

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 Course Details

<http://www.drps.ed.ac.uk/22-23/dpt/cxchem10012.htm>

Host Institution Campus

University of Edinburgh

Host Institution Faculty

School of Chemistry

Host Institution Degree
Host Institution Department
Course Last Reviewed 2022-2023

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