

CHEMISTRY (CHEM)

CHEM 010 Preparatory Chemistry (3 credits)

This preparatory course is designed to permit access to other science courses. Basic principles of atomic structure and chemical change are presented as a foundation for the study of freshman chemistry or biology. May not be used to meet the graduation requirements.

Prerequisite(s): (SAT Mathematics with a score of 530) or (Next Gen QAS with a score of 243) or (Compass - Mathematics-Algebra with a score of 046) or (Accuplacer Elem Algebra with a score of 050) or (Accuplacer College Math with a score of 001) or (MATH 022) or (MATH 024) or (PARCC Algebra II with a score of 750)

CHEM 111 General Chemistry I (GL) (4 credits)

An introduction for students requiring a full year of chemistry. The structure of matter and its behavior from a chemical perspective is presented. Topics include atomic and molecular structure, chemical bonding, stoichiometry, periodic relationships, principles of chemical reactions, and properties of state and solutions. The laboratory illustrates the principles discussed in lecture. Course includes 45 hours of lecture and 45 hours of laboratory per semester. Requires two units of high school algebra or MATH 017 or Math 023 or Math 026. In addition, it is recommended that students have completed one year of high school chemistry or CHEM 010. Course Fee.

Prerequisite(s): (MATH 023) or (MATH 026) or (MATH 017) or (Accuplacer College Math with a score of 045) or (MATH 101) or (MATH 109) or (MATH 203) or (MATH 103) or (MATH 102) or (MATH 216) or (SAT Mathematics with a score of 530) or (Next Gen QAS with a score of 263) or (MATH 204) or (ACT Mathematics with a score of 21) or (PARCC Algebra II with a score of 750)

CHEM 112 General Chemistry II A (GL) (4 credits)

The second semester course for students who require a full year of chemistry. Topics are chemical thermodynamics, kinetics, chemical equilibrium, electrochemistry, acid-base theory, nuclear reactions, and an introduction to basic principles and structures in organic and biochemistry. The laboratory consists of applications of topics discussed in lecture and introduction to the qualitative analysis of some common metals and nonmetals. Course includes 45 hours of lecture and 45 hours of laboratory per semester. Course fee.

Prerequisite(s): CHEM 111

CHEM 207 Organic Chemistry I (4 credits)

This course, along with CHEM 208, presents a comprehensive survey of organic chemistry. The first semester stresses the physical and chemical properties of aliphatic and aromatic hydrocarbons. Emphasis is given to organic nomenclature, synthesis, stereochemistry, reaction mechanisms and spectroscopy of organic compounds. The laboratory illustrates the common techniques used in the preparation, purification and characterization of typical compounds. CHEM 112 or permission of instructor required. Course includes 45 hours of lecture and 45 hours of laboratory per semester. Course fee.

Prerequisite(s): CHEM 112

CHEM 208 Organic Chemistry II (4 credits)

A continuation of CHEM 207, this course covers the alcohols, ethers, aldehydes, ketones, carboxylic acids, and their derivatives and selected special topics. Syntheses and reaction mechanisms are stressed throughout the course. The laboratory includes organic syntheses and an introduction to organic qualitative analysis. Course includes 45 hours of lecture and 45 hours of laboratory per semester. Course fee.

Prerequisite(s): CHEM 207