CHEMISTRY (CHEM)

CHEM 110 Survey of Chemistry (4 credits)
This course will cover the basic principles and concepts of inorganic, organic and biological chemistry. Topics will include states of matter, measurements, elements, atoms and the periodic table, chemical bonding, chemical equations, gases, liquids and solids, energy and equilibrium reaction, acid-base and oxidation reduction. Organic topics include hydrocarbons, alcohol, ethers, esters, aldehydes and ketones. Topics in biochemistry will include carbohydrates, carboxylic acids, liquids, amines, proteins, enzymes, and metabolism.
Prerequisite/s: MATH 101
Lab Required.

CHEM 115 Introduction to Chemistry (4 credits)
This course will cover the basic principles and concepts of inorganic, organic and biological chemistry. Topics will include states of matter, measurements, elements, atoms and the periodic table, chemical bonding, chemical equations, gases, liquids and solids, energy and equilibrium, reactions, acid-base and oxidation-reduction.
Lab Required.

CHEM 116 Introduction to Organic & Biochemistry (4 credits)
This course will cover the basic principles and concepts of organic and biological chemistry. Organic topics include saturated and unsaturated hydrocarbons, alcohol, ethers, esters, aldehydes and ketones. Topics in biochemistry will include carbohydrates, carboxylic acids, lipids, amines, proteins, enzymes, and metabolism.
Prerequisite/s: MATH 101, or CHEM 115, or CHEM 121
Lab Required.

CHEM 121 General Chemistry I (4 credits)
This course will cover the basic principles and concepts of inorganic chemistry. Topics will include states of matter, measurements, matter and energy, elements, atoms and periodic table, chemical reactions, chemical equations and properties of gases.
Prerequisite/s: MATH 103
Lab Required.

CHEM 122 General Chemistry II (4 credits)
This course will cover the basic principles and concepts of inorganic chemistry and an introduction to organic chemistry. Topics will include chemical bonding, liquids and solids, Solutions, acids and bases, chemical equilibrium, oxidation and reduction, nuclear chemistry and an introduction to organic chemistry.
Prerequisite/s: CHEM 121
Lab Required.

CHEM 321 Environmental Chemistry (3 credits)
This course will examine the chemical nature of air, water, and soil. Some of the specific topics covered will include: the ozone layer and ozone depletion, greenhouse effect, nutrient cycles, radiation, and acid rain. The fate of chemicals in the environment will be studied.
Prerequisite/s: ENS 113, and CHEM 115, and MATH 103

CHEM 403 Analytical Chemistry (3 credits)
This course will introduce students to the use of advanced scientific analytical equipment. This equipment will allow students to identify almost any element or chemical compound. Students will be exposed to analyses using pH meter, conductivity meter, spectrophotometers, atomic absorption and graphite furnace. They will also analyze samples using UV and IR spectrophotometers, HPLC, and gas chromatograph. Students will learn techniques of sampling, sample preparation and storage. Lab safety will be emphasized.
Prerequisite/s: CHEM 115, or CHEM 116, or CHEM 121