Chemistry 3A

Intro to General Chemistry

(Spring 2015)

**CHEM 3A**

**Time: 9:00 am – 3:20 pm**

**BLDG:** PHY 76 and 80

**Instructor:** Leonel R. Jimenez

**Email:** leonel.jimenez@reedleycollege.edu

**Required texts:** “Introductory Chemistry 5 Ed., Nivaldo J. Tro”

**Course description:** This is a survey course in the principles of inorganic chemistry covering the composition of matter, physical and chemical changes, atomic and molecular structure, inorganic nomenclature, chemical formula and reaction calculations, gas laws, bonding, solutions, net-ionic equations, acid-base theories, pH, oxidation-reduction reactions, thermodynamics, nuclear chemistry and equilibrium. The course emphasizes problem solving and chemical calculations. Both qualitative and quantitative theory and techniques will be covered. It is intended for applied science and non-science majors or for students preparing to take Chemistry 1A.

**PREREQUISITES: Mathematics 103. ADVISORIES: English 1A, Chemistry 10 or high school chemistry. (A, CSU-GE, UC, I)**

**Assessment of your learning**

The grade of each student will be determined by the total number of accumulated points from the lecture and laboratory based on the percent scale below.

 90-100 % **A**

 80-89 % **B**

 70-79 % **C**

 60-69 % **D**

 0-59 % **F**

**Your grade in the class will be determined by your performance on the following**

|  |  |
| --- | --- |
| Exam 1 | 100 points (12.5 %) |
| Exam 2 | 100 points (12.5 %) |
| Exam 3 | 100 points (12.5 %) |
| Final Lecture Exam  | 200 points (25 %) |
| Lab | 200 points (25 %) (100 lab + 100 lab final)  |
| Home Work  | 100 points (10 point each) (12.5 %) |
| **Total**  | **800points** |

**Exams: (one 3x5 notes card allowed for exams)** All exams are to be taken by everyone including the final on their assigned date and time. If you miss an exam you *cannot* make it up. In addition*, you will not be allowed to take exams earlier than scheduled.* If accommodations are needed for disability purposes please inform me the first week of class.

**Home Work:** Will be assigned weekly but only 10 random assignment will be collected for grading.

**Extra Credit:** No extra credit will be given.

**Dates to Remember (Fall 2013):**

* Jan. 23 (F) Last day to drop for full refund
* Jan. 30 (F) Last day to drop class without a “W”
* Mar. 13 (F) Last Day to drop a full-term class
* Mar. 30 – Apr. 2 (M-Th) Spring Recess
* **Lab Final** Saturday, May 9, 2015; 12:00 pm – 3:00 pm
* **Lecture Final** Saturday, May 16, 2015; 9:00 am – 12:00 pm

**Academic Honesty Policy:**  See the general catalog for the policy on academic integrity. Academic dishonesty or cheating of any kind is not tolerated in this class. Cheating of any sort will be reported to appropriate staff and the administrators and my result in an immediate “F” grade in the course.

**Cell phones/electronic devices:** Cell phones **MUST** be turned to silent and put away. If you answer a cell phone or take a cell phone out during class you will be asked to leave. If you absolutely MUST have your phone for emergency reasons you are to consult with me prior to class.

Lecture and Lab Schedule: subject to change

**Jimenez’s CHEM 3A Spring 2015**

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| Week | Days | Dates | Lab (Sat) | Lectures (Sat) |
| 1 | S | Jan. 17 | Safety, Sig. Figs., Cal. 5pts | **Ch 1** Intro & **Ch 2** Measurement |
| 2 | S | Jan. 24 | Exp 3: Density 5pts | **Ch 3** Matter and Energy  |
| 3 | S | Jan. 31 | Exp 1: Properties and changes of matter 5pts | **Ch 4** The Atom |
| 4 | S | Feb. 7 | Exp 2: Calorimetry 10pts | **Ch 9** Electronic Configuration/ The Periodic Table  |
| 5 | S | Feb. 14 | Molecular modeling & Lewis dot 10pts | **Ch 10** Bonding and Geometry/polarity |
| 6 | S | Feb. 21 | Nomenclature handout 5pts | **Lecture Exam 1 Ch 1-4, 9-10 (9 -11AM)** |
| 7 | S | Feb. 28 | Exp 5: Simple formula of a compound 10pts | **Ch 5** Molecules and Compounds |
| 8 | S | Mar. 7 | Exp 6: % of O in KClO3 10pts | **Ch 6** Empirical Formulas, The Mole, Percent Composition  |
| 9 | S | Mar. 14 | Exp 7: % copper recovery 5pts | **Ch 7** Reactions & Balancing Equations  |
| 10 | S | Mar. 21 | Exp 8: Alum production 5pts | **Ch 8** Mole to Mole Ratio, Stoichiometry, Limiting Reagents |
| 11 | S | Mar. 28 | Mole ratio & stoichiometry 10pts | **Ch 11** Gases and Gas Laws |
| 12 | S | Apr. 4 | Exp 9: H2 production 5pts | **Lecture Exam 2 Ch 5-8 (9 -11AM)** |
| 13 | S | Apr. 11 | Molarity and concentration 5pts | **Ch 12** Liquids, Solids and I.M. Forces **Ch 13** Solutions, Dilutions |
| 14 | S | Apr. 18 | Exp 10: pH lab 5pts | **Ch 14** Acids, Bases, Titrations and pH |
| 15 | S | Apr. 25 | Exp 11: Acid base titration 5pts | **Ch 15** Chemical equilibrium |
| 16 | S | May 2 | **Lab practical acid base titration** 100pts | **Lecture Exam 3 Ch 11-15 (9 -11AM)** |
| 17 | S | May 9 | Q&A | **Ch 17** Radioactivity Nuclear chemistry |
| 18 | S | May 16 |  | **Final 9:00 AM – 12:00 PM (All lectures Covered)**  |