

# CH - CHEMISTRY

## CH104 General Chemistry for Health Professions

Credits 5 Summer/Fall/Winter/Spring

**Registration Requirement:** RD090 and WR090, or IECC201R and IECC201W, and MTH058 or MTH060, each with a grade of "C" or better; or placement above stated course levels.

This course is taught on the assumption that the enrollee has had no previous introduction to the study of chemistry. The student must be proficient in general mathematics and must be able to handle elementary algebraic operations. The first term includes the major topics of inorganic chemistry including elements, compounds, atomic structure, nomenclature, stoichiometry, bonding and structure, states of matter, solution chemistry, equilibrium, reaction rates, thermodynamics, acid-bases and pH and nuclear chemistry.

**Additional Course Fee:** \$25.00

**This course fulfills:** Lab Science

## CH105 Organic Chemistry for Health Professions

Credits 5 Winter/Spring

**Registration Requirement:** CH104 and MTH058 or MTH065, or placement above stated course level.

This course is an introduction to organic chemistry. The student must have passed CH104. The course includes an introduction to the nomenclature, physical properties, and chemical properties of alkanes, alkenes, alkynes, benzenes, haloalkanes, alcohols, ether, aldehydes, ketones, amines, and carboxylic acid derivatives.

**Additional Course Fee:** \$25.00

**This course fulfills:** Lab Science

## CH106 Biological Chemistry for Health Professions

Credits 5 Fall/Spring

**Registration Requirement:** CH104 or CH112.

CH106 is an introduction to the general topics in biochemistry: carbohydrates, lipids, proteins, enzymes, nucleic acids and bioenergetics.

**Additional Course Fee:** \$25.00

**This course fulfills:** Lab Science

## CH151 Basic Chemistry

Credits 4 Fall/Winter

**Registration Requirement:** RD090 and WR090, or IECC201R and IECC201W, each with a grade of "C" or better; or placement above stated course levels. Co-requisite: MTH095, MTH098 or higher.

CH151 is a basic course designed for students who want to take CH221 but who lack sufficient math and/or chemistry background. This one-term course includes mathematical applications appropriate to CH221, as well as an introduction to classification of matter, atomic theory, stoichiometry and nomenclature.

**Additional Course Fee:** \$25.00

**This course fulfills:** Lab Science

## CH221 General Chemistry I

Credits 5 Fall/Winter/Spring

**Registration Requirement:** RD090 and WR090, or IECC201R and IECC201W, each with a grade of "C" or better; or placement above stated course levels. Co-requisite: MTH111 or placement above stated course level. Recommended requisite: CH151.

This course offers the fundamental basis of chemistry for science, pre-professional and engineering majors. A strong emphasis is placed on a mathematical approach. CH221 covers atomic and molecular structure, stoichiometry, periodic properties, thermochemistry and introductory chemical bonding.

**Additional Course Fee:** \$25.00

**This course fulfills:** Lab Science

## CH222 General Chemistry II

Credits 5 Summer/Winter/Spring

**Registration Requirement:** CH221 with a grade of "C" or better.

This course offers the fundamental basis of chemistry for science, pre-professional, chemistry and engineering majors. A strong emphasis is placed on a mathematical approach. CH222 covers molecular bonding and molecular properties, gases, liquids, solids, physical states and changes of state, solutions, kinetics and nuclear chemistry.

**Additional Course Fee:** \$25.00

**This course fulfills:** Lab Science

## CH223 General Chemistry III

Credits 5 Summer/Spring

**Registration Requirement:** CH222 with a grade of "C" or better.

This course offers the fundamental basis of chemistry for science, pre-professional and engineering majors. A strong emphasis is placed on a mathematical approach. CH223 covers equilibrium, introduction to acids and bases, spontaneity of reactions, ionic equilibria, oxidation reduction and electrochemistry.

**Additional Course Fee:** \$25.00

**This course fulfills:** Lab Science

## CH241 Organic Chemistry I

Credits 5 Fall

**Registration Requirement:** WR121 or WR121Z and MTH095, each with a grade of "C" or better, or placement above stated course levels; and CH222.

The study of aliphatic, aromatic and biochemical compounds. CH241 includes a study of nomenclature, aliphatic hydrocarbons, structure, conformation, stereochemistry, resonance and aromaticity, addition mechanism and infrared spectroscopy.

**Additional Course Fee:** \$25.00

**This course fulfills:** Lab Science

## CH242 Organic Chemistry II

Credits 5 Winter

**Registration Requirement:** CH241.

This course continues organic chemistry involving the study of free radical, substitution and elimination mechanisms involving alkyl halides, alcohols and ethers. Organic redox reactions, nuclear magnetic resonance spectroscopy and carbonyl chemistry are also studied.

**Additional Course Fee:** \$25.00

**This course fulfills:** Lab Science

**CH243 Organic Chemistry III**

Credits 5

Spring

**Registration Requirement:** CH242.

This course continues the study of carbonyl chemistry as well as polymers, heterocycles, proteins, carbohydrates and nucleic acids.

**Additional Course Fee:** \$25.00

**This course fulfills:** Lab Science

*Course fees are subject to change. Additional section fees (web, hybrid, etc.) may apply.*