Chem 120-01 Assignment Schedule

Prof. Adam Van Wynsberghe **Fall 2013**

Week	Date	Lecture Topic	Reading	Laboratory	Assignments
1	8/30 F	Class Introduction		No Lab	
2	9/2 M	Atomic Structure	1.1-10; 2.1-4, 2.7	Lab Check in	
	9/4 W	Waves and Particles	7.1-3		
	9/6 F	Quantum Mechanics	7.5		**HW #1**
3	9/9 M	Bohr Model; H Atom	7.4; 7.6	Types of Chemical Reactions	
	9/11 W	Atomic Orbitals	7.7-8		
	9/13 F	Electron Configurations	7.8-10		**HW #2**
4	9/16 M	Periodic Trends; Ions and Compounds	7.10-12; 2.5-6	Types of Chemical Reactions	
	9/18 W	Chemical Bonds and Lewis Theory	8.1-3		
	9/20 F	Resonance Structures	8.4-6		**HW #3**
5	9/23 M	Advanced Lewis Structures; Expanded Octets	8.7-8	Origins of Color	
	9/25 W	VSEPR	9.1-3		
***** Exam I: Thursday, September 26th, 6:00 PM SCCT G027 *****					
	9/27 F	Molecular Shapes; Valence Bond Theory	9.4		

6	9/30 M	Valence Bond Theory	9.4	Analysis of Pennies	
	10/2 W	Molecular Orbital Theory I	9.7		
	10/4 F	Molecular Orbital Theory II			**HW #4**
7	10/7 M	Molecular Interactions	10.1-6	Analysis of Pennies	
	10/9 W	Phase Transitions & Gas Laws	6.1-4		
	10/11 F	Ideal Gas Laws	6.5-7		**HW #5**
8	10/14 M	Kinetic Molecular Theory; Real Gases	6.8-9	No Lab	
	10/16 W	Stoichiometry; Balanced Rxns	3.1-5; 4.9		
	10/18 F	No Lecture-Fall Recess			
9	10/21 M	Redox Rxns; Limiting Reactants; % Yield	3.9; 4.9	Calorimetry	**HW #6**
	10/23 W	Energy, heat, & work	5.1-2		

***** Exam II: Thursday, October 24th, 6:00 PM SCCT 3024 *****

	10/25 F	1st Law & Enthalpy	5.2-5		
10	10/28 M	Calorimetry; Hess's Law	5.6-8; 8.8	Biodiesel	
	10/30 W	Spontaneity, Entropy, and the 2nd Law	14.1-2		
	11/1 F	Statistical Entropy	14.1-2		**HW #7**

11	11/4 M	Thermodynamic Entropy; 3rd Law	14.2-4	Biodiesel	
	11/6 W	Free Energy; Rates of Rxns	14.5-6; 15.1-2		
	11/8 F	Rate Laws	15.3		**HW #8**
12	11/11 M	Integrated Rate Laws	15.3	Equilibrium	
	11/13 W	Arrhenius Equation	15.4		
	11/15 F	Rxn Mechanisms	15.5		**HW #9**
13	11/18 M	Catalysis; Dynamic Equilibrium	15.6; 16.1-6	Equilibrium	
	11/20 W	Free Energy and Equilibrium	16.9-10		

***** Exam III: Thursday, November 21st, 6:00 PM SCCT 3024 *****

	11/22 F	Le Chatlier's Principle	16.7		

Thanksgiving Break!

14	12/2 M	Equilibrium constant calculations	16.8	Demo Presentations Prep	
	12/4 W	Solubility Equilibria	17.9		
	12/6 F	Acids and Bases; pH	17.1-2; 17.4		**HW #10**
15	12/9 M	K_a's and pK_a's	17.3	Demo Presentations	
	12/11 W	Buffers and Titrations	17.6-8; 17.10		
	12/13 F	Molecular rationale of acid/base strength	17.5		**HW #11**

***** Final Exam: Monday, December 16th, 7:00 PM SCCT G027 *****