

CHEMISTRY (CHEM) COURSES

CHEM 101 4 Units

Introductory Chemistry

Lecture: 54 contact hours

Lab: 54 contact hours

Prerequisite/Corequisite: ENGL 101 or ENGL 101H or READ 100 and MATH 102 or eligibility for MATH 151 or higher as determined by the SBVC assessment process.

This comprehensive course provides a foundation for the concepts of chemistry. Some of the areas studied include the physical and chemical properties of common elements and compounds, the metric system, measurements and conversions, atomic structure, the periodic table, chemical equations and calculations, gases, solutions, ionization, and an introduction to organic and biochemistry.

Associate Degree Applicable

Transfers to both UC/CSU

C-ID: CHEM 101

CHEM 104 4 Units

Introduction to Organic Chemistry and Biochemistry

Lecture: 54 contact hours

Lab: 54 contact hours

Prerequisite: CHEM 101

This course is an introduction to the bonding, naming, structure, and chemical and biomolecular properties for different classes of organic compounds and biomolecules, with a focus on their cellular, medicinal and industrial importance.

Associate Degree Applicable

Transfers to both UC/CSU

C-ID: CHEM 102

CHEM 105 5 Units

Introduction to General, Organic And Biochemistry

Lecture: 54 contact hours

Lab: 108 contact hours

Prerequisite/Corequisite: ENGL 101 or ENGL 101H or READ 100 and MATH 102 or eligibility for MATH 151 or higher as determined by the SBVC assessment process.

This course provides a foundation for the concepts of general, organic, and biochemistry for students who wish to pursue allied health fields such as nursing. Some of the areas studied include the physical and chemical properties of common elements and compounds, the metric system, measurements and conversions, atomic structure, the periodic table, chemical equations and calculations, gases, solutions, electrolytes as well as an introduction to the bonding, naming, structure, and chemical and biological properties for different classes of organic compounds and biomolecules, with a focus on their cellular, medicinal and commercial importance.

Associate Degree Applicable

Transfers to both UC/CSU

C-ID: CHEM 102

CHEM 150 5 Units

General Chemistry I

Lecture: 54 contact hours

Lab: 108 contact hours

Prerequisite: CHEM 101 or CHEM 105 and ENGL 101 or ENGL 101H and MATH 102

Corequisite: ENGL 101 or ENGL 101H and MATH 102

General Chemistry I is first-semester college-level chemistry with an emphasis on the mole concept, thermochemistry, atomic and molecular structure, the relationships of intramolecular and intermolecular forces to chemical and physical properties, the periodic table, organic chemistry, and solids, liquids and gases.

Associate Degree Applicable

Transfers to both UC/CSU

C-ID: CHEM 110/120S

CHEM 151 5 Units

General Chemistry II

Lecture: 54 contact hours

Lab: 108 contact hours

Prerequisite: CHEM 150 and MATH 102 or SBVC assessment higher than MATH 102.

General Chemistry II is the second half of a two-part sequence in chemistry with an emphasis on thermodynamics, chemical equilibrium, chemical kinetics, nuclear and electrochemistry. This course prepares students for future courses and careers in chemistry, physics, biology, health sciences, and the earth sciences.

Associate Degree Applicable

Transfers to both UC/CSU

C-ID: CHEM 120S

CHEM 205 5 Units

Quantitative Chemical Analysis

Lecture: 54 contact hours

Lab: 108 contact hours

Prerequisite: CHEM 151

This course explores the principles, calculations, and applications of volumetric, gravimetric, and instrumental analysis as well as provides practical experience in standardizing reagents and determining the composition of various mixtures pertaining to the chemical laboratory setting. It is designed for second year Chemistry and Biology majors and students pursuing professional careers.

Associate Degree Applicable

Transfers to both UC/CSU

CHEM 212 4 Units

Organic Chemistry I

Lecture: 54 contact hours

Lab: 54 contact hours

Prerequisite/Corequisite: CHEM 151

The first semester of organic chemistry examines carbon compounds including aliphatic, aromatic, and heterocyclic series, and modern theoretical concepts are studied. Students identify properties, synthesis, and reactions of functional groups. Mechanisms are examined in detail. Laboratory includes preparation, identification and the study of properties of organic compounds.

Associate Degree Applicable

Transfers to both UC/CSU

C-ID: CHEM 150/160S

CHEM 213 4 Units

Organic Chemistry II

Lecture: 54 contact hours

Lab: 54 contact hours

Prerequisite: CHEM 212

The second semester of organic chemistry continues the study of carbon compounds including aliphatic, aromatic and heterocyclic series, theoretical concepts, instrumentation, mechanisms, synthesis and functional groups. Laboratory includes preparation and study of properties, and extensive identification of organic compounds.

Associate Degree Applicable

Transfers to both UC/CSU

C-ID: CHEM 160S