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Office Hours: held in room Chem 120, 108, or 162 T & Th 12:40-1:10 pm, 5:10-5:40 pm, & _____.

Catalog Course Description: General Chemistry, 5 units

Chemistry of elements and their compounds in periodic groupings, transition metal complexes, chemical equilibrium, chemical thermodynamics, kinetics, atomic and molecular structure, aqueous solutions, net ionic equations, oxidation-reduction equations, electrochemistry and nuclear chemistry. Laboratory: qualitative analysis of common metallic and non-metallic ions and additional experiments on selected lecture topics.

Course Objective:

Successful students are expected to gain an understanding of, and appreciation for, the physical and chemical interactions of matter. This objective will be met through individual, class, and laboratory study. Opportunities for the development of the factual and theoretical knowledge, skills, and intellectual tools required for a foundation in chemistry will be provided. Problem solving and laboratory skills are emphasized including the ability to work safely, efficiently, and accurately in both independent and supervised situations. Upon successful completion of this course, students will obtain a chemistry background comparable to that obtained at a CSU or UC campus.

Student success will be assessed via exams, lab reports, instructor observations, and SLOs (student learning outcomes). Two SLO's are shown below.

CHEM 1B COURSE LEVEL STUDENT LEARNING OUTCOME:

On a written exercise, given the names of chemical compounds, students will be able to write the correct reactant formulas, states of matter (when required), identify reaction type, predict the formulas of products, and balance the chemical equation.

CHEMISTRY PROGRAM LEVEL STUDENT LEARNING OUTCOME:

Students will practice safe laboratory procedures by putting their goggles on at the beginning of a chemistry lab experiment involving burners or chemicals, and by keeping their goggles in place during the entire course of the experiment. Students will not remove their goggles until the students are leaving or until the instructor has said that it is safe to do so (whichever comes first).

Prerequisite: Chemistry 1A with a minimum grade of C.

Required Materials:

1. Petrucci, et al. General Chemistry, Principles and Modern Applications, Ninth Edition, Pearson Prentice Hall, New Jersey, 2007.
2. Catalyst, the prentice hall custom laboratory program for chemistry, Chemistry 1B, El Camino College, Pearson Custom Publishing.
4. Laboratory Research Notebook: Quad-Ruled, 100 numbered duplicate pages.
5. Safety Goggles
6. Scientific Calculator
7. Fine-point permanent marker for labeling glassware.

Recommended Materials:

1. Lab Coat or Apron
2. Nitrile or Latex Disposable Gloves

Required Assignments:

Students are required to attend both lecture *and* lab meetings as scheduled, take all exams, submit all assigned homework, complete laboratory assignments, check out of lab at the end of the course, and take the final examination.

Absences:

Excessive absences will result in a lower grade or being dropped from the course. It is not possible to makeup most laboratory experiments.

Grades:

Exams	ca. 400 points → 50 pt/Chapter, except Ch. 14 (60 pt), Ch. 15 (55 pt), Ch. 17 (65 pt), and Ch. 19 (20 pt).
Homework	ca. 200 points → normalized to 22 pt/Chapter.
Lab	ca. 200 points → 10 pt/experiment except Qualitative Analysis (50 pt), pH Titration (50 pt), Rate Law (50 pt).
Final Exam	200 points → comprehensive.

Assignment of the final letter grade is based on percentage of total points

100 – 90%	A
89 – 80%	B
79 – 65%	C
64 – 50%	D
49% and below	F

Important Note Regarding Grades: *If you fail the lab portion of the course, then you will fail the course even if you have a passing grade percentage.*

Cheating:

Academic honesty is mandatory. Any evidence to the contrary will result in a report to the Dean of Student Affairs for disciplinary action.

chemistry (kém-ĩ-strê) noun

plural chemistries

Abbr. chem.

1. The science of the composition, structure, properties, and reactions of matter, especially of atomic and molecular systems.
2. The composition, structure, properties, and reactions of a substance.
3. The elements of a complex entity and their dynamic interrelation: "Now that they had a leader, a restless chemistry possessed the group" (John Updike).
4. Mutual attraction or sympathy; rapport: The chemistry was good between the partners.

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