

Chemistry 360, Jasperse, Spring 2025 Wade 9 (43 class days, 39 lectures)			Reading Assignment
Date	Topic		
1	13-Jan	Intro; Structure, Nomenclature, Properties, Weak Acidity of Alcohols	10.1-10.6
2	15-Jan	Synthesis of Alcohols; Organometallic Reactions.	10.7-10.9
3	17-Jan	Synthesis of Alcohols; Organometallic Reactions.	10.7-10.9
		Skip 10.12	
	20-Jan	No Class. Martin Luther King Day.	no class
4	22-Jan	Side Reactions; Reduction of Carbonyl Compounds	10.10-10.11
5	24-Jan	Oxidation of Alcohols	11.1-11.3
		Skip 11.4, 11.11-13	
6	27-Jan	Conversion of Alcohols to Tosylates or Halides; Uses of Tosylates and Halides	11.5-11.9
7	29-Jan	Miscellaneous; Chemical Tests; Multistep Synthesis	11.10, 11.14
8	31-Jan	Retrosynthetic Analysis	
9	3-Feb	Catchup, Multistep Synthesis Problems	Catchup
10	5-Feb	Review for Test 1	---
11	7-Feb	¹ H NMR Overview: Chemical Shift, Integration, and Splitting; ¹ H NMR Problem Solving *Note: some lectures for a later test come before an earlier test has been completed.	13.5-8
T1	10-Feb	Test #1 Covering Chapters 10-11.	Test 1
12	12-Feb	¹ H NMR Overview: Chemical Shift, Integration, and Splitting; ¹ H NMR Problem Solving	13.5-8
13	14-Feb	¹ H NMR Problem Solving	13.5-8
14	17-Feb	No classes (Non-Instructional Day)	
15	19-Feb	More Problem Solving; Complex Splitting; Stereochemical Nonequivalence of Protons	13.9-10
16	21-Feb	¹³ C NMR; Infrared Spectroscopy (Focus on 13.5-8, 12-13; Skim 13.1-4, 9, 10; Skip 11, 14)	13.12-14
	24-Feb	Spectroscopy Catchup, Integrated Problems	catchup
17	26-Feb	Ketones/Aldehydes. Nomenclature, Properties, Intro.	18.1-7
T1	28-Feb	Test #2 Covering Chapters 12-13. 50 points.	Test 2
18	3-Mar	Synthesis of Ketones/Aldehydes.	18.7-11
19	5-Mar	Reactions of Ketones/Aldehydes	18.12-17
20	7-Mar	Carbonyls, Carbohydrates, and Condensation Polymers (Skip 18.13, for now....)	18.19-20
	10-Mar	No Class, Spring Break	
	12-Mar	No Class, Spring Break	
	14-Mar	No Class, Spring Break	
21	17-Mar	Catchup; Enols and Enolates Intro. Acid/Base Considerations; Proton as Electrophile	22.1-2, 22.15
22	19-Mar	Enols and Enolates Intro. Acid/Base Considerations; Proton as Electrophile	22.1-2, 22.15
23	21-Mar	Halogenation; Alkylation; Double Activation; Ester Hydrolysis; Decarboxylation (Skip 22.4,6, 18, 19)	22.3, 5, 15-17
24	24-Mar	The Aldol Reaction (Aldehyde/Ketone as Electrophile)	22.7-11
25	26-Mar	Claisen Reaction (Ester as Electrophile)	22.12-17
26	28-Mar	Catchup	
27	31-Mar	The Wittig Reaction and Alkene Synthesis; Catchup	18.18
28	2-Apr	Catchup, Integrated Practice Problems.	Catchup
29	4-Apr	Reactions of Amines	19.1-7
30	7-Apr	Amines. Intro, Nomenclature, Properties; Basicity of Amines; Structural Factors; Salts	19.9-12, 16-17
T3	9-Apr	Test #3 Covering Chapters 18 and 22.	
31	11-Apr	Reactions of Amines. Proteins: Condensation Polymers of Amino Acids.	19.16-18
32	14-Apr	More Synthesis of Amines	19.18
33	16-Apr	Carboxylic Acids: Nomenclature; Properties; *ACIDITY*; Salts; Soap; SYNTHESIS	20.1-5
	18-Apr	No classes (Non-Instructional Day, Easter weekend) (Skip 19.8-9,14-16,24-25)	
34	21-Apr	Acid Synthesis; Reactions	20.8-11
35	23-Apr	Reactions of Acids: Nucleophilic Acyl Substitution; Carboxylic Acid Derivatives	20.13-15; 21.1-3
36	25-Apr	Interconversions Among Acids and Derivatives; Synthesis and Mechanism; Catchup (Skip 20.6,7,12; Skip 21.4))	21.5-7
37	28-Apr	Interconversions Among Acids and Derivatives; Synthesis and Mechanism; Catchup	21.5-7
38	30-Apr	Practice Problems	Practice
39	2-May	Practice Problems, Catchup. Polymers Chemistry. Addition, Condensation, Biopolymers.	26.1-4, 24.8-10, 23.13
T4	5-May	Test #4 Chapters 19-21	Test 4
	13-May	Final Exam, 11:30am., Tuesday	Final Exam