

COURSE DETAIL

GIS AND SPATIAL ANALYSIS FOR EARTH SCIENTISTS

Country

United Kingdom - Scotland

Host Institution

University of St Andrews

Program(s)

University of St Andrews

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Geography Earth & Space Sciences

UCEAP Course Number

132

UCEAP Course Suffix**UCEAP Official Title**

GIS AND SPATIAL ANALYSIS FOR EARTH SCIENTISTS

UCEAP Transcript Title

GIS&SPATIAL ANALYS

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course covers the principles behind, and practical application of digital spatial analysis in earth sciences. This includes the analysis of primary and secondary datasets, how to access and import a variety of data types, and the fundamentals of various spatial analytical methods including spatial statistics and modeling within a GIS environment. The course also prepares students for the correct presentation of maps and datasets in the dissertation proposal and thesis. The aspects of GIS covered include understanding the input, storage, management and transformation of digital data using GIS, becoming competent with data analysis and graphical output using GIS, and learning a range of applications of GIS for solving spatial problems in earth and environmental sciences. The course is taught through laboratory practical classes supported by short introductory lectures that cover general theories, methodologies and applications of GIS. The laboratory exercises are based on using ESRI ArcMap and associated products. This course provides students with a combination of hands-on experience using the software with a wide variety of datasets. The course is assessed through a portfolio of the laboratory exercises presented in a professional report-style format.

Language(s) of Instruction

English

Host Institution Course Number

ES3003

Host Institution Course Title

GIS AND SPATIAL ANALYSIS FOR EARTH SCIENTISTS

Host Institution Campus

St Andrews

Host Institution Faculty

Host Institution Degree

Host Institution Department

Earth & Environmental Sciences

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