

Chemistry

CHEM 131 Survey of Chemistry

3 credits

Attributes: LA SC

This is a survey course for non-science transfer students and involves lectures, demonstrations, and laboratory experiments relating to the basic facts and principles of chemistry. Discussions of atomic theory, bonding, states of matter, chemical equilibrium, and applied chemistry are included. Two lecture and two laboratory hours per week.

CHEM 151 General Chemistry I

4 credits

Attributes: LA LS SC

This course is designed for students who plan to continue in a science or related area. The major topics covered include atomic structure, stoichiometry, modern chemical bonding, and the gaseous state of matter. The laboratory is both preparative and analytical using classical and spectroscopic techniques. Three lecture and two laboratory hours per week.

Pre/Co-requisite: ENGL 101 - English Composition I or higher and

Pre/Co-requisite: MATH 203 College Algebra or higher; waiver by placement testing results; or departmental approval.

CHEM 152 General Chemistry II

4 credits

Attributes: LA LS SC

This course is a continuation of CHEM 151 General Chemistry I. Major topics covered include thermo-chemistry, thermodynamics, the states of matter, solutions, chemical kinetics, chemical equilibrium, electro-chemistry, and an introduction to organic chemistry. The laboratory includes classical and spectroscopic techniques. Three lecture and two laboratory hours per week.

Prerequisite: C- or higher in CHEM 151 General Chemistry I; or departmental approval.

Pre/Co-requisite: MATH 217, Precalculus; or waiver by placement testing results.

CHEM 201 Organic Chemistry I

5 credits

Attributes: LA LS SC

This is a study of the main classes of organic compounds, including an introduction to natural products. The nomenclature, reaction mechanisms, synthesis, and general properties of alkanes, alkenes, alkynes, alcohols, and haloalkanes are discussed. The topics of stereochemistry, nucleophilic substitution, elimination, and radical chain reactions are discussed. The laboratory is both preparative and analytical using classical and instrumental experimental techniques. Three lecture and four laboratory hours per week.

Prerequisite: C or higher in CHEM 152 General Chemistry II; or permission of instructor.

CHEM 202 Organic Chemistry II

5 credits

Attributes: LA LS SC

This is a continuation of the study of the main classes of organic compounds, including aldehydes, ketones, carboxylic acids, amines, and aromatics. The nomenclature, reaction mechanisms, synthesis, and general properties of these compounds will be discussed. The techniques of MS, NMR, and IR spectroscopy will be introduced. IR and NMR spectra will be run and interpreted where appropriate in the laboratory. The laboratory is both preparative and analytical using classical and instrumental experimental techniques. Three lecture and four laboratory hours per week.

Prerequisite: C- or higher in CHEM 201 Organic Chemistry I; or permission of instructor.

CHEM 400 Special Study in Chemistry

1 credit

Attributes: LA SC

This course involves independent work on a selected topic under the direction of members of the Chemistry faculty. Limited to two courses per student.

Prerequisite: approval of the Department Chair and Division Dean.