

CHEMISTRY (CHEM)

CHEM-012

Strategies for Success in Chem 102 Introduction to General, Organic and Biological Chemistry 1 UNITS

Corequisite: Concurrent enrollment in CHEM 102

3.0 hours laboratory

The purpose of this course is to review and reinforce the skills and knowledge necessary for success in CHEM 102 (Introduction to General, Organic & Biological Chemistry). Students will strengthen their abilities related to critical thinking strategies, time management skills, coupled with unique features of effective reading strategies in science, technical writing skills and mastery of basic chemistry skills critical to CHEM 102. Pass/No Pass only. Non-degree applicable.

CHEM-020

Strategies For Success In CHEM 120 1 UNITS

Corequisite: Concurrent enrollment in CHEM 120

3.0 hours laboratory

The purpose of this course is to review and reinforce the skills and knowledge necessary for success in CHEM 120 (Preparation for General Chemistry). Students will strengthen their abilities related to critical thinking strategies, time management skills, coupled with unique features of effective reading strategies in science, technical writing skills and mastery of basic chemistry skills critical to CHEM 120. Pass/No Pass only. Non-degree applicable.

CHEM-102

Introduction to General, Organic and Biological Chemistry 5 UNITS

Prerequisite: Appropriate mathematics placement

4.0 hours lecture, 3.0 hours laboratory

A one-semester course covering the basic principles of general, organic and biochemistry as needed to understand the biochemistry, physiology and pharmacology of the human body. Intended for students planning to transfer to a California State University nursing program. Students with a grade of "C" or better in CHEM 115 or 116 (offered at Grossmont College) are not eligible for this class. (AA/AS GE, CSU, CSU GE, IGETC, UC, UC credit limit)

CHEM-115

Fundamentals of Chemistry 4 UNITS

Prerequisite: Appropriate mathematics placement

3.0 hours lecture, 3.0 hours laboratory

Elementary principles of inorganic and general chemistry with a brief introduction to organic and biochemistry. Previous chemistry background is not required. Recommended for students who need only a one-semester general chemistry course and for students entering paramedical and allied health fields. Students will not receive credit toward graduation for more than one of the following courses: CHEM 115, 120. (C-ID CHEM 101) (AA/AS GE, CSU, CSU GE, IGETC, UC credit limit)

CHEM-120

Preparation for General Chemistry 4 UNITS

Prerequisite: "C" grade or higher or "Pass" in MATH 110 or equivalent

3.0 hours lecture, 3.0 hours laboratory

Elementary principles of chemistry approached from a problem-solving perspective necessary to succeed in CHEM 141. Intensive study in the areas of problem solving, stoichiometry, chemical nomenclature, basic atomic theory and bonding, solutions, acid-base chemistry, redox reactions and gas laws. The laboratory will be an introduction to quantitative techniques, descriptive chemistry, gas laws, error analysis, and data treatment. Students will not receive credit toward graduation for more than one of the following courses: CHEM 115, 120. (AA/AS GE, CSU, CSU GE, IGETC, UC, UC credit limit)

CHEM-141

General Chemistry I 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in CHEM 120 or equivalent or the CHEM 141 assessment and "C" grade or higher or "Pass" in the MATH 110 or equivalent

3.0 hours lecture, 6.0 hours laboratory

Basic principles and concepts of chemistry with an emphasis in the areas of stoichiometry, thermochemistry, atomic structure, chemical bonding and gas laws. The laboratory is an introduction to quantitative analysis and the principles of atomic and molecular structures. (C-ID CHEM 110, 120S (with CHEM 142)) (AA/AS GE, CSU, CSU GE, IGETC, UC credit limit)

CHEM-142

General Chemistry II 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in CHEM 141 or equivalent

3.0 hours lecture, 6.0 hours laboratory

Basic principles and calculations of chemistry with emphasis in the areas of chemical and acid-base equilibrium, thermodynamics, descriptive chemistry of the periodic table, intermolecular forces, properties of liquids, solids and solutions, kinetics, electrochemistry, coordination compounds. The laboratory is a continuation of CHEM 141 with the quantitative analysis of matter and also includes qualitative analysis. (C-ID CHEM 120S (with CHEM 141)) (CSU, CSU GE, IGETC, UC)

CHEM-231

Organic Chemistry I 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in CHEM 142 or equivalent

3.0 hours lecture, 6.0 hours laboratory

First of a two semester organic chemistry sequence. Includes nomenclature, structure/function relationships, and reaction mechanisms. Lab reinforces chemical principles and teaches proper lab technique. Course intended for science/pre-med majors. (C-ID CHEM 150, CHEM 160S (with CHEM 232)) (CSU, CSU GE, IGETC, UC)

CHEM-232

Organic Chemistry II 5 UNITS

Prerequisite: "C" grade or higher or "Pass" in CHEM 231 or equivalent

3.0 hours lecture, 6.0 hours laboratory

Second of a two-semester sequence. The topics covered will include: structure and reactivity of carboxylic acids and their derivatives, amines and other nitrogen functional groups, aromatic compounds, heterocyclic compounds, polyfunctional compounds, conjugation and aromaticity, and multistep organic synthesis. (C-ID CHEM 160S (with CHEM 231)) (AA/AS GE, CSU, CSU GE, IGETC, UC)