Chem 1050 **Essentials of General, Organic, and Biochemistry** **Dr. Walker, Spring, 2021**

Proposed Course Schedule

Week	*Date*	*Topic*	*Text Reading*
1 M	1/11	Introduction; Properties of Matter; The Elements: Names & Symbols	1.1-1.5
T	1/12	Atoms & Molecules; Formulas; Measurements: Metric vs English	1.6-1.10
W	1/13	Significant Numbers; Sci Notation; Conversion Factors, Dimensional Analysis	2.1-2.6
F	1/15	Conversion Factors and Dimensional Analysis; Temperature Scales, Calories	2.7-2.9
2 M	1/18	*Martin Luther King Day Holiday*	
T	1/19	Atomic Structure, Mass Numbers, Isotopes, Periodic Table	3.1-3.7
W	1/20	Nuclear Stability & Radioactivity; Half-life, Nuclear Medicine	3.8-3.11
F	1/22	Chemical Bonds: Lewis Dot Structures, Ionic Compounds & Their Names	4.1-4.9
3 M	1/25	Covalent Bonds; Single & Multiple Bonds	4.10-4.19
T	1/26	Polar Bonds; Naming non-ionic compounds	
W	1/27	Review for exam	
F	1/29	**First Hour Exam**	Chap 1-4
4 M	2/1	Review exam; Avagadro & the Mole	5.1-5.3
T	2/2	Molar Calculations; Chemical Equations; *(~~Ground Hog~~ Mole Day)*	5.4-5.7
W	2/3	Balancing Equations	5.7-5.8
F	2/5	More calculations using chemical equations	5.7-5.8
5 M	2/8	Gases, Liquids, and Solids; Gas Laws	6.1-6.7
T	2/9	Dalton's Law; Vapor Pressue, Evaporation, Boiling	6.8-6.13
W	2/10	Solutions: Concentration Units, Preparation, Dilutions	7.1-7.6
F	2/12	Colligative Properties; Osmosis	7.7-7.9
6 M	2/15	*Presidents' Holiday*	
T	2/16	Chemical Reactions: Oxidation and Reduction	8.1-8.3
W	2/17	Combustion reactions;	8.4-8.5
F	2/19	Rates of chemical reactions: Kinetics	8.6
7 M	2/22	LeChatelier and chemical equilibrium	8.7-8.8
T	2/23	Acids, Bases, and Salts	9.1-9.7
W	2/24	pH Scale, buffers; review	9.8-9.9
F	2/26	**Second Hour Exam**	Chap 5-9
8 M	3/1	Organic Chemistry-Alkanes	10.1-10.8
T	3/2	Naming organic compounds	10.9-10.2
W	3/3	Petroleum: Products from Oil	10.12-10.14
F	3/5	Unsaturated Hydrocarbons: Alkenes	11.1-11.6
9 M	3/8	*Spring Break*	
T	3/9	*Spring Break*	
W	3/10	*Spring Break*	
F	3/12	*Spring Break*	
10 M	3/15	Addition Polymers	11.6
T	3/16	Unsaturated Hydrocarbons: Alkynes and Aromatics	11.7-11.10
W	3/17	Halogenated hydrocarbons; alcohols & phenols;	12.1-12.4
F	3/19	Ethanol: production, concentration terms, commercial importance	12.4
11 M	3/22	Common alcohols & their uses	
T	3/23	Ethers, thiols	12.5-12.9
W	3/24	Amines	
F	3/26	Aldehydes, Ketones	13.1-13.5
12 M	3/29	Carboxylic acids & Esters; Polyester	13.6-13.9
T	3/30	Amides; nylon; review	13.10-13.12
W	3/31	**Third Hour Exam**	
F	4/2	Introduction to Biochemistry, Carbohydrates: Monosaccharides	14.1-8
13 M	4/5	Carbohydrates: Disaccharides & Polysaccharides	14.9-14.10
T	4/6	Lipids: Fatty acids & Triacyglycerols (Fats & Oils)	15.1-15.4
W	4/7	Lipids: Soap production; Phospholipids, sphingolipids, prostoglandins, steroids	15.5-15.9
F	4/9	Proteins: Amino acids, the building blocks of proteins	16.1-16.4
14 M	4/12	Proteins: Peptide bonds, Levels of Protein structure; hydrolysis, denaturation	16.5-16.11
T	4/13	Proteins: Hydrolysis and Denaturation	16.12-16.13
W	4/14	Enzymes: Characteristics and function	16.13-16.14
F	4/16	Enzymes: Factors affecting activity	16.15-16.16
15 M	4/19	Food Labels and Nutritional Values	
T	4/20	Review for Final Exam	Chap 1-10
W	4/21	Root Review, in-class worksheet and synthesis	Chap 1-10
F	4/23	Review for Final Exam	Chap 11-14
16 W	4/28	**Final Exam - 9:00-10:50am**	Comprehensive