

LF257-15 Ecology and its Applications

22/23

Department

Life Sciences

Level

Undergraduate Level 2

Module leader

Charlotte Allender

Credit value

15

Module duration

5 weeks

Assessment

Multiple

Study location

University of Warwick main campus, Coventry

Description

Introductory description

This module gives second year students the opportunity to gain a scientific and interdisciplinary perspective of ecosystems and responses by habitats and species to disturbances caused by a variety of factors. Several major environmental issues are presented along with possible solutions to some of them, using concepts learned through case studies from across the world.

[Module web page](#)

Module aims

The students will be shown some of the important methods used in environmental analysis, as well as some of the problems posed by human impacts on the environment. They should gain an understanding of: environmental resources, drivers of biodiversity loss, pollution, environmental degradation and global change, including the role of human populations. They will explore the following methodologies: remote and in-situ technologies for natural resource measurement, conservation techniques including use of protected areas, economic aspects of environmental practice and approaches to environmental problem-solving.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be

covered. Actual sessions held may differ.

Introduction to the application of ecological approaches to environmental issues

Ecosystems services – honeybees and pollinators case study: honeybees and neonicotinoids

Sustainable use of marine resources: tools and techniques – policy, marine food chains and fisheries, environmental assessment methods,

Balancing tourism and conservation of key UK habitat – Yorkshire Dales case study

Impact and management of invasive species

Learning outcomes

By the end of the module, students should be able to:

- Level 5 understanding of key mechanisms by which humans can impact ecosystem structure and function, demonstrated through reference to relevant examples
- Level 5 understanding of how specific biological traits of organisms can influence their ability to support or disrupt ecosystem services, structure or function
- Level 5 ability to evaluate different methods for the assessment of environmental impacts, including current research techniques used in industry and academic research
- Level 5 understanding of the benefits of an interdisciplinary approach to understanding human impacts on the environment

Indicative reading list

The majority of the reference material will be primary literature and web based information relating to specific environments and scenarios, this will be highlighted during the lectures

Key text for basic ecological principles

Townsend CR, Begon M and Harper JL (2008) Essentials of Ecology (3rd Edition). Blackwell Publishing

Subject specific skills

Understand key mechanisms by which humans can impact ecosystem structure and function, demonstrated through reference to relevant examples

Demonstrate how specific biological traits of organisms can influence their ability to support or disrupt ecosystem services, structure or function

Evaluate different methods for the assessment of environmental impacts

Describe the benefits of an interdisciplinary approach to understanding human impacts on the environment

Transferable skills

Study

Study time

| Type | Required |
|----------------|----------------------------|
| Lectures | 12 sessions of 1 hour (8%) |
| Seminars | 3 sessions of 1 hour (2%) |
| Other activity | 10 hours (7%) |
| Private study | 125 hours (83%) |
| Total | 150 hours |

Private study description

Self directed learning and revision

Other activity description

Authentic assessment, based on a common problem or dataset researchers would deal with on a regular basis in the academic environment. This is in-line with both AQSC and RSB requirements on assessments

Costs

No further costs have been identified for this module.

Assessment

You do not need to pass all assessment components to pass the module.

Students can register for this module without taking any assessment.

Assessment group D

| | Weighting | Study time |
|---|-----------|------------|
| In-Module Assessment | 30% | 30 hours |
| Authentic assessment, based on a common problem or dataset researchers would deal with on a regular basis in the academic environment. This is in-line with both AQSC and RSB requirements on assessments | | |

| | Weighting | Study time |
|--|------------------|-------------------|
| Online Examination | 70% | 45 hours |
| 45 min short answer paper / 45 min essay paper | | |

- Online examination: No Answerbook required

Assessment group R

| | Weighting | Study time |
|---------------------------------------|------------------|-------------------|
| In-person Examination - Resit | 100% | |
| 45 min SAQ paper / 45 min essay paper | | |

- Answerbook Green (8 page)
- Students may use a calculator

Feedback on assessment

Feedback will be provided to students on submitted examination answers in line with the policy of the School of Life Sciences ; currently to provide students with cohort level guidance highlighting characteristics of highly scoring vs poorly scoring essays.

[Past exam papers for LF257](#)

Availability

Courses

This module is Core for:

- Year 2 of UIPA-C1L8 Undergraduate Life Sciences and Global Sustainable Development

This module is Core optional for:

- Year 2 of UIPA-C1L8 Undergraduate Life Sciences and Global Sustainable Development

This module is Optional for:

- Year 2 of UBSA-C700 Undergraduate Biochemistry
- ULFA-C1A2 Undergraduate Biochemistry (MBio)
 - Year 2 of C1A2 Biochemistry
 - Year 2 of C700 Biochemistry

- Year 2 of ULFA-C702 Undergraduate Biochemistry (with Placement Year)
- Year 2 of ULFA-C1A6 Undergraduate Biochemistry with Industrial Placement (MBio)
- UBSA-3 Undergraduate Biological Sciences
 - Year 2 of C100 Biological Sciences
 - Year 2 of C100 Biological Sciences
- Year 2 of ULFA-C1A1 Undergraduate Biological Sciences (MBio)
- Year 2 of ULFA-C113 Undergraduate Biological Sciences (with Placement Year)
- Year 2 of ULFA-C1A5 Undergraduate Biological Sciences with Industrial Placement (MBio)
- Year 2 of UMDA-CF10 Undergraduate Integrated Natural Sciences (MSci)