

CHEMISTRY (CHEM)

Chemistry (CHEM)

CHEM 115 Applied Science for the Craft Beverage Industry 5 Credits

Introduces chemistry methods used within beverage industries to ensure consistency of products. Prepares students for subsequent classes that will utilize chemistry skills for quality control/quality assurance.

Prerequisite: None.

Distribution Requirements: Natural Science with Lab

CHEM 214 Undergraduate Research I 2 Credits

Prepares students to successfully complete their own scientific research project by introducing the use of the scientific method, ethics, research methods, proposal writing, and presentation techniques. This course also introduces students to research opportunities in the South Sound region.

Prerequisite: Prerequisites: Completion of or concurrent enrollment in CHEM& 161 or PHYS& 114 or PHYS& 221 or BIOL& 211 or instructor's permission.

CHEM 215 Undergraduate Research II 1 Credit

Prepares students to successfully complete their own scientific research project by introducing the use of the scientific method, ethics, research methods, proposal writing, and presentation techniques. This course also introduces students to research opportunities in South Sound region.

Prerequisite: Prerequisite: BIOL 214 or CHEM 214 or PHYS 214 or instructor's permission.

CHEM 216 Undergraduate Research III 2 Credits

Provides a framework for students to carry out their own scientific research project in collaboration with peers and mentors.

Prerequisite: Prerequisite: BIOL 214 or CHEM 214 or PHYS 214 or instructor's permission.

Chemistry (CCN) (CHEM&)

CHEM 110 Chemical Concepts W/Lab 5 Credits

Surveys chemical concepts for non-science majors with a focus on practical applications of chemistry and the impact of chemistry on the environment, society, economy, and individual.

Prerequisite: None.

Distribution Requirements: Natural Science with Lab

CHEM 121 Introduction to Chemistry 5 Credits

Introduces fundamentals of chemistry for those interested in nursing/allied health and those pursuing a non-science degree. Study of the classification, composition, calculations, and properties (both chemical and physical) of matter at the macroscopic, atomic and subatomic levels. Includes measurements and conversions, atomic structure, chemical bonding, chemical reactions, molar stoichiometry, and acid/base chemistry.

Prerequisite: Prerequisite: MATH 096 with a C or better.

Distribution Requirements: Natural Science with Lab

CHEM 131 Introduction to Organic/Biochemistry 5 Credits

Continues the general, organic, and biochemistry series for nursing and allied health majors. Focuses on general structure, function, properties, and chemical reactions of major organic and biochemical compounds.

Prerequisite: Prerequisites: C or better in CHEM& 121 or CHEM& 162

Distribution Requirements: Natural Science with Lab

CHEM 139 General Chemistry Prep 5 Credits

Introduces fundamentals of inorganic chemistry and problem solving strategies as preparation for the general chemistry sequence (CHEM& 161 and further studies in chemistry). Emphasis is on reaction equations, calculations, and development of symbolic and particulate concepts that are applied to quantitative reasoning in chemistry.

Prerequisite: Prerequisite: Concurrent enrollment in or completion of MATH 098 with a C or better.

Distribution Requirements: Natural Science

CHEM 161 General Chemistry w/Lab I 5 Credits

Introduces general chemistry concepts, including bonding types, chemical nomenclature, basic atomic structure, stoichiometry, reaction prediction, thermochemistry, gas laws, and quantum mechanical concepts. First course of a three quarter series for engineering, biological science, physical science, pre-med, pre-dental, and math majors.

Prerequisite: Prerequisites: MATH& 141 with a C or better; as well as one of the following: CHEM& 139 or CHEM& 121 with a C or better, or a year of high-school chemistry.

Distribution Requirements: Natural Science

CHEM 162 General Chemistry W/Lab II 5 Credits

Introduces general chemistry concepts including electronic structure, periodicity, bonding theory, molecular shapes, introduction to organic chemistry, structure of solids, properties of liquids, phase transitions, colligative properties, and kinetics. Second course of a three-quarter series for engineering, biological science, physical science, pre-med, pre-dental, and math majors.

Prerequisite: Prerequisites: C or better in CHEM& 161 and MATH& 141.

Distribution Requirements: Natural Science

CHEM 163 General Chemistry W/Lab III 5 Credits

Covers acid and base theory, equilibria, thermodynamics, electrochemistry, and nuclear chemistry. Completes the general chemistry sequence for science, engineering, pre-med, pre-dental, and math majors.

Prerequisite: Prerequisite: 'C' or better in CHEM& 162.

Distribution Requirements: Natural Science