CHEMISTRY (CHEM)

CHEM 110. Survey of Chemistry
Credits: 3
Corequisite: Concurrent registration in, or previous successful completion of, CHEM 110L.
Typically Offered: FALL
Course designed specifically for non-science majors who wish to obtain a basic understanding of chemistry as applied in the world today. This includes a basic introduction to chemistry principles. This course does not serve as a prerequisite for other chemistry courses.

CHEM 110L. Survey of Chemistry Lab
Credits: 1
Corequisite: Concurrent registration in, or successful completion of, CHEM 110.
Typically Offered: FALL
One two-hour lab session per week. Labs will follow topics covered in the lecture portion of the class.

CHEM 112. Introduction to Forensic Science
Credits: 3
Corequisite: Concurrent registration in, or previous successful completion of, CHEM 112L.
Typically Offered: FALL
This course introduces the basic principles and relationships between the applications of chemistry to forensic sciences as they relate to the criminal investigative process. Areas included are blood analysis, hair analysis, firearm identification, fiber comparisons, paints, glass compositions, and soil comparison. Upon completion of this course students should understand the potential value of forensic science and also the limitations.

CHEM 112L. Introduction to Forensic Science Lab
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, CHEM 112.
Typically Offered: FALLSPR
CHEM 112L is designed to complement topics covered in CHEM 112.

CHEM 114. Chemistry in Art
Credits: 3
Corequisite: Concurrent registration in, or previous successful completion of, CHEM 114L.
Typically Offered: SPRING
This course is designed specifically for non-science majors and liberal arts majors who wish to obtain the elementary principles and theories of chemistry and the study of chemical elements and their compounds as relevant to art topics and real-world uses. It does NOT serve as a prerequisite for any other chemistry courses.

CHEM 114L. Chemistry in Art Lab
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, CHEM 114.
Typically Offered: SPRING
One two-hour lab session per week. Labs will follow topics covered In the lecture portion of the class.

CHEM 115. Introductory Chemistry
Credits: 4
Corequisite: Concurrent enrollment in, or previous successful completion of, CHEM 115L.
Typically Offered: FALLSPR
Course introduces the fundamental concepts of inorganic chemistry including states of matter, measurement, atomic theory, bonding, naming, molecular geometry, stoichiometry, gas laws, intermolecular forces, solutions, equilibrium, and acid/base chemistry. This course is recommended for students of the allied health fields, those wanting a preparatory course for general chemistry or needing a general education lab science.

CHEM 115L. Introductory Chemistry Lab
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, CHEM 115.
Typically Offered: FALLSPR
One two-hour lab session per week. Labs completed will follow topics covered in the lecture portion of the class.

CHEM 116. Introduction to Organic and Biochemistry
Credits: 4
Prerequisite: Passing grade of C or better in CHEM 115 or CHEM 121 within the past three years.
Corequisite: Concurrent registration in, or previous successful completion of, CHEM 116L.
Typically Offered: FALLSPR
This course explores nomenclature, properties, and reactions of hydrocarbons, the functional groups derived from them, and major biochemical compounds.

CHEM 116L. Introduction to Organic and Biochemistry Lab
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, CHEM 116.
Typically Offered: FALLSPR
One two-hour lab session per week. Labs completed will follow topics covered in the lecture portion of the class.

CHEM 121. General Chemistry I
Credits: 4
Prerequisite: Successful completion of MATH 103 or higher level math with a C or better; Math ACT score or equivalent placement score of at least 24; or departmental approval.
Corequisite: Concurrent registration in, or previous successful completion of, CHEM 121L.
Typically Offered: FALLSPR
This course is the first of a two-semester sequence primarily intended for students majoring in science and science-related fields. Topics to be covered in this semester include: matter, measurement, atoms, ions, molecules, reactions, chemical calculations, thermochemistry, bonding, molecular geometry, periodicity, and gases.

CHEM 121L. General Chemistry I Lab
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, CHEM 121.
Typically Offered: FALLSPR
One three-hour lab session per week. Labs completed will follow topics covered in the lecture portion of the class.

CHEM 122. General Chemistry II
Credits: 4
Prerequisite: Completion of CHEM 121 with a grade of C or better.
Corequisite: Concurrent registration in, or previous successful completion of, CHEM 122L.
Typically Offered: SPRSUM
This course is the second of a two-semester sequence primarily intended for students majoring in science and science-related fields. Topics to be covered in this semester include: intermolecular forces, liquids, solids, kinetics, equilibria, acids, bases, solution chemistry, precipitation, thermodynamics, and electrochemistry.

CHEM 122L. General Chemistry II Lab
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, CHEM 122.
Typically Offered: SPRSUM
One three-hour lab session per week. Labs completed will follow topics covered in the lecture portion of the class.

CHEM 241. Organic Chemistry I
Credits: 4
Prerequisite: CHEM 122 with a grade of C or better.
Corequisite: Concurrent Registration in, or previous successful completion of, CHEM 241L.
Typically Offered: FALL
Designed for science and pre-professional students. Structure and bonding, nomenclature, stereochemistry, functional groups, spectrocopy (NMR, IR, MS) for structure determination.

CHEM 241L. Organic Chemistry I Lab
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, CHEM 241.
Typically Offered: FALL
One three-hour lab session per week. Labs completed will follow topics covered in the lecture portion of the class.

CHEM 242. Organic Chemistry II
Credits: 4
Prerequisite: C or better in CHEM 241 within the last 3 years.
Corequisite: Concurrent registration in, or previous successful completion of, CHEM 242L.
Typically Offered: SPRING
Designed for science and preprofessional students. Structure and reactivity, name reactions, carbon-carbon bond forming reactions, aromatic and heterocyclic chemistry, biomolecules and polymers, multi-step synthesis.

CHEM 242L. Organic Chemistry II Lab
Credits: 1
Corequisite: Concurrent registration in, or previous successful completion of, CHEM 242.
Typically Offered: SPRING
One three-hour lab session per week. Labs completed will follow topics covered in the lecture portion of the class.