Schedule: Which Lecture Videos and Practice-Set Videos Go with Each Test

Video	Organic Chemistry 1, Jasperse, Wade Version 8 (43 class days, 39 lectures) Other version of Wade, or other textbooks: http://web.mnstate.edu/jasperse/Chem350/Other-Textbooks.html Topic		Reading Assignment
	TEST 1 LECTURES		
1	Intro. Why Carbon is Special, Normal bonding, Lewis Structures in Organic		1.1-1.6
2	1. Normal Bonding. 2. Formal Charge and Abnormal Bonding. 3. Electronegativity		**1.7**, 1.4-1.8
3	1. Structural formulas: Full, Condensed, and Skeletal 2. Resonance Structures		1.9-1.12
4	1. Mechanism/Arrow-pushing. 2. Acid-Base Chemistry. 3. Anion Stability Patterns.		**1.13**-14
5	VSEPR 3D Shape. Drawing 3D; Hybridization; Pi bonds; Isomers,		2.1-2.8
6	Polarity IMF, Boiling Points, Solubility. Catchup. Functional Groups		2.9-2.11
7	Functional Groups. Alkane Nomenclature		2.12-2.14
8	Alkane Nomenclature. Newman Projections; Torsional and Steric Strain; Cycloalkanes		3.1-3.9
9	Cyclohexane Chairs, Cis-and-Trans, Structural Isomers		3.9-3.15
10	Catchup/Practice. First 38 minutes of video 10.		
	Additional Practice Sets/Videos: Mechanism Practice; Acid-Base Practice; 3D-Drawing Practice; Newman Projection Practice; Cyclohexane Practice		
	Test 1 Practice Tests: V1, V2, V3, V4		
	TEST 2 LECTURES		
10	Radical Halogenation; Mechanism; Radicals; Bond Energies; Reaction Energies. Last 12 minutes of Video.		4.1-4.7
11	Rate Laws, Transition States, Stability-Reactivity Principles		4.7-4.13
12	Radical Brominations. Major product, mechanism, structure isomers. Stability patterns for carbon radicals, cations, and anions.		4.13-4.16
13	Chiral vs achiral, Enantiomers, Recognizing/Drawing Mirror Images.		5.1-5.3
14	Chiral Carbons; Attachment Priorities; R/S Designation; Drawing Chiral Molecules		5.3-5.8
15	Racemic MIxtures, Optical Activity, Meso, Molecules with More than One Chiral Center		5.11-5.16
16	Drawing Stereoisomers, Meso Compounds. Alkyl Halides Intro, Classification, and Naming		6.1-6.7
17	The Sn2 Substitution Reaction.		6.8-6.12
18	The Sn1 Substitution Reaction.		6.13-6.16
19	SN1 REactions in More Depth. Elimination Reactions		6.17-6.21
20	E1 and E2 Reactions in More Depth; Recognizing Which Reaction Will Occur. Catchup, Practice.		Catchup
21	Catchup/Practice. First ??? minutes of video 21.		
	Additional Practice Sets/Videos: Br2/hv Products/Mechanisms Practice; Introductory Mechanism Practice; Extra Stereochemistry Practice; Extra Mechanisms + Product Prediction Practice		
	Test 2 Practice Tests: V1, V2, V3, V4		
	TEST 3 LECTURES		
21	Intro to alkenes, Elements of Unsaturation (EU), Last ??? minutes of video 21		7.1-7.6
22	Hydrogenation + Isomers; Alkene Nomenclature. E/Z; Heats of Hydrogenation		7.7-7.10
23	Alkene Synthesis. From RX. Bulky Bases. From Alcohols via Acid-Catalyzed E1. Mechanism Recognition.		7.10-8.2
24	Addition reactions to Alkenes. Addition of HBr; Acid-Catalyzed HOH Addn.		8.1-8.5
25	Acid-Catalyzed HOH Addn; Indirect HOH Addn (Hydroboration-Oxidation). Synthesis Design		8.5-8.7,8-10
26	anti-Mark HBr and HOH addition; Synthesis Design, H2 addn; Br2 addn		8.8-8.9
27	Br2 and BrOH additions and mechanisms; epoxidation		8.12-8.16
28	Epoxidation, Dihydroxylation, Ozonolysis. Stereospecific Alkene Reactions. Synthetic Design.		Catchup
29	Catchup/Practice. First ??? minutes of video 29.		
	Additional Practice Sets/Videos: Test 3 Extra Practice 1; Test 3 Extra Mechanisms Practice; Test 3 Alkene Reactions Practice; Test 3 Extra Synthesis Practice (6 pages)		
	Test 3 Practice Tests: V1, V2, V3, V4		
	TEST 4 LECTURES		
29	Conjugation, Molecular Orbitals, Dienes, Allylic Cations, Additions to Dienes. Last ??? minutes of video.		15.1-6
30	More allylic cations/radicals/conjugation and Applications;		15.7-11
31	Diels-Alder Reaction; Aromaticity		15.11, 16.1-2
32	Aromaticity; Huckel's Rule and Complex Aromatics		16.1-7
33	Complex Aromaticity, Application, Nomenclature (Skip "endo rule" section in 15.11A, p. 684; Skip 15.12,13)		16.8-11, 13
34	Electrophilic Aromatic Substitution: Intro, Mech, Kinetic Effects		17.1,6-8
35	Reactions in Detail: Halogenation, Nitration, Sulfonation, Alkylation, Acylation		17.2-5,10,11
36	Catchup; Addition to Disubstituted Benzenes; Synthetic Applications		17.9, practice
37	Side Chain Reactions; Retrosynthesis; Synthetic Applications; Practice		17.14
38	Review for Test 4		---
39	More allylic cations/radicals/conjugation and Applications;		15.7-11
	Additional Practice Sets/Videos: HBr Addn to Dienes + NBS Allylic Bromination; Conjugation-Allylic-Diels-Alder Practice; Aromatic Substitution Mechanisms (Products Provided); Aromatic Substitution Product Prediction/Mechanisms/Synthesis Design		
	Test 4 Practice Tests: V1, V2, V3, V4		
	Final Exam, Cumulative.		Final Exam