

"Pre-Chemistry, Chemistry Prep Course" - Summer 2026

Week	Day	Dates	Lessons / Discussion	In-Class "Pen-to-Paper" Assignments
1	M	7 / 13	Measurement, Sig. Figs. Unit Conversions, Density	<u>1-1a</u> - Unit Conversions / Dimensional Analysis <u>1-1b</u> - Accuracy vs Precision; Density, Types of Matter
	Tu	7 / 14	Atomic Structure, Isotopes, Molecules, Ions, Naming	<u>1-2a</u> - Atoms, Molecules, Ions, Isotopes, Periodic Table <u>1-2b</u> - Naming Ionic and Covalent Compounds
	W	7 / 15	Mole Conversions, Mass %, Empirical/Molecular Formula	<u>1-3a</u> - Molar Mass, Grams to Moles, Mass Percent <u>1-3b</u> - Empirical Formula and Molecular Formula
	Th	7 / 16	Balancing Reactions, Limiting Reactants, % Yield	<u>1-4a</u> - Types of Reactions and Balancing Equations <u>1-4b</u> - Mole Conversions, Limiting Reactant Problems
2	M	7 / 20	Concentration and Molarity, Dilutions, Precipitation Rxns.	<u>2-1a</u> - Concentration, Molarity, and Dilutions <u>2-1b</u> - Solubility Rules, Precipitates, Net Ionic Rxns.
	Tu	7 / 21	Pressure Conversions, Gas Laws, and Ideal Gas Law	<u>2-2a</u> - Units of Pressure, Named Gas Laws. <u>2-2b</u> - Combined and Ideal Gas Law. Partial Pressure
	W	7 / 22	Types of Energy, Transfer of Heat (Exo vs Endothermic)	<u>2-3a</u> - Energy, Heat, Work. Exothermic vs. Endothermic <u>2-3b</u> - Introduction to Calorimetry and Specific Heat
	Th	7 / 23	Calorimetry, Heating Curves, & Enthalpy of Reaction (ΔH)	<u>2-4a</u> - Calorimetry Practice, Heating Curve for Water <u>2-4b</u> - Calculating Heat of Rxn: Hess' Law vs. $\Delta H^\circ f$'s
3	M	7 / 27	Electromagnetic Radiation, Bohr Model, e- configuration	<u>3-1a</u> - Electromagnetic Radiation (EMR) Calculations <u>3-1b</u> - Assigning Electron Config.'s, Core vs. Valence
	Tu	7 / 28	Periodic Trends, Electron Dot Notation, Lewis Structures	<u>3-2a</u> - Polarity / Dipoles, and Electron Dot Notation <u>3-2b</u> - Lewis Structures, Using BDE's to Calculate ΔH
	W	7 / 29	VSEPR Theory, Types of Intermolecular Forces (IMF's)	<u>3-3a</u> - Lewis Structures, Resonance, VSEPR Theory <u>3-3b</u> - States of Matter, Types of Intermolecular Forces
	Th	7 / 30	Three Types of Solids, Vapor Pressure, Changes of State	<u>3-4a</u> - Ionic, Atomic, Covalent Solids; Metallic Bonding <u>3-4b</u> - Vapor Pressure of a Liquid, Changes of State
4	M	8 / 3	Solutions, Molarity, Mass Percent, and Mole Fraction	<u>4-1a</u> - Molarity and Mass Percent Practice Problems <u>4-1b</u> - Boiling Pt. Elevation, Freezing Pt. Depression
	Tu	8 / 4	The Equilibrium Constant, K, and Equilibrium Expressions	<u>4-2a</u> - How to Calculate the Equilibrium Constant, K <u>4-2b</u> - ICE Tables and Le Chatelier's Principle
	W	8 / 5	Bronsted-Lowry Acids and Bases, and pH Calculations	<u>4-3a</u> - pH Scale; pH, pOH, $[H^+]$, $[OH^-]$ Calculations <u>4-3b</u> - Acid Dissociation Reactions, and Acid Strength
	Th	8 / 6	pH Calculations for Weak Acids; Radioactive Decay	<u>4-4a</u> - Using ICE Tables for the pH of a Weak Acid <u>4-4b</u> - Nuclear Reactions: Alpha, Beta, Gamma Decay

Note: This schedule is tentative. I reserve the right to alter it at any time during the course, and I often do!!.