Greg Sanchez, Ph.D. **Chemistry 120**

Tentative Lecture and Lab Schedule – Spring 2017

Week	Date	Text	Lecture Topic	Laboratory Exercises
1	1/30	Ch 1, 2	Introduction; Scientific Method; Scientific Notation; Significant Figures	Safety; Check into lockers; Introduction to Lab
	2/1	Ch 2	Introduction to Unit Conversion/Dimensional Analysis; SI Units	
2	2/6	Ch 2	Unit conversion of Area & Volume; Density	Exp 1: Measurements – Part 1: Length, Volume, and Temperature
	2/8	Ch 3	States of Matter; Matter Classification; Physical & Chemical Properties/Changes; Conservation of Mass	
3	2/13	Ch 3, 4	Energy; Temperature; Specific Heat; Atomic Theory & Discovery of the Atom	Exp 2: Measurements - Part 2: Mass, Time, Area & Volume
	2/15	Ch 4, 9	Ions; Isotopes and Average Atomic Mass; Basic Concepts of Quantum Mechanics	
4	2/20		**Holiday**	Exp 3: Density and the Separation of Mixtures
	2/22		**Exam 1: Chapters 1-4**	
5	2/27	Ch 9	EM Spectrum; Electronic Structure and Configuration	Exp 4: Atomic Properties
	3/1	Ch 9 & 10	Periodic Trends; Ionic and Covalent Bonding; Lewis Structures	
6	3/6	Ch 10	Resonance; Shapes of Molecules; Molecular Dipole/Polarity	Exp 5: Lewis Structures and the Shapes of Molecules
	3/8	Ch 5	Chemical Formulas; Nomenclature of Molecular Compounds and Type (I) Ionic Compounds	
7	3/13	Ch 5	More Nomenclature: Type (II) Ionic Compounds, Oxyanions, Acids	Exp 6: Water in Hydrates Crucible Required!
	3/15	Ch 6	Formula Mass; Introduction to the Mole; Formulas as Conversion Factors	
8	3/20	Ch 6	Percent Composition; Empirical & Molecular Formulas	Exp 7: Percent Oxygen in Potassium Chlorate Crucible Required!
	3/22		**Exam 2: Chapters 5, 6, 9, & 10**	
10	3/27		**Spring Break**	
	3/29			
11	4/3	Ch 7	Introduction to Chemical Equations; Balancing	Exp 8: Double Displacement Reactions
	4/5	Ch 7	Solubility Rules; Precipitation Reactions; Electrolytes	
12	4/10	Ch 7	Complete Ionic and Net Ionic Equations; Acid-Base and Gas Evolution Reactions	Exp 9: Identification of Common Ions
	4/12	Ch 7	Redox Reactions & Combustion; Classification of Reactions	
13	4/17	Ch 7, 8	More on Reactions; Introduction to Stoichiometry	Exp 10: Limiting Reactant
	4/19	Ch 8	Stoichiometry; Mole-to-Mole, Mass-to-Mole, and Mass-to-Mass Calculations	
14	4/24	Ch 8	Additional Calculation Practice	Exp 11: Preparation and Properties of Oxygen
	4/26	Ch 13	Limiting Reagents, Enthalpy of Reactions	
15	5/1	Ch 13	Concentration: Mass Percent and Molarity; Solution Stoichiometry; Ion Concentrations	Exp 12: Introduction to Acid-Base Titration
	5/3	Ch 13	Dilution; Characterizing Acids and Bases; Titration (Ch.14)	
16	5/8	Ch 11	**Exam 3: Chapters 7, 8, & 13 (13.1-13.8 only)**	Exp 13: Calorimetry and Specific Heat
	5/10	Ch 11	Gases: Pressure; Kinetic Molecular Theory; Gas Laws	
17	5/15	Ch 14	Ideal Gases; Stoichiometry of Reactions Involving Gases; Introduction to Solutions; Solubility and Saturation	Checkout of Lab
	5/17	Ch 14, 12	pH and pOH; Dispersion Forces; Dipole-Dipole Forces; Hydrogen Bonding; Intermolecular Forces; Types of Solids	
18	**5/24**		**Final Exam (4:45pm – 6:45pm)**	