

MSC (APPLIED ENVIRONMENTAL GEOSCIENCE)

Overview

NFQ Level 9, Major Award

The MSc in Applied Environmental Geoscience is a full-time multidisciplinary degree running for 12 months from the date of first registration for the programme. A part time version of the degree running over 24 months from the date of first registration for the programme is also available.

This programme will consist of Part I and Part II. Part I will consist of taught modules to the value of 60 credits involving lectures, practicals, seminars and fieldwork. Part II consists of a research dissertation based on independent research to the value of 30 credits (GL6019), completed over the summer months. Students will complete a research project during a five month placement in industry or a research group within the School of BEES. In some cases the number of available industry placements may be limited and students who are unsuccessful in obtaining an industry placement will complete their research project in the School of BEES. Each of the prescribed taught modules will be examined by a written paper and/or continuous assessment. Each candidate progressing to Part II of the programme must submit the Research Dissertation (GL6019) in an area of Environmental Geoscience by a date in August of the registration year as prescribed by the School of BEES.

Postgraduate Diploma in Applied Environmental Geoscience

Students who achieve 40% in each individual taught module in Part I but fail to achieve the requisite grade of 50% across the taught modules, or students who pass Part I and do not wish to complete the Research Dissertation GL6019 (Part II) may opt to be conferred with a Postgraduate Diploma in Applied Environmental Geoscience (<https://uccie-public.courseleaf.com/programmes/pdags/>).

Programme Requirements

For information about modules, module choice, options and credit weightings, please go to Programme Requirements (p. 1).

Programme Requirements

Code **Title** **Credits**

Students take 90 credits as follows - taught modules in Part I (**60** credits) and a research project (**30** credits) in Part II:

Part I

Taught Modules

Students take **60** credits as follows:

Core Modules

EV6011	Principles of Environmental Assessment and Monitoring	10
GL6020	Hydrogeology, Contaminated Land and Assessment	10
GL6021	Engineering Geology	10
GL6022	Environment and Planning: Policy & Regulation	5

GL6023	Offshore Environmental Geology	5
GL6024	Applied Geophysics	5
GL6025	Geoinformatics for Environmental Geology	5
GL6028	Applied Hydrogeology Skills	5
GL6029	Applied Geotechnical Skills	5

Part II

Research Project

Students take **30** credits as follows:

Core Modules

GL6019	Applied Environmental Geoscience Research Project	30
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Total Credits **90**

Examinations

Full details and regulations governing Examinations for each programme will be contained in the *Marks and Standards Book* and for each module in the *Book of Modules*.

Programme Learning Outcomes

Programme Learning Outcomes for MSc in Applied Environmental Geoscience (NFQ Level 9, Major Award)

On successful completion of this programme, students should be able to:

- Use geoinformatics to process Environmental Geology data;
- Successfully apply geophysical tools to site investigations;
- Apply the principles of soil and rock mechanics to Environmental Geology and engineering scenarios;
- Describe the principles of groundwater flow and discharge;
- Carry out an analysis on the sustainability of groundwater for a given regional aquifer;
- Critique and evaluate the status of environmental and planning law in the context of geoscience;
- Undertake field analysis of soils, sediments and rocks to industry standard;
- Describe the methods used in sampling and mapping the seabed;
- Scope, design and execute an Environmental Geology study;
- Present findings from a project based on an industry focused research question in a written report and an oral presentation.