Earth Science
BSc

College of Science, Engineering and Food Science

UCC
University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

CK404

DEGREE OUTLET
COURSE PAGE ONLINE
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Introduction
Earth Science is a unique approach to studying the physical system of the Earth, combining aspects of physical geography and geology, to investigate how our planet functions, how it can be wisely managed and how it might change under different environmental conditions.

Why Study
Key thematic areas that students cover include geomorphology; weather and climate, oceans and coastal zones, Earth's resources, rocks, minerals and fossils, applied geology, the use of computers for map making, and spatial data analysis. Students undertake a range of field studies in each year of study in different geological and geographical locations, allowing them to gain the practical skills required of Earth scientists in the workplace. The research project, on a topic of their own choosing, encourages students to develop and test their own ideas, and to gain independence in thinking and reaching conclusions based on data they have collected.

Work Placement
Students have the option of organising for themselves a six-week work placement during the summer between Year 3 and Year 4. This placement can be in any industry associated with Earth Science, for example the Environmental Protection Agency, a port authority or a mine.

Study Abroad
Students have the option of spending all or part of Year 3 at one of UCC's partner universities in Europe under the ERASMUS scheme, or in North America.

Careers
Earth scientists are employed in a variety of careers that draw upon their field, laboratory and computing skills and experience. Typical careers for Earth science graduates include:
- mineral and water exploration
- water resource management
- geotechnical services
- resource conservation
- mapping and planning
- natural hazards and disaster management
- oceanography and marine science.

Further Study
Earth Science graduates in recent years have gone directly into PhD programmes, or have undertaken postgraduate studies in:
- geographical information systems and remote sensing
- coastal and marine management
- geological and environmental hazards
- carbon management and carbon finance
- climate sciences.

ROISIN MARY MULVEY
FINAL YEAR STUDENT

"One of my favourite aspects of this course is the fieldtrips. They're brilliant for putting everything we learn during lectures into context in the real world. They can be hard work but I've really enjoyed them and made some great friends because of those trips. Also practical classes gave hands on experience in using different equipment and computer software."

KEY FACTS

- **This programme combines the expertise and resources of the geography and geology departments**
- **There is a high component of fieldwork, with one residential fieldtrip each year (for which there are additional fees)**
- **There is a large element of practical work which reinforces teaching and reading**
- **Students have choice in the modules they take as well as the topic of their literature review and final research project**

Year 1 Modules

BL1002 Cells, Biomolecules, Genetics & Evolution (5 credits); **BL1004** Physiology and Structure of Plants and Animals (5 credits); **BL1005** Habitats and Ecosystems (5 credits); **CM1003** Introductory Chemistry for Environmental Scientists (10 credits); **ER1006** Applied Earth Systems (5 credits); **EV1002** The Environment (5 credits); **GL1001** Introduction to Geology (5 credits); **GL1004** Geological Evolution of Ireland (5 credits); **GG1010** Introduction to Physical Geography (5 credits); **MA1001** Calculus for Science Part 1 (5 credits); **PY1009** Physics for the Environmental Sciences I (5 credits)

Year 2 Modules

CORE: Field Training; Quaternary Environments and Geomorphology; The Atmospheric Environment; Biogeography; Geographical Research Methods; Crystallography, Optics and Mineralogy; Sedimentological Processes and Sedimentary Petrology; Igneous and Metamorphic Petrology; Structural Geology; Geohazards and Research Skills; Fossils as Living Organisms

ELECTIVES: Environmental Archaeology; Introductory Programming in Python; The Environment and Human Health; Calculus for Science; Ecological Plant Physiology; Fluids; Physics for the Environmental Sciences; Introduction to Biostatistics

Year 3 Modules

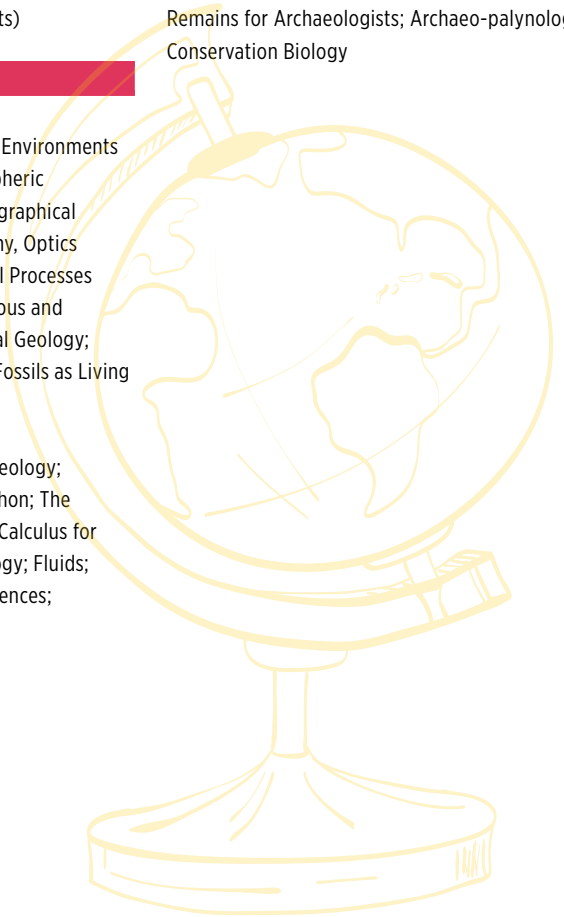
CORE: Field Training; Earth Science Literature Review; Geoinformatics; Geographies of Environment and Sustainability; Coastal and Marine Geomorphology; Dynamic Climatology; Environmental Economic Geography; Applied Structural Geology; Sedimentary Environments; Geological Map Interpretation; Micropalaeontology and Palynology

ELECTIVES: Introduction to Environmental Archaeology; Valuing the Environment; Introduction to Energy Engineering; Human Remains for Archaeologists; Archaeo-palynology; Conservation Biology

Year 4 Modules

CORE: Research Project; Advanced Geographical information Systems; Environmental Remote Sensing; Applied Geophysics; Climate Variability and Change

ELECTIVES: Practical Offshore Marine Science; Earth Science Work Placement; Petroleum Geology and Basin Analysis; Regional and Local Planning Issues and Policies; Food Geography; Geohazards and Research Skills; Advanced Field Geoscience Techniques; Exceptional Glimpses of Ancient Life; Stratigraphy; Geological Map Interpretation



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