Overview

This is a 5-day field course run at various locations within Australia. Each day, there will be lectures on the theory behind various environmental geophysical methods used in the analysis of air, water, soil, vegetation or the subsurface. This will be followed by field measurements, data processing, data analysis and presentation of the results to the class.

Methods covered will include a selection of the following techniques, depending on instrument availability: time-domain reflectometry measurements of soil water content; optical spectrophotometry and the measurement of organic water quality; laser mass spectrometry of gases and water; x-ray fluorescence of soils and minerals; geophysics of weather and climate measurements, hydrological techniques (pressure transducer measurements of water level, acoustic drip loggers).

This course aims to provide each student with the necessary theory and skills to undertake geophysical measurements of air, water, vegetation, soil and rock. These skills are often required in research and consulting environments in hydrology, hydrogeology, climatology and environment sciences. Students will gain a theoretical understanding of the electromagnetic, optical, gravitational, acoustic and dynamic properties of air, water, vegetation, soil and rock; practical field experience in measuring the properties of air, water, vegetation soil and rock; data analysis skills; group work experience; public presentation skills; and literature research skills.

Note: A compulsory field trip will be held and personal expenses will be incurred
Faculty
Faculty of Science

School
School of Biological, Earth and Environmental Sciences

Study Level
Postgraduate

Indicative contact hours
4

Timetable
Visit timetable website for details
To access course outline, please visit:

GEOS6733 Course Outline
Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)

Pre-2019 Handbook Editions