

# CHEMISTRY (CHEM)

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## CHEM 100 - Chemistry and Society (4)

Gen Ed Science

*Prerequisites: ENGL 70 or ENGL 75 or (ESOL 72 and ESOL 73) or ESOL 100 AND [(Prerequisite: MATH 101A or MATH 120A or MATH 145S)\* OR (Prerequisite or Co-requisite: MATH 101 or higher credit level (non-A or S) MATH course) OR (appropriate score on mathematics placement test)] \*MATH 101A, MATH 120A, MATH 145S can serve as prerequisites only, not co-requisites*  
(formerly CH 100)

Explores important concepts of modern chemistry. Emphasizes connection between basic scientific principles and the current technologies of our society. Laboratory experiments illustrate the process of scientific discovery. No background in science is required. Intended for non-science majors. Will not serve as a prerequisite for CHEM 102, CHEM 201, or advanced science courses. Meets the requirement for a general education science lab course.

## CHEM 101 - General Chemistry I (4)

Gen Ed Science

*Prerequisites: ENGL 70 or ENGL 75 or (ESOL 72 and ESOL 73) or ESOL 100 AND [(Prerequisite: MATH 120A or MATH 145S)\* OR (Prerequisite or Co-requisite: MATH 120 or higher credit level (non-A or S) MATH course) OR (appropriate score on mathematics placement test)] \*MATH 120A, MATH 145S can serve as prerequisites only, not co-requisites*  
(formerly CH 101)

Examines the concepts underlying modern chemistry including atomic and molecular structure, bonding, states of matter, and solutions. Intended for science majors, technology majors (STEM), and pre-allied health major. Laboratory experiments illustrate the lecture material. Meets the requirement for a general education science lab course.

## CHEM 102 - General Chemistry II (4)

Gen Ed Science

*Prerequisite: Grade of C or better in CHEM 101; Recommended Prerequisite or Co-requisite: MATH 145*  
(formerly CH 102)

Continues examining the concepts underlying general chemistry: intermolecular forces; chemistry of solutions; kinetics; equilibrium; acid-base chemistry; thermochemistry; electrochemistry; nuclear chemistry; chemistry of metals and nonmetals; organic chemistry including basic structures, nomenclature, and functional groups; mass spectrometry; and visible and infrared spectroscopies. Meets the requirement for a general education science lab course.

## CHEM 150 - Essentials of Organic Chemistry and Biochemistry (4)

*Prerequisite: Grade of C or better in CHEM 101*

Introduces organic chemistry concepts and their application in biochemical systems. Course topics include nomenclature of organic compounds, functional groups, reactions, stereochemistry, carbohydrates, proteins, lipids and nucleic acids. This course is intended for students needing a one semester introductory survey course in organic chemistry. Laboratory experiments introduce physical separation techniques, synthesis, purification and identification of organic compounds and biomolecules. This course cannot serve as a prerequisite for CHEM 202.

## CHEM 201 - Organic Chemistry I (4)

*Prerequisite: Grade of C or better in CHEM 102*  
(formerly CH 201)

Focuses on structure, nomenclature, reactions and uses of hydrocarbons, alkyl halides, alcohols, and compounds containing related functional groups. Mass spectrometry, infrared, and nuclear magnetic resonance spectroscopy are also covered. Lab experiments introduce basic organic chemistry techniques, synthesize and purify organic compounds, and provide hands-on experience with infrared spectroscopy. Meets the requirement for a science lab course.

## CHEM 202 - Organic Chemistry II (4)

*Prerequisite: Grade of C or better in CHEM 201*  
(formerly CH 202)

Focuses on structure, nomenclature, synthesis, reactions and uses of ethers, aromatic compounds, amines, aldehydes, ketones, carboxylic acids, and carboxylic acid derivatives. Relevant aspects of mass spectrometry, infrared, and nuclear magnetic resonance spectroscopy are reviewed. Applications of visible and ultraviolet spectrums of organic compounds are covered. The chemistry of carbohydrates, nucleic acids, and proteins are introduced. Lab experiments compliment and reinforce lecture material. Meets the requirement for a science lab course.