

Ecology and Environmental Biology

BSc

College of Science,
Engineering and Food
Science



University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

Introduction

The BSc Ecology and Environmental Biology degree is the only one of its kind in Ireland. It is the study of the interactions between animals, plants and microbes and their environment. It includes the study of how individual organisms interact in communities and how communities interact with the surrounding ecosystem.

Why Study

The degree addresses such questions as: what controls animal and plant distribution, abundance and biodiversity? How do nutrients and energy move around ecosystems? How do species interact with each other? It examines the biology of various habitats from marine and freshwater, to terrestrial habitats and the soil. It uses the understanding of basic ecological principles and concepts to predict and manage environmental change. It includes subjects such as: conservation, pest control, wildlife and fisheries management, pollution and ecotoxicology.

Work Placement

A Work Placement module is offered as an optional part of the fourth year curriculum. Students can carry out this work placement during the summer prior to the final year.

Study Abroad

Practical ecological studies are emphasised by field courses run at residential field centres outside UCC and abroad (Portugal).

Students undertaking the Ecology and Environmental Biology degree can avail of an exchange to other EU countries (under the ERASMUS scheme). Exchange opportunities also exist with the University of Singapore and a number of universities in the US where students have an opportunity to spend some or all of the third year of their degree.

Careers

A degree in Ecology and Environmental Biology allows you to work in many different fields such as:

- research in universities or industry
- research in government agencies such as OPW, EPA, ERU, Forestry, Fisheries
- consultancy
- journalism
- teaching
- administration in civil service, county councils or industry
- environmental scientists in industry, agriculture, aquaculture and fisheries and government
- management conservation, working in habitat management, nature reserves, landscape planning, and fisheries.

Further Study

Ecology and Environmental Biology graduates can pursue research at MSc and PhD level, both at UCC or in other national and international institutions.

CK404

DEGREE OUTLET

COURSE PAGE ONLINE

www.ucc.ie/en/ck404/ecology

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LORRAINE GUERIN

BSC ECOLOGY AND ENVIRONMENTAL
BIOLOGY 2015

"I really enjoyed studying Ecology. I received a well-rounded introduction into the life sciences with an emphasis on field work and research skills. I also had freedom to focus on my own particular interests. In 3rd year I had the opportunity to study abroad at the University of Montana in the United States – an invaluable experience of both academic and personal growth for me."

#uccmakeyourmark



KEY FACTS

- **Ecology and Environmental Biology is unique in Ireland and was established in response to increasing awareness of environmental and wildlife issues**
- **A degree in Ecology and Environmental Biology provides you with experience in a wide range of scientific techniques relevant to addressing current environmental issues**
- **There is a high component of fieldwork, with a residential fieldtrip in Years 3 and 4**
- **You will learn laboratory techniques relevant to other biological fields including biochemistry, biotechnology, environmental sciences, aquaculture, fisheries and zoology**

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

Fundamentals of Ecology; Practical Ecological Skills; Fossils as Living Organisms; Ecological Plant Physiology; Plant Identification; Introduction to Biostatistics; Vertebrate Diversity; Invertebrate Diversity; Practical Invertebrate Skills; Plant and Animal Genetics; Practical Environmental Science; Environment and Public Health

Year 3 Modules

CORE: Introduction to Ecotoxicology; Practical Field Ecology (residential); Literature Review; Evolution and Diversity; Conservation Biology; Ecology and Hydrology of Wetland Systems; Biostatistics

ELECTIVES: Micropalaeontology and Palynology; Valuing the Environment; Plants and Hostile Environments; Advanced Vertebrate Biology; Animal Behaviour; Sustainable use of Freshwater; Adaptations to Extreme Environments

Year 4 Modules

CORE: Advanced Ecotoxicology; Biology and Management of Alien Species; Research Project; Frontiers in Biology; Research Skills in Biology; Biostatistics; Environmental Impact Assessments; Landscape Conservation and Management or Temperate Marine Biology (residential field courses)

ELECTIVES: Biological Work Placement; Market Forces and the Environment; Food Production; Environmentally Protective Management of Plant Pests and Pathogens; Crop Physiology and Climate Change; Biology of Marine Mammals