

BSC (HONS) APPLIED PLANT BIOLOGY

Overview

NFQ Level 8, Major Award

Students enter Second Science Applied Plant Biology from the First Science Area of Study: Biological and Chemical Sciences (CK402) (<https://ucc-ie-public.courseleaf.com/programmes/bscbf/>) or 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.

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.

Examinations

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

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
Year 1		
Students take 60 credits as follows:		60
<i>Core Modules</i>		
CK402	(https://ucc-ie-public.courseleaf.com/programmes/bscbf/)	
or		
CK404	(https://ucc-ie-public.courseleaf.com/programmes/bscr/)	
Year 2		
Students take 60 credits as follows:		
<i>Core Modules</i>		
AE2001	Fundamentals of Ecology	5
AE2007	Ecological Fieldwork and Analysis	10
BL2001	Plant and Animal Genetics	5
GS2002	The Evolving Earth	5
MB2905	Fundamentals of Microbiology	5
MB2906	Principles of Microbiology	5
PS2001	Introduction to Plant Biotechnology	5
PS2002	Ecological Plant Physiology	5
PS2003	Plant Identification	5

ST2001	Introduction to Biostatistics	5
ZY2005	Invertebrate Diversity	5

Year 3

Students take **60** credits as follows – all listed core modules (**55** credits) and **5** credits of elective modules:

Core Modules

BL3002	Evolution & Diversity	10
BL3003	Conservation Biology	5
PS3003	Plant Science Literature Review	5
PS3012	Plants and Hostile Environments	5
PS3019	Bioactive Natural Products	5
PS3020	Plant Biology Field Course	10
PS3021	Plant Science Practical Skills	5
ST3001	Biostatistics I	5
MB3005	The role and ecology of microbes in the environment	5

Elective Modules

Students take modules to the value of 5 credits from the following:		5
FE3018	Agriculture and Natural Resource Use in the Developing World (5)	
GG3041	Environmental Remote Sensing (5)	

Year 4

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

Core Modules

BL4001	Research Project	15
BL4004	Frontiers in Biology	5
BL4006	Sustainable Food Production	5
PS3019	Bioactive Natural Products	5
PS4006	Genetic Manipulation of Plants	5
PS4021	Sustainable Plant Pest and Disease Management	5
PS4024	Crop Physiology and Climate Change	5
ST4001	Biostatistics II	5

Elective Modules

Students take modules to the value of 10 from the following:		10
AE4012	Landscape Conservation and Management (10)	
AE4016	Advanced Ecology and Biogeography (5)	
BL3004	Key Research Skills in Biology (5)	
BL4003	Biological Work Placement (5)	
EV4012	Environmental Impact Assessments (5)	
ZY4021	Evolutionary Ecology (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 Applied Plant Biology (NFQ Level 8, Major Award)

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

- Communicate in oral and written reports about plant- and biotechnology-based issues with technical and non-technical audiences;
- 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;
- Assemble information on ecological issues and critically appraise it for scientific credibility and relevance;
- Be familiar with the application of plant biotechnology in the analysis and solution of environmental issues;
- Demonstrate an understanding of the biology of plants, and how they respond to a changing environment;
- Critically assess information on plant and biotechnology issues for scientific credibility and relevance;
- Demonstrate an understanding of the role of human activities on ecosystems and evaluate approaches to minimize or ameliorate negative impacts.