

# BSC (HONS) EARTH SCIENCE (FOR STUDENTS WHO ENTERED FIRST YEAR PRIOR TO 2022/23)

## Overview

### NFQ Level 8, Major Award

Students entered Second Science Earth Science from First Science Area of Study: Biological, Earth and Environmental Sciences (CK404) (<https://ucc-ie-public.courseleaf.com/programmes/bscr/>) provided they passed First Science.

The Fourth Science Research Project **must** be passed for the award of a BSc (Hons) Degree.

## Elective Modules

The selection of elective modules in Third and Fourth Years may depend on the student having the necessary prerequisites. Elective modules must, therefore, be chosen in consultation with the appropriate Head of Discipline. In exceptional cases, the Academic Board of the School of Biological, Earth and Environmental Sciences and the College will be prepared to consider applications for alternative elective modules in Third Year. Modules that have been taken and passed in one year of study may not be re-taken in a subsequent year.

## BSc Ordinary Degree - NFQ Level 7, Major Award

Students who pass Third Year may choose not to proceed to Fourth Year and may opt instead to be conferred with a BSc Ordinary Degree.

## Programme Requirements

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

## Programme Requirements

Code	Title	Credits
<b>Year 1</b>		
Students take <b>60</b> credits as follows:		
<i>Core Modules</i>		
BL1002	Cells, Biomolecules, Genetics and Evolution	5
BL1004	Physiology and Structure of Plants and Animals	5
BL1006	Habitats and Ecosystems	5
BL1009	Grand Challenges in Biological, Earth and Environmental Sciences	5
CM1003	Introductory Chemistry for Environmental Scientists	10
EV1002	Introduction to Environmental Science	5
GL1001	Introduction to Geology	5
GL1004	Geological Evolution of Ireland	5
GG1010	Introduction to Physical Geography	5
MA1001	Calculus for Science Part 1	5
PY1009	Physics for the Environmental Sciences I	5
<b>Year 2 (2022/23 only)</b>		
Students take <b>60</b> credits as follows:		

### *Core Modules*

AE2001	Fundamentals of Ecology	5
CM2101	Introductory Organic Chemistry for Environmental Scientists	5
EV2002	The Environment and Human Health	5
EV2003	Practical Data Analysis and Research Skills	5
GG2005	Ice Age Quaternary Environments and Geomorphology	5
GG2037	Introduction to Geoinformatics	5
GS2001	Dynamic Earth	5
GS2002	The Evolving Earth	5
GL2016	Easter Field Course	5
PY2009	Physics for the Environmental Sciences II	5
ST2001	Introduction to Biostatistics	5
ZY2005	Invertebrate Diversity	5

### **Year 3 (2023/24 only)**

Students take **60** credits as follows – all listed core modules (**50** credits) and **10** credits of elective modules:

### *Core Modules*

### *ER Modules*

ER3005	Field Training 1	5
ER3052	Earth Science Literature Review	5

### *GG Modules*

GG3007	Marine and Coastal Geosciences	5
GG3012	Advanced Geographical Information Systems	5
GG3041	Environmental Remote Sensing	5
GG3056	Climate Change and Historical Climatology	5

### *GL/GS Modules*

GL3004	Applied Structural Geology	5
GL3013	Sedimentary Environments <sup>1</sup>	5
	or GL4029 Environmental Sedimentology	
GL3030	Geological Map Interpretation	5
GS3010	Mineralogy, Igneous and Metamorphic Petrology	5

### *Elective Modules*

Students take modules to the value of **10** credits from the following: 10

### *EV/GG/GL*

EV3017	Freshwater Science ()	
GG2040	Geographies of Environment and Sustainability ()	
GG3037	Geography of Heritage ()	

### **Year 4 (2023/24 and 2024/25 only)**

Students take **60** credits as follow:

### *Core Modules*

### *ER Modules*

ER4001	Research Project	15
ER4004	Practical Offshore Marine Science	5
ER4020	Earth Science Work Placement	5

### *GG Modules*

GG3027	Regional and Local Planning Issues and Policies	5
GG3051	Landscape Palaeoecology and Palynology	5

### *GL Modules*

GL3013	Sedimentary Environments <sup>1</sup>	5
	or GL4029 Environmental Sedimentology	
GL3031	Environmental Hydrogeology	5

GL4023	Neotectonic Field Studies	5
GL4024	Advanced Palaeobiology	5
GL4031	Frontiers in Geoscience	5
<b>Total Credits</b>		<b>240</b>

<sup>1</sup> Note: GL3013 Sedimentary Environments and GL4029 Environmental Sedimentology are offered in alternate years in 3rd and 4th Year. GL3013 Sedimentary Environments and GL4029 Environmental Sedimentology cannot be taken in fourth year if previously taken in third year.

## 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 BSc in Earth Science (NFQ Level 8, Major Award)

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

- Demonstrate a clear knowledge of the form, functioning and operation of earth systems;
- Show a clear understanding of planet Earth as an integrated system, involving application of aspects of the geological, geographical, physical, chemical and biological sciences to the study of the solid Earth oceans and atmosphere;
- Work individually and in small groups in the analysis of thematic issues;
- Apply the principles of collection, interpretation and analysis of geographical and geological data from field settings;
- Demonstrate a knowledge of the application of scientific methods and techniques in the examination of the Earth environment;
- Source information on geological and geographical issues and critically appraise it for scientific credibility and relevance;
- Synthesise and apply published information and data from the earth sciences to the analysis of environmental problems;
- Design, manage and write a research-based project through its various stages from inception to completion;
- Communicate effectively, orally and in written reports, about Earth and other related environmental issues.