

Chemistry 201 F'10 Dr. Macintosh Reading Schedule (all readings from Timberlake General, Organic and Biological Chemistry)

Day	Date	Topic	Prior Reading	Vocabulary Words (learn definitions before class)	Suggested Problems from Timberlake
1	8/23	Class Intro; Review of Intermolecular Attractions	pp. 234-236	dipole-dipole attractions, hydrogen bond, dispersion forces	6: 29, 30, 31, 32, 33, 34, 67, 74
2	8/25	Functional Groups; Organic Compounds; Alkanes; Structural Formulas; Isomers of Alkanes	11.1-11.2; pp. 415-mid 416; 11.5	organic compounds, hydrocarbons, expanded structural formula; alkanes, IUPAC system, condensed structural formula, continuous alkanes, line-bond formula, cycloalkanes, substituent, branched-chain alkane, isomers, functional groups,	11: 1, 5, 11, 12, 13, 15, 17, 18, 37, 38, 39, 65
3	8/27	Naming Alkanes and Haloalkanes; Drawing Structural Formulas for Alkanes	pp. mid 416-417; pp. 419-420	alkyl group	11: 21, 22, 25, 26, 27, 28
4	8/30	Physical Properties of Alkanes; Drawing and Naming Cycloalkanes; Reactions of Alkanes; Cycloalkanes;	pp. 417-418; 11.4	combustion, halogenation reaction	11: 19, 20, 23, 24, 31, 32, 33
5	9/1	Alkenes & Alkynes; Naming Alkenes and Alkynes; Structure of Alkenes: Cis-Trans Isomers	12.1-12.2	unsaturated hydrocarbons, alkene, alkyne, cycloalkenes, cis isomer, trans isomer	12: 1, 3, 5, 6, 7, 8, 9, 10, 11, 12
6	9/8	Reactions of Alkenes & Alkynes; Alkene Polymers	pp. 452-454; pp. bot 459-461	addition, hydrogenation, halogenation, polymer, monomer	12: 13, 14, 21, 22, 23
7	9/10	Aromatic Compounds; Naming Aromatic Compounds; Properties of Aromatic Compounds	12.5-12.6	aromatic compounds, benzene, resonance, phenyl	12: 25, 27 (a, b, d), 29, 31
8	9/13	Alcohols, Phenols & Thiols; Classification of Alcohols; Common Alcohols; Naming Alcohols; Ethers	pp. 477-mid 479; 13.2	alcohol, hydroxyl group, phenol, thiol, primary alcohol, secondary alcohol, tertiary alcohol, ether, alkoxy group, glycol	13: 1, 2, 3, 4, 5, 6, 13 (common names only)

9	9/15	Exam 1			
10	9/20	Physical Properties of Alcohols. Phenols and Ethers; The Carbonyl Group; Naming Aldehydes and Ketones	pp. bot 488-490; 14.1	aldehyde, ketone	13: 21, 22, 23 14: 1, 5, 6, 9, 10
11	9/22	Physical Properties of Aldehydes and Ketones; Oxidation of Alcohols and Thiols	14.2; pp. mid 493-496	oxidation, disulfide	14: 13, 14, 15, 16, 17 13: 31, 32, 33, 34
12	9/24	Oxidation and Reduction of Aldehydes and Ketones	14.3	Tollens' test, Benedict's test, reduction	14: 19 (a, c, d), 21, 22, 23, 24
13	9/27	Acetal Formation; Hemiacetal Intermediate; Cyclic Hemiacetal	14.4	acetals, hemiacetal	14: 27, 29, 30, 31, 32
14	9/29	Chiral Molecules; Fischer Projections	14.5	stereoisomers, chiral, achiral, chiral carbon, Fischer Projections	14: 33, 34, 35, 37, 38
15	10/4	Types of Carbohydrates; Structures of Monosaccharides; Fischer Projections; Cyclic Structures of Monosaccharides; Haworth Projections	15.1-15.2; p. Top 553; p. 555	Monosaccharides, disaccharides, polysaccharides, aldose, ketose, glucose, Haworth structure, anomers	15: 5, 9, 10, 13, 14, 19, 21, 27, 28
16	10/6	Building Models of Cyclic Monosaccharides; Chemical Properties of Monosaccharides	15.4	reducing sugar	15: 29, 30
17	10/8	Disaccharides; Polysaccharides	15.5-15.6	glycosidic bond, amylose, amylopectin, cellulose	15: 37, 38, 39, 41, 42
18	10/11	Ethanol fuels			
19	10/13	Exam 2			
20	10/18	Naming Carboxylic Acids; Preparation of Carboxylic Acid; Physical Properties of Carboxylic Acids; Acidity of Carboxylic Acids	16.1; pp.582-top 584	carboxylate anion, carboxylic acid salt	16: 3, 5, 6, 7, 9, 11, 12, 13, 15, 16

21	10/20	Neutralization of Carboxylic Acids; Esters; Esterification; Aspirin; Naming Esters	p. 584 16.3-16.4	carboxylic acid salt, esterification	16: 17, 19, 21, 25, 26, 27, 29, 30, 31
22	10/25	Physical Properties of Esters; Hydrolysis of Esters; Polyesters	16.5	Hydrolysis, saponification	16: 35, 36, 39, 40
23	10/27	Types of Lipids; Fatty Acids; Fats and Oils: Triacylglycerols	17.1; pp. 608-610; p. 613 17.3	lipids, fatty acid, saturated fatty acids, monounsaturated fatty acids, polyunsaturated fatty acids, wax triacylglycerols, fat, oil	17: 1, 4, 9, 10, 11, 12, 21, 25, 27, 28
24	10/29	Chemical Properties of Triacylglycerols	17.4	hydrogenation	17: 29, 31, 33, 35, 36, 37, 38
25	11/1	Classification of Amines; Common Names of Amines; Physical Properties of Amines; Basicity of Amines; Amine Salts	pp. 651-653; 18.2	secondary protein structure, alpha- (α -) helix, Beta- (β -) sheet, fibrous protein, globular protein, tertiary protein structure, native protein, simple protein, conjugated protein, quaternary protein structure	18: 3, 9, 10 (a, c), 11, 13, 15, 17, 18, 19, 21
26	11/3	Heterocyclic Amines and Alkaloids; Preparation of Amides; Naming of Amides; Physical Properties of Amides	18.3-18.4	heterocyclic amine, alkaloids, amides	18: 23, 29, 30, 31, 32, 33, 34, 35, 36
27	11/8	Hydrolysis of Amides; Nylon Formation	18.5		18: 37, 38
28	11/10	Proteins and Amino Acids; Amino Acids as Acids and Bases; Formation of Peptides	19.1-19.2 pp. 688-689	amino acid, zwitterions, electrophoresis, peptide, peptide bond, N-terminal, C-terminal	19: 3, 11, 12, 13, 15, 16, 47, 48
29	11/12	Exam 3			
30	11/15	Primary Structure; Secondary Structure; Tertiary Structure	19.4; pp. 696- mid 697	primary structure; Secondary Structure; tertiary structure, hydrophobic interactions, hydrophilic interactions, salt bridges, hydrogen bonds, disulfide bonds	19: 21, 23, 25, 26, 29, 30, 31

31		Globular and Fibrous Proteins; Quaternary Structure; Prions and Mad Cow Disease; Protein Hydrolysis and Denaturation	pp. mid 697-701; 19.6	globular proteins, fibrous protein, quaternary structure; denaturation	19: 32, 33, 34, 37, 38, 39, 40
32	11/22	Catalysis by Enzymes; Enzyme Action; Factors Affecting Enzyme Activity	20.1-20.3	enzymes, substrates, active site, enzyme-substrate complex, lock-and-key model, induced-fit model, activity	20: 1, 2, 11, 12, 14, 19, 20
33	11/29	Enzyme Inhibition	20.4	Inhibitors, competitive inhibitor, antibiotics	20: 23, 24, 25, 26
34	12/1	Enzyme Cofactors and Vitamins	20.6	simple enzymes, cofactors, coenzyme, vitamins, water-soluble vitamins, fat-soluble vitamins	20: 35, 43, 44
35	12/3	Pesticides & Insecticides			
36	12/6	Ion exchange in soils			
37	12/8	Review or catch-up			
	12/17	Comprehensive final exam	8:00-10:00 am		