COURSE DETAIL

ANALYTICAL CHEMISTRY

Country
United Kingdom - Scotland

Host Institution
University of Edinburgh

Program(s)
University of Edinburgh

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Chemistry

UCEAP Course Number
110

UCEAP Course Suffix

UCEAP Official Title
ANALYTICAL CHEMISTRY

UCEAP Transcript Title
ANALYTICAL CHEM

UCEAP Quarter Units
8.00

UCEAP Semester Units
5.30

Course Description

This course covers both the theory and application of a number of techniques in analytical chemistry, as well as instruction in the general principles of sampling and analysis and in the statistical presentation and testing of data. Topics include different strategies for sampling; quality assurance procedures in support of an analytical measurement; calibration curves and statistical procedures to extract quantitative information from a measurement; basic parametric and non-parametric significance tests on data; different chromatographic techniques for an analysis involving separation; the principles of different types of ion sources; analytical methods which employ mass spectrometry to identify and quantify the abundance of molecular species; modern techniques for determination of isotopic elemental composition, including isotope ratio quantification and accelerator mass spectrometry, and their application to understanding environmental processes; and the principles of biosensor design from simple molecular recognition to transduction of binding events and be able to apply these in the context of detecting a variety of classes of target molecule.

Language(s) of Instruction
English

Host Institution Course Number
CHEM10012

Host Institution Course Title
ANALYTICAL CHEMISTRY

Host Institution Campus
University of Edinburgh

Host Institution Faculty
School of Chemistry

Host Institution Degree

Host Institution Department

Print