Chemistry 201
Spring Quarter 2005
MWR, 9/O201
Lab T 7-9, E104

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Required Materials:
Text: Chang, Raymond, *Chemistry*, 8th Ed, 2005
Laboratory Manual: Mottel, Erwin, and Sakano, *An Introduction to Experimental Chemistry*, 2004.
Bound laboratory notebook
Goggles

Course Grading

3 Examinations	50%
Homework Quizzes	15%
Laboratory	15%
Final Examination	20%

Course Outline

Date	Topic	Reference
3/7	Course Overview, Periodic Table, Ion and Salt Nomenclature	Ch 1,2
3/8	No Lab	
3/9	Atoms, Ions, & Molecules; Weighted Average	Ch 1, 2
3/10	Molecules & moles; nomenclature, formula & structure	Ch 3
3/14	Percentage Composition, empirical formula	Ch 3
3/15	*Lab U: Density of Solutions*	*Lab Manual*
3/16	Reacting Quantities; Chemical Equations	Ch 3
3/17	Chemical stoichiometry, Limiting reagent	Ch 3
3/21	Chemical stoichiometry; Percentage Yield	Ch 3
3/22	*Lab R: Thermal Decomposition of Sodium Bicarbonate*	*Lab Manual*
3/23	Solution process: solubility rules, electrolytes, reactions	Ch 4
3/24	**Examination I**	----------
3/28	Solutions; solution preparation; solution concentration	Ch 4
3/29	*Lab FF: Electrical Conductivity of Solutions*	*Lab Manual*
3/30	Atomic structure; Electronic configuration of atoms	Ch 7
3/31	Configuration of ions; Periodic trends; Electronegativity	Ch 7, 8
4/4-4/8	Spring Break	----------
4/11	Skeleton diagrams	Ch 8, 9
4/12	*Dry Lab: VSEPR Worksheet*	*Lab Manual*
4/13	Lewis Dot Structures	Ch 9
4/14	Covalent Bonding; Formal charge; resonance	Ch 9
4/18	VSEPR; Molecular polarity	Ch 10
4/19	*Dry Lab: VSEPR Worksheet*	
4/20	Molecular orbital theory; diatomic bonding	Ch 10
4/21	**Examination II**	----------
4/25	sp Hybridization; Localized bonding	Ch 10
4/26	*Lab JJ: Solid State II*	*Lab Manual*
4/27	Phases of matter, solid state properties	Ch 11
4/28	Ideal gas law, Kinetic theory of gases	Ch 5
5/2	Gaseous mixtures, Mole fraction, Dalton's law, Wet gases	Ch 5
5/3	***Lab D: The Ideal Gas Law***	*Lab Manual*
5/4	Gas-solution properties; vp, phase diagrams, distillation	Ch 11
5/5	Colligative properties, Raoult's Law, fp & bp changes	Ch 11
5/9	Chemical Kinetics; rate equation; initial rate method	Ch 13
5/10	*Handout: Kinetics of Food Coloring Reaction/Check out*	

5/11	Differential Rate law; data analysis; half-life	Ch 13
5/12	Integrated solution to rate law	Ch 13
5/16	**Examination 3**	----------
5/17	*No Lab Scheduled*	Ch 13
5/18	Rate constants & the Arrhenius equation	Ch 13
5/19	Mechanisms	
5/23-5/26	Final Exam	----------