

Syllabus for Chemistry 210; M,W,F (1:00 -1:50 AM) Fall 2009

		Topics	
Aug	24	Background, Elements, Chemical and Physical Properties, Measuring	Reading Chapters 1 and 2
Aug	26	Measuring and Significant Figures	
Aug	28		
Aug	31	Calculations with Sig Figures and Dimensional Analysis	
Sept	2	Defining Atoms, Molecules and Ions, Dalton's Atomic Theory,	
Sept	4	Isotopes, Chemical formula, bonding types	
Sept	7	LABOR DAY - no classes	
Sept	9	Naming compounds	Chapters 3, 4 skip 3.3
Sept	11	Balancing chemical equations, molecular and molar mass, counting by weighing	
Sept	14	Theoretical Yield, Molarity, Calculating Empirical and Molecular Formulae	
Sept	16		
Sept	18	General reaction types, electrolytes, writing net ionic equations	
Sept	21	Exam 1	
Sept	23	Solubility, defining Oxidation and Reduction, assigning oxidation numbers	Chapter 5
Sept	25	REDOX reactions	
Sept	28	REDOX problem solving	
Sept	30	Periodicity, Wave properties, ElectroMagnetic spectrum, Radiation and spectra	Chapter 7
Oct	2	Planck Equation, Electron behavior, orbitals	
Oct	5	Quantum numbers, orbitals, Pauli Principle	
Oct	7		
Oct	9	Electron configurations, atomic radii, Effective Nuclear Charge effects	
Oct	12	Ionization energies, electron affinities,	
Oct	14		
Oct	16	Lattice Energies and the Born Haber Process (Cycle)	
Oct	19	Born Haber and Review!	

Other Important dates

Monday, Aug 28: last day to add a class

Friday, Aug 28: last day to drop classes without a 'W'.

Wed, Oct 14, Last day to withdraw and receive a "W"

Oct	21	Exam 2	
Oct	23	Fall Break (Thursday and Friday)	
Oct	26	Covalent bonding, electronegativity, Lewis Dot Representations, Isomers	Chapters 8 and 9
Oct	28	Drawing Lewis Respresentations of molecules, resonance, expanded octets	
Oct	30	Formal charges, shapes of molecules (VSEPR Model)	
Nov	2	VSEPR, Valence Bond Theory	
Nov	4	Valence Bond Theory, Molecular Orbital Theory	
Nov	6	Heat and Work Energy, Expansion Work, Heat and Enthalpy	Chapter 6
Nov	9	Combustion, The Thermodynamic Standard State, Enthalpy changes	
Nov	11	Calorimetry Hess' Law	
Nov	13	Heats of Formation Hess' Law	
Nov	16	Heats of Reaction	
Nov	18	(...continued)	
Nov	20	Entropy and Gibb's Free Energy	
Nov	23	Exam 3	
Nov	25	Bulk Gas behavior, Ideal Gas Laws, defining STP conditions	Chapter 10
Nov	27	Thanksgiving - no classes	
Nov	30	Molar Volume, Gas Stoichiometry, Partial Pressures	
Dec	2	Kinetic Theory of Gases	
Dec	4	Defining Intermolecular interactions, dipoles, ion-dipole, dipole-dipole interactions	Chapter 11
Dec	7	London dispersion forces, Hydrogen bonding, vapor pressures	
Dec	9	allotropes, phase diagrams	
Dec	11	Exam 4 (last day of classes)	

Final (mandatory) ACS Exam: Dec 15 th 10:15 - 12:45 (Tuesday)

WSB-122