CHEMISTRY (CHEM)

CHEM 1151K. Survey of Chemistry I. (4 Credits)
Credit Hours: (3-2-4) First course in a two-semester sequence covering elementary principles of general, organic and biochemistry designed for allied health professions majors (Nursing or Dental Hygiene) and non-science majors. The primary topics covered are measurements, nomenclature, atomic bonding, states of matter, solutions, equilibria, acids, bases and pH. This course lays the foundation for understanding of biochemical processes. Laboratory exercises supplement the lecture material.

CHEM 1152K. Survey of Chemistry II. (4 Credits)
Prerequisite: CHEM 1151K or CHEM 1211K. Credit Hours: (3-2-4). Second course in a two-semester sequence covering elementary principles of general, organic, and biochemistry designed for allied health professions majors. Laboratory exercises supplement the lecture material. Nursing and dental hygiene students planning to pursue a baccalaureate degree may need to enroll in CHEM 1152. This course is also open to non-science majors. Topics to be covered include a study of the classes of the basic functional groups and the reactions of organic molecules, including their common uses and physical and chemical properties. Additionally, carbohydrates, lipids, proteins, and enzymes are introduced.

CHEM 1211K. Principles of Chemistry I. (4 Credits)
Prerequisites: Eligible to enroll in MATH 1113 Credit Hours: (3-3-4). First course in a two-semester sequence covering the fundamental principles and applications of chemistry designed for science majors. Topics to be covered include composition of matter, stoichiometry, periodic relations, nomenclature, electronic structure, chemical bonding, molecular geometry, and properties of gases. Laboratory exercises supplement the lecture material.

CHEM 1212K. Principles of Chemistry II. (4 Credits)
Prerequisite: CHEM 1211K or eCore Prerequisite: CHEM 1211 and MATH 1113. Credit Hours: (3-3-4) or eCore (3-1-4). Second course in a two-semester sequence covering the fundamental principles and applications of chemistry designed for science majors. Topics to be covered include properties of solids and liquids, solutions, chemical kin etics, acid/base reactions, oxidation/reduction reactions, chemical equilibrium, thermodynamics, and electrochemistry. Laboratory exercises supplement the lecture material.

CHEM 2200. Science, Tech, & Modern World. (3 Credits)
Prerequisite: Completion of any science course with lab (4 cr hrs) and MATH 1001 or higher Credit Hours: (3-0-3) This course covers recent advancements in chemistry that have been applied through technology to continually shape and reshape our modern world.

CHEM 2295. Special Research Topics. (1 Credit)
Prerequisite: CHEM 1211K or CHEM 1151. Credit Hours: (0-3-1). Faculty guided student research untilizing laboratory, library, and/or computer resources.

CHEM 2300K. Quantitative Chemical Analysis. (4 Credits)
Prerequisite: Chem 1211K and CHEM 1212K Credit Hours: (3-3-4) The lecture portion of this course will cover topics in quantitative analysis, i.e., statistical evaluation of data, gravimetric, volumetric, and selected instrumental methods, including spectrophotometry and separations. The laboratory portion of this course will cover selected quantitative analytical chemical topics, including gravimetric and volumetric methods, potentiometry, spectrophotometry, and separations.

CHEM 2401K. Organic Chemistry I. (4 Credits)
Prerequisite: CHEM 1212K. Credit Hours: (3-3-4). The fundamental principles of organic chemistry, including classification and naming of organic compounds, interpretation of IR, NMR, and mass spectra data for the identification of organic compounds, synthetic methods, theory of organic reactions, and reaction mechanisms.

CHEM 2402K. Organic Chemistry II. (4 Credits)
Prerequisite: CHEM 2401K. Credit Hours (3-3-4). A second course in a two-semester sequence covering the fundamental principles of organic chemistry.

CHEM 4905. Undergraduate Research Chem. (1-3 Credits)
Independent Research under the supervision of a faculty mentor. Includes literature review, laboratory project, and presentation of results. The student and mentor would determine the amount of credit the course will carry (1-3) depending on the complexity of the project to be undertaken.