
13	9/24	4.9-4.11 Optical Resolution	
14	9/27	4.12-4.14 Resolution and Asymmetric Synthesis	
	9/29	First Examination	
	10/1	No Class – Fall Break	
15	10/4	5.2-5.4 Stereochemistry and Conformational Analysis of Rings	
16	10/6	5.4-5.6 Stereochemistry and Conformational Analysis of Rings	
17	10/8	5.6-5.7 Stereochemistry and Conformational Analysis of Rings	
18	10/11	5.7-5.8 Stereochemistry and Conformational Analysis of Rings	
19	10/13	6.2-6.4 Alkyl halides; Alcohols	
20	10/15	6.4-6.6 Alcohols	
21	10/18	6.7-6.8 Amines and Ethers	
22	10/20	6.8-6.9 Ethers, Thiols, Thioethers	
23	10/22	7.2 -7.4 Nucleophilic Substitution: The S _N 2 Reaction	
24	10/25	7.6-7.7 Nucleophilic Substitution: The S _N 1 Reaction; Overview of S _N 2 and S _N 2 Reactions	
	10/27	Second Examination	
25	10/29	7.7-7.9 Overview of S _N 2 and S _N 2 Reactions;	

		E1 and E2 Reactions	
26	11/1	7.8-7.10 E1 and E2 Reactions	
27	11/3	8.2-8.5 Equilibrium; Rates of Chemical Reactions	
28	11/5	8.6-8.7 Energy Barriers; Reaction Mechanism	
29	11/8	8.8 Hammond Postulate	
30	11/10	9.2-9.8 H-X Additions to Alkenes	
31	11/12	9.8-9.11 Rearrangements During H-X Addition; Hydroboration	
32	11/15	9.11-9.12 Hydroboration	
33	11/17	10.2; 10.7 Addition of X ₂ to Alkenes and Alkynes	
34	11/19	10.6,10.8-10.9 Alkyne Hydration and Hydroboration	
35	11/22	10.10; 10.4 Hydrogenation of Alkynes; Cyclopropane from Carbenes	
	11/24	Third Examination	
	11/26	No Class -Thanksgiving	
37	11/29	10.5 Dipolar Addition Reactions	
38	12/1	11.2-11.5: Radical Additions to Alkenes	
39	12/3	11.6-11.9: Radical Additions	
40	12/6	12.2-12.6: Dienes: Structure and Bonding	
42	12/8	12.9-12.11: Addition Reactions of Dienes	
43	12/10	12.11-12.12: The Diels-Alder Reaction	

