CHEMISTRY 100: INTRODUCTORY CHEMISTRY WITH LABORATORY

Class Information:

Instructor: Ms. Barbara Kramer

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Phone: 770-784-8340 (4-8340 on campus)

Office Hours: Pierce 210, M 10:00 am -12:00 pm, Th 9:00 am – 10:30 am or by appointment

Class Website: http://userwww.service.emory.edu/~bkram01/100info.htm

Class schedule: TT 11:00 am-12:15 pm; Pierce 201

Lab schedule: Monday **or** Tuesday 2:00 - 5:00 pm; Pierce 203; Pre-lab Pierce 201

Required texts:

Introduction to General, Organic and Biochemistry, 5th edition by Bettelheim and March.

Chemistry 100 Lab Manual by Brenda Bacon Harmon.

Supplemental texts:

Study Guide and *Student Solutions Manual*

Homework:

Graded assignments will be given periodically to be completed and returned. These assignments may involve group work, but each student will be graded on the quality of his/her own work. Assignments will only be handed out during class as most will involve in-class work as well as outside work. If you are not present during class, you will be unable to complete the assignment.

Problems from the book will be assigned for self-study. In addition, sets of problems will be handed out periodically and posted on Learnlink. Answers to even problems can be found in the study guide and student solutions manuals. Effort should be made to work through all problems without first consulting the answers. Answers to additional problems will be posted on-line.

Quiz and Exam Information:

1. There will be a 15-20 minute quiz every third class during non-exam weeks (see schedule). Quiz problems will be similar to homework problems. Makeup quizzes will not be given. If a quiz is missed for an unexcused reason, a grade of zero will be entered for that quiz. The lowest quiz score will be dropped.

CLASS SCHEDULE

Note: Schedule is subject to change

Date	Topic	Chapter	Notes
Thurs, Jan 18	What is Chemistry? Scientific Method	1	
Tues, Jan 23	Physical and Chemical Properties, States of Matter, Measurements, Scientific Notation	1	
Jan 25	Significant Figures, Conversions, Density, Energy, Heat	1	**Quiz 1**
Tues, Jan 30	Classification of Matter, Atomic Theory, Subatomic Particles	2	
Feb 1	Periodic Table, Electronic structure of the atom, Electronic Configuration	2	
Tues, Feb 6	Periodic Table and Electron Configuration, Ionization Energy, Atomic size	2	
Feb 8	**EXAM I, Chapters 1 and 2**		
Tues, Feb 13	Ions, Octet Rule, Ionic Bonds, Covalent Bonds	3	
Feb 15	Lewis Structures, Shapes of Molecules	3	
Tues, Feb 20	Shapes continued, Electronegativity, Predicting Bond Formation	3	**Quiz 2**
Feb 22	Polyatomic Ions, Naming Compounds	3	
Tues, Feb 27	Mole, Formula Weight, Chemical Equations	4	
Mar 1	**EXAM II, Chapter 3**		
Tues, Mar 6	Stoichiometry, % yield, Limiting Reagents	4	
Mar 8	Net Ionic Reactions, Oxidation-Reduction, Heat of Reaction	4	**Quiz 3**
Tues, Mar 13	**Spring Break, No Classes**		
Mar 15			
Tues, Mar 20	Solids, Liquids and Gases, Gas Laws, Ideal Gas Law	5	
Mar 22	More Gas laws, Intermolecular Forces, Phase Changes	5	
Tues, Mar 27	Solutions, Characteristics of Solutions, Solubility, Concentration	6	
Mar 29	**EXAM III, Chapters 4 and 5**		
Tues, Apr 3	Solvation Colloids, Colligative Properties	6	
Apr 5	Energy Diagrams, Rates of Reaction Equilibrium	7	
Tues, Apr 10	Equilibrium continued, Le Chatelier's Principle	7	**Quiz 4**
Apr 12	Acids and Bases	8	
Tues, Apr 17	Reactions of Acids and Bases, pH, Buffers	8	
Apr 19	**Exam IV, Chapters 6, 7 and 8**		
Tues, Apr 24	Nuclear Chemistry	9	
Apr 26	More Nuclear Chemistry	9	
Tues, May 1	**Last Class: REVIEW**		