

# BSC (HONS) ENVIRONMENTAL SCIENCE

## Overview

### NFQ Level 8, Major Award

Students enter Second Science Environmental Science through the First Science Area of Study: Biological, Earth and Environmental Sciences (CK404) (<https://ucc-ie-public.courseleaf.com/programmes/bscr/>) provided they have 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</b>		
Students take <b>60</b> credits as follows:		
<i>Core Modules</i>		
AE2001	Fundamentals of Ecology	5
CM2101	Introductory Organic Chemistry for Environmental Scientists	5

EV2001	Practical Environmental Science	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
PY2009	Physics for the Environmental Sciences II	5
ST2001	Introduction to Biostatistics	5
ZY2005	Invertebrate Diversity	5

### Year 3

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

<i>Core Modules</i>		
CM3104	Environmental Chemistry and Analysis	5
EV3013	Pollution Prevention and Control	5
EV3014	Environmental Science in the Field	10
EV3017	Freshwater Science	5
EV3020	Environmental Science Literature Review	5
GG3012	Advanced Geographical Information Systems	5
GL3031	Environmental Hydrogeology	5
PY3011	Environmental Physics	5
ST3001	Biostatistics I	5

### *Elective Modules*

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

<i>CM/GG/PA/PS<sup>1</sup></i>		
CM3024	Analytical Chemistry (10)	
GG2046	Atmosphere, Weather and Climate (5)	
GG3007	Marine and Coastal Geosciences (5)	
GG3041	Environmental Remote Sensing (5)	
PA3400	Market Forces and the Environment (5)	
PS3012	Plants and Hostile Environments (5)	

### Year 4

Students take **60** credits as follows – all listed core modules (**35** credits) and **25** credits of elective modules:

<i>Core Modules<sup>1</sup></i>		
EV4001	Environmental Science Research Project	15
EV4002	Environmental Monitoring and Assessment	10
EV4012	Environmental Impact Assessments	5
EV4017	Frontiers in Environmental Sciences	5

### *Elective Modules*

Students take modules to the value of **25** credits from the following: 25

<i>AE/BL/CM/ER/EV/PA/PS/ST<sup>1</sup></i>		
AE4012	Landscape Conservation and Management (10)	
AE4016	Advanced Ecology and Biogeography (5)	
BL4006	Sustainable Food Production (5)	
CM4026	Advanced Analytical Chemistry Part 1 (5)	
CM4027	Advanced Analytical Chemistry Part 2 (5)	
CM4112	Atmospheric Chemistry and Air Pollution (5)	
ER4004	Practical Offshore Marine Science (5)	
EV4010	Environmental Work Placement (5)	

PS4021	Sustainable Plant Pest and Disease Management (5)
PA4408	Valuing the Environment (5)
PS4024	Crop Physiology and Climate Change (5)
ST4001	Biostatistics II (5)
<b>Total Credits</b>	<b>240</b>

<sup>1</sup> Module selections must take into consideration the satisfaction of any prerequisites. Choices of certain combinations of modules may be restricted by timetable constraints.

## 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 Environmental Science (NFQ Level 8, Major Award)**

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

- Demonstrate knowledge of the functioning of environmental systems;
- Demonstrate knowledge of impacts of human activities on the environment and current approaches to minimising or preventing negative impacts;
- Evaluate environmental issues using scientific principles;
- Source information on environmental issues and critically appraise it for scientific credibility and relevance;
- Synthesise and apply published information and data from the biological, chemical and earth sciences to the analysis of environmental problems;
- Carry out field measurements of basic environmental parameters and analyse, interpret and report the results;
- Select appropriate methods, and design programmes, for environmental assessment;
- Communicate effectively, orally and in written reports, about environmental issues with technical and non-technical audiences.