

# BSC (HONS) ECOLOGY AND ENVIRONMENTAL BIOLOGY

## Overview

### NFQ Level 8, Major Award

Students enter Second Science Ecology and Environmental Biology 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 (<https://ucc-ie-public.courseleaf.com/programmes/bscpas/>).

## 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 – all listed core modules ( <b>55</b> credits) and <b>5</b> credits of elective modules:		
<i>Core Modules</i>		
AE2001	Fundamentals of Ecology	5

AE2007	Ecological Fieldwork and Analysis	10
BL2001	Plant and Animal Genetics	5
BL2002	Understanding and Reviewing Scientific Literature	5
PS2002	Ecological Plant Physiology	5
PS2003	Plant Identification	5
ST2001	Introduction to Biostatistics	5
ZY2000	Vertebrate Diversity	5
ZY2005	Invertebrate Diversity	5
ZY2007	Practical Invertebrate Skills	5

### *Elective Modules*

Students take modules to the value of **5** credits from the following: 5

### *EV/GG/ZY*

EV2002	The Environment and Human Health ()	
GG2037	Introduction to Geoinformatics (5)	
ZY2006	Vertebrate Diversity 2 (5)	

### **Year 3**

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

### *Core Modules*

AE3013	Practical Field Ecology	10
BL3001	Zoology and Ecology Literature Review	5
BL3002	Evolution & Diversity	10
BL3003	Conservation Biology	5
BL3004	Key Research Skills in Biology	5
EV3017	Freshwater Science	5
ST3001	Biostatistics I	5
ZY3023	Advanced Invertebrate Zoology	5

### *Elective Modules*

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

### *PA/PS/ZY*

PA3400	Market Forces and the Environment (5)	
PS3012	Plants and Hostile Environments (5)	
ZY3015	Advanced Vertebrate Biology (5)	
ZY3019	Adaptations to Extreme Environments (5)	
ZY3020	Animal Behaviour (5)	

### **Year 4**

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

### *Core Modules*

AE4012	Landscape Conservation and Management	10
or ZY4020	Temperate Marine Biology	
AE4016	Advanced Ecology and Biogeography	5
BL4001	Research Project	15
EV4012	Environmental Impact Assessments	5

### *Elective Modules*

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

### *AE/BL/PA/PS/ST/ZY*

AE4020	Field Ornithology (5)	
AE4021	Freshwater Macroinvertebrate Biomonitoring (5)	
BL4003	Biological Work Placement (5)	
BL4006	Sustainable Food Production (5)	
PA4408	Valuing the Environment (5)	

PS4021	Sustainable Plant Pest and Disease Management (5)
PS4024	Crop Physiology and Climate Change (5)
ST4001	Biostatistics II (5)
ZY4021	Evolutionary Ecology (5)
ZY4022	Pathogen biology, ecology and control (5)

**Total Credits** **240**

## 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 Ecology and Environmental Biology (NFQ Level 8, Major Award)

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

- Demonstrate knowledge of habitats and communities from aquatic and terrestrial systems;
- Assemble information on ecological issues and critically appraise it for scientific credibility and relevance;
- Communicate in oral and written reports about ecological issues with technical and non-technical audiences;
- Demonstrate an understanding of the role of human activities on ecosystems and evaluate approaches to minimize or prevent negative impacts;
- Demonstrate an ability to undertake an independent research project. Design experiments, collect data, select and execute appropriate analyses and interpret and present results in appropriate formats;
- Analyze the appropriateness of different laboratory and field experimental protocols.