CHM-131 Introduction to Chemistry

Class 3  Lab 0  Clinical 0  Work 0  Credit 3

This course introduces the fundamental concepts of inorganic chemistry. Topics include measurement, matter and energy, atomic and molecular structure, nuclear chemistry, stoichiometry, chemical formulas and reactions, chemical bonding, gas laws, solutions, and acids and bases. Upon completion, students should be able to demonstrate a basic understanding of chemistry as it applies to other fields.

Minimum State Prerequisites: None
Minimum State Corequisites: None

CHM-131A Introduction to Chemistry Lab

Class 0  Lab 3  Clinical 0  Work 0  Credit 1

This course is a laboratory to accompany CHM 131. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 131. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 131.

Minimum State Prerequisites: None
Minimum State Corequisites: Take CHM-131

CHM-132 Organic and Biochemistry

Class 3  Lab 0  Clinical 0  Work 0  Credit 4

This course provides a survey of major functional classes of compounds in organic and biochemistry. Topics include structure, properties, and reactions of the major organic and biological molecules and basic principles of metabolism. Upon completion, students should be able to demonstrate an understanding of fundamental chemical concepts needed to pursue studies in related professional fields.

Minimum State Prerequisites: Take one set: Set 1: CHM-131 and CHM-131A Set 2: CHM-151
Minimum State Corequisites: None

CHM-151 General Chemistry I

Class 3  Lab 3  Clinical 0  Work 0  Credit 4

This course covers fundamental principles and laws of chemistry. Topics include measurement, atomic and molecular structure, periodicity, chemical reactions, chemical bonding, stoichiometry, thermochemistry, gas laws, and solutions. Upon completion, students should be able to demonstrate an understanding of fundamental chemical laws and concepts as needed in CHM 152.

Minimum State Prerequisites: None
Minimum State Corequisites: None

CHM-152 General Chemistry II

Class 3  Lab 3  Clinical 0  Work 0  Credit 4

This course provides a continuation of the study of the fundamental principles and laws of chemistry. Topics include kinetics, equilibrium, ionic and redox equations, acid-base theory, electrochemistry, thermodynamics, introduction to nuclear and organic chemistry, and complex ions. Upon completion, students should be able to demonstrate an understanding of chemical concepts as needed to pursue further study in chemistry and related professional fields.

Minimum State Prerequisites: Take CHM-151
Minimum State Corequisites: None

CHM-251 Organic Chemistry I

Class 3  Lab 3  Clinical 0  Work 0  Credit 4

This course provides a systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of hydrocarbons, alkyl halides, alcohols, and ethers; further topics include isomerization, stereochemistry, and spectroscopy. Upon completion, students should be able to demonstrate an understanding of the fundamental concepts of covered organic topics as needed in CHM 252.

Minimum State Prerequisites: Take CHM-152
Minimum State Corequisites: None

CHM-252 Organic Chemistry II

Class 3  Lab 3  Clinical 0  Work 0  Credit 4

This course provides continuation of the systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of aromatics, aldehydes, ketones, carboxylic acids and derivatives, amines and heterocyclics; multi-step synthesis will be emphasized. Upon completion, students should be able to demonstrate an understanding of organic concepts as needed to pursue further study in chemistry and related professional fields.

Minimum State Prerequisites: Take CHM-251
Minimum State Corequisites: None