

CHM 1045 General Chemistry I Topics  
 Text: General Chemistry, 9<sup>th</sup> Edition Covering CH 1-10

Topic	CHM 1045	M = mandatory O = optional V = overview R=review
Measurements	Dimensional Analysis Sig Figs Scientific Method Precision & Accuracy Basic vs Derived Units Density, Temp Matter Classification SI Units and Prefixes	M M R M M M M M
Kinetic-Molecular Treatment of Gases	Properties of Gases Gas Laws Kinetic-Molecular Theory Postulates Dalton Effusion & Diffusion Stoichiometry Ideal gases Real gases	M M M M M M M M
Kinetic-Molecular Treatment of Liquids & Solids	Intermolecular Attraction Concentrations Intro to pH	O M V
Structure of Atom	Atomic Theory History & Application of Atomic Theory Electron Configuration Noble Gas Abbreviation Quantum Mechanics Periodic Trends Electronic Transitions – (no calcs needed)	M M M M M M M
Interatomic Forces-Chemical Bonding-Molecular Geometry	Bonding Energy Diagrams Hybridization/Valence Bond Molecular Orbital Theory Formal Charge & Resonance Electronegativity & Polarity Lewis Dot Structures/VSEPR	M M M M M M M
Nomenclature & Reactions	Nomenclature-Hydrates, Covalent, Ionic, Acids, Bases MM Limiting Reactant Avogadro's # % Composition Empirical & Molecular Formulas Stoichiometry Balancing Redox Reactions (acidic sol'n) Precipitation, Acid-Base, Redox Reactions	M M M M M M M M M
Solutions	Molarity Dilutions Solubility Rules Titrations Properties of Liquids	M M M V V
Energy	Heat, Work, Energy, Temp Enthalpy Entropy Gibb's Free Energy Specific Heat 1 <sup>st</sup> Law of Thermodynamics	M M O O M M