CHEM 1212K: Principles of Chemistry and Lab II

4 Credit Hours

Prerequisite: CHEM 1211 and (MATH 1113 or MATH 1190 or MATH 2202)

Second course in a two-semester sequence covering the fundamental principles and applications of chemistry designed for science majors. Laboratory exercises supplement the lecture material.

This course is managed through the cooperative academic agreement known as eCore.

CHEM 1212L: Principles of Chemistry Laboratory II

1 Credit Hours

Prerequisite: CHEM 1211, and CHEM 1211L

Concurrent: CHEM 1212

Laboratory exercises designed to supplement the lecture material of CHEM 1212.

CHEM 2050: Introduction to Directed Research

1-3 Credit Hours

Prerequisite: CHEM 1211 and CHEM 1211L and permission of the instructor.

This course enables freshmen and sophomores to conduct an applied research project that is directed by a faculty member. Students may earn between one and three credits per semester and this course may be repeated for up to a total of five credit hours only.

CHEM 2800: Quantitative Analytical Chemistry

3 Credit Hours

Prerequisite: CHEM 1212 and (MATH 1113 or MATH 1190 or MATH 1179 or MATH 2202)

This course introduces students to statistics; the use of spreadsheets; principles of gravimetric and volumetric analysis; concepts of chemical equilibria as applied to acid-base, precipitation and complex ion reactions; electrochemistry and potentiometry; ultraviolet-visible spectroscopy; and an introduction to modern chromatographic separations.

CHEM 2800L: Quantitative Analytical Chemistry Laboratory

1 Credit Hours

Prerequisite: CHEM 1212L

Concurrent: CHEM 2800

Laboratory experiments include: gravimetric analysis, precipitation, complexometric, and reduction-oxidation titrations; potentiometric applications; calibration techniques using ultraviolet - visible spectroscopy. Tutorials on the application of spreadsheets.