Chemistry 3A

Intro to General Chemistry

(Fall 2013)

**CHEM 3A**

**BLDG:** PHY 76

**Instructor:** Leonel R. Jimenez

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

**Required texts:** “Introductory Chemistry 3 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, equilibrium and organic chemistry. 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 %) |
| 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):**

* Aug. 23 (F) Last day to drop for full refund
* Aug. 30 (F) Last day to drop class without a “W”
* Sep. 2 (M) Labor day – No Classes
* Oct. 11 (F) Last day to drop class
* Nov. 11 (M) Veterans day – No Classes
* Nov. 28 – 29 Thanksgiving – No Classes
* **Lecture Final** Monday, December 9, 2013; 5:30 pm – 7:30 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 off 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 Fall 2013**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Week | Days | Dates | Lab (wed) | M & W Lectures |
| 1 | M  W | Aug. 12 - 16 | Safety, Sig. Figs., Cal. | **Ch 1** Intro  **Ch 2** Measurement |
| 2 | M  W | Aug. 19 - 23 | Exp 3: Density | **Ch 3** Matter, Physical and Chemical Changes  **Ch 4** The Atom |
| 3 | M  W | Aug. 26 - 30 | Exp 1: Properties and changes of matter | **Ch 4** The Atom  **Ch 9** Electronic Configuration |
| 4 | M  W | Sep. 2 -6 | Exp 2: Calorimetry | **No Class (Monday)**  **Ch 9** The Periodic Table |
| 5 | M  W | Sep. 9 -13 | Molecular modeling & Lewis dot | **Lecture Exam 1 Mon. Sep. 9th Ch 1-4 & 9**  **Ch 10** Bonding and Geometry |
| 6 | M  W | Sep. 16 - 20 | **Lab Quiz 1**, Nomenclature handout | **Ch 10** Polarity  **Ch 5** Molecules and Compounds |
| 7 | M  W | Sep. 23 - 27 | Exp 5: Simple formula of a comound | **Ch 5** Molecules and Compounds  **Ch 6** Empirical Formulas, The Mole |
| 8 | M  W | Sep. 30 - Oct. 4 | Exp 6: % of O in KClO3 | **Ch 6** percent Composition  **Ch 7** Reactions |
| 9 | M  W | Oct. 7 - 11 | Exp 7: % copper recovery | **Ch 7** Balancing Equations  **Ch 8** Mole to Mole Ratio, Stoichiometry |
| 10 | M  W | Oct. 14 - 18 | Exp 8: Alum production | **Ch 8** Limiting Reagents  **Ch 11** Gases and Gas Laws |
| 11 | M  W | Oct. 21 - 25 | **Lab Quiz 2**, Mole ratio & stoichiometry | **Lecture Exam 2 Mon. Oct. 21st Ch 5-8 & 10**  **Ch 12** Liquids, Solids and I.M. Forces |
| 12 | M  W | Oct. 28 - Nov.1 | Exp 9: H2 production | **Ch 13** Solutions, Dilutions  **Ch 14** Acids, Bases, Titrations and pH |
| 13 | M  W | Nov. 4 - 8 | Molarity and concentration | **Ch 15** Chemical equilibrium  **Ch 17** Radioactivity Nuclear chemistry |
| 14 | M  W | Nov. 11 - 15 | Exp 10: pH lab | **No Class (Monday)**  **Lecture Exam 3 Wed. Nov. 13th Ch 11-15** |
| 15 | M  W | Nov. 18 - 22 | Exp 11: Acid base titration | **Ch 17** Radioactivity Nuclear chemistry  **Ch 18** Intro to Organic Chemistry |
| 16 | M  W | Nov. 25 - 29 | Exp 12: **Lab practical acid base titration** | **Ch 18** Intro to Organic Chemistry  **No Class (Wednesday)** |
| 17 | M  W | Dec. 2 -6 |  | **Ch 18** Intro to Organic Chemistry  **Final review** |
| 18 | M | Dec.9 |  | **Final 5:30 PM – 7:30PM (All lectures Covered)** |