

# CHEM - CHEMISTRY

## CHEM 100 - Molecules and Life in the Modern World **Units: 3**

A course for students with no science background. A general introduction into topics in inorganic and organic chemistry as related to environmental and energy issues in modern society. Four laboratory experiences are required through the course period.

*Enrollment Requirements: Prerequisite: ENG 100, ENG 101, ENG 113 or equivalent.*

*Term Offered: Spring and Fall*

## CHEM 121 - General Chemistry I **Units: 4**

A first semester general chemistry course which focuses on the chemical principles of atomic structure, electron configurations, inorganic nomenclature, stoichiometry, reactions in aqueous solutions, thermochemistry, gas laws, and Lewis structures. Course includes a weekly lab.

*Enrollment Requirements: Prerequisite: MATH 120, MATH 124, MATH 126 or qualifying ACCUPLACER, SAT or ACT scores AND Completion of ENG 101 or equivalent or qualifying ACCUPLACER, SAT or ACT scores.*

*Term Offered: Spring and Fall*

## CHEM 122 - General Chemistry II **Units: 4**

A second semester general chemistry course covering topics on intermolecular forces, kinetics, equilibrium, acid/base chemistry, thermodynamics, and electrochemistry. Course includes a weekly lab.

*Enrollment Requirements: Prerequisite: C or better in CHEM 121 within 5 years.*

*Term Offered: Spring and Fall*

## CHEM 198 - Special Topics in Chemistry **Units: 0.5-6**

Various short courses and experimental classes covering a variety of subjects. The course will be a variable credit of one-half to six credits depending on the course content and number of hours required. The course may be repeated for up to six credits.

*Term Offered: AS NEEDED*

## CHEM 220 - Introductory Organic Chemistry **Units: 4**

Introduction to the properties of organic functional groups, fundamental principles of carbon chemistry, and biological chemistry. The weekly laboratory portion of the course focuses on techniques involved in the preparation, reactivity, and identification of organic compounds.

*Enrollment Requirements: Prerequisite: CHEM 121. Recommended: CHEM 122.*

*Term Offered: Spring and Fall*

## CHEM 241L - Organic Chemistry for Life Sciences Lab I **Units: 1**

Laboratory techniques and principles in introductory Organic Chemistry for the synthesis, purification, and characterization of organic compounds.

*Enrollment Requirements: Prerequisite or corequisite: CHEM 341.*

*Term Offered: Fall*

## CHEM 242L - Organic Chemistry for Life Sciences Lab II **Units: 1**

Laboratory techniques and principles in intermediate Organic Chemistry for the synthesis, purification, and characterization of organic compounds.

*Enrollment Requirements: Prerequisite or corequisite: CHEM 342*

*Term Offered: Spring*

## CHEM 341 - Organic Chemistry for Scientists and Professionals I **Units: 3**

Detailed treatment of organic molecules, simple functional groups, stereochemistry, reaction mechanisms, introductory synthesis, and spectroscopy. For chemistry, biochemistry, molecular biology, and other pre-professional majors. Credit allowed in only one of CHEM 220, CHEM 241 (Taught at other NSHE Institutions), or CHEM 341.

*Enrollment Requirements: Prerequisite: CHEM 122 or CHEM 202 (Taught at other NSHE Institutions).*

*Term Offered: Fall*

## CHEM 342 - Organic Chemistry for Scientists and Professionals II **Units: 3**

Continuation of CHEM 341, with emphasis on complex functional groups, detailed reaction mechanisms, multistep syntheses, and molecules relevant to biology and materials science. Credit not allowed in both CHEM 242 (Taught at other NSHE Institutions) and CHEM 342.

*Enrollment Requirements: Prerequisite: CHEM 341 or CHEM 241 (Taught at other NSHE Institutions) with a grade 'C' or higher.*

*Term Offered: Spring*