CHEMISTRY (CHEM) COURSES

CHEM 101 4 Units
Introductory Chemistry
Lecture: 54 contact hours
Lab: 54 contact hours
Prerequisite: Eligibility for college level English and Mathematics based on the SBVC Guided-Self Placement process.
Introductory Chemistry involves the study of the material makeup of our world and its relationship to life, the natural environment, and our lived experiences. General scientific principles including scientific observation and measurement are also introduced. This course is designed to prepare students for careers in nursing, medicine, engineering and other science and allied health professions.
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
Advisory: Eligibility for college level English and Mathematics based on the SBVC Guided-Self Placement 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 SI 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
Corequisite: MATH 102 or placement into MATH 102 based on the SBVC Guided-Self Placement process.
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 MATH 151 or placement into MATH 250 based on the SBVC Guided-Self Placement process.
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 5 Units
Organic Chemistry I
Lecture: 54 contact hours
Lab: 108 contact hours
Prerequisite/Corequisite: CHEM 151
This course examines the properties, synthesis, and reactions of organic compounds, those that contain carbon, which includes many important modern materials, such as plastic and pharmaceuticals. It also provides the foundational background to later learn about the chemistry of biological systems.
Associate Degree Applicable
Transfers to both UC/CSU
C-ID: CHEM 150/160S

CHEM 213 5 Units
Organic Chemistry II
Lecture: 54 contact hours
Lab: 108 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