

ENVIRONMENT AND SUSTAINABILITY - 2024/5

Module code: BMS3105

Module Overview

This module considers the negative impacts of humans on the environment and ways to mitigate these for a sustainable future.

Module provider

School of Biosciences

Module Leader

PIRIE Tara (Biosciences)

Number of Credits: 15

ECTS Credits: 7.5

Framework: FHEQ Level 6

Module cap (Maximum number of students): N/A

Overall student workload

Independent Learning Hours: 69

Lecture Hours: 17

Tutorial Hours: 5

Practical/Performance Hours: 6

Guided Learning: 3

Captured Content: 34

Module Availability

Semester 1

Prerequisites / Co-requisites

None

Module content

Specific topics may be subject to change. Indicative content includes:

- Biodiversity: genetic diversity, species diversity, & ecosystem diversity
- Community ecology: relationships & change within ecosystems
- Sustainability: reversing negative human impacts, mitigation strategies for a sustainable future
- The Anthropocene Period: Human environment interactions such as habitat loss, over-harvesting, introduced species, climate change
- Case studies: students will present case studies in addition to those incorporated into lecture content
- Interactive tutorial sessions with opportunity to discuss and debate topics

Assessment pattern

| Assessment type | Unit of assessment | Weighting |
|-----------------|--|-----------|
| Coursework | Case study on a current topic | 50 |
| Coursework | Investigative video (35%) and report (15%) | 50 |

Alternative Assessment

N/A

Assessment Strategy

The assessment strategy is designed to provide students with the opportunity to demonstrate their knowledge and their ability to integrate content from across the module in order to consider ecological problems and their solutions. This assessment is also designed to stimulate self-learning practices and develop skills required to locate and present information. Students will be expected to integrate practical and ethical considerations with an element of investigative thinking.

The summative assessment for this module consists of the following elements:

- IS1 - Case study on a current topic: 50% - A 2500 words report on an issue that is relevant to the content covered in the course, providing the appropriate references and showing critical analysis of the reported fact.
- IS2 - Investigative video and field report: 50%: A investigative-type short video (35%) linked to the topic chosen in the first assessment, which will include an interview from a relevant representative in that field, reporting facts and opinions in a non-bias way; plus a report on the field trip about land management (15%).

Formative assessment and feedback

Students can obtain formative feedback from a variety of sources:

- Drop-in sessions where students can discuss their progress
- Class debates and discussions in which all students can participate.
- Immediate feedback during formative quizzes
- Individual formative feedback provided on one assignment draft submitted in SurreyLearn

Module aims

- Revise the concept of biodiversity and ecology at the population, community and planetary levels and consider the relationships within a dynamic ecosystem to ensure fundamentals are covered in order to build on during the rest of the module.
- Consider the nature of human influence on the environment, using case studies to illustrate the impact of particular issues outlined in the indicative content.
- Consider our responsibility to the planet in terms of restorative and maintenance of habitat, conservation ecology and sustainability.

Learning outcomes

| | | Attributes Developed |
|-----|--|----------------------|
| 002 | Evaluate the relative importance of biodiversity | KC |
| 003 | Discuss ecological principles | KC |
| 004 | Evaluate the various ways in which humans impact the environment | KC |
| 005 | Compare and contrast conservation strategies for protecting the environment for a sustainable future | KCP |
| 006 | Discuss the relative merits of strategies to evaluate and mitigate against a specific environmental threat | KCP |
| 007 | Identify suitable sources of information and critically evaluate them in order to address a specific environmental concern | KCPT |
| 008 | Present information both orally and in writing in a manner appropriate to specified audiences | KCPT |
| 001 | | |

Attributes Developed

C - Cognitive/analytical

K - Subject knowledge

T - Transferable skills

P - Professional/Practical skills

Methods of Teaching / Learning

The learning and teaching strategy is designed to: Stimulate engagement with both the practical and ethical aspects of environmental science. The lecture component of the module will introduce some of the basic principles underpinning this topic, however, the use of case studies to illustrate these principles and debates in which students can explore their own ethical ideals are both integral to the module. This module is intended to promote "blue skies" thinking as students identify and consider solutions to the issues raised by the conflict between human needs and the environment in which we live.

The learning and teaching methods include:

Lectures

Interactive tutorials and debates

Practical session in the field

Formative feedback either written or oral on one assignment draft

In-class formative tests

Summative assessments

Indicated hours (which may also include seminars, tutorials, workshops and other contact time) are approximate and may be subject to change.

Indicated Lecture Hours (which may also include seminars, tutorials, workshops and other contact time) are approximate and may include in-class tests where one or more of these are an assessment on the module. In-class tests are scheduled/organised separately to taught content and will be published on to student personal timetables, where they apply to taken modules, as soon as they are finalised by central administration. This will usually be after the initial publication of the teaching timetable for the relevant semester.

Reading list

<https://readinglists.surrey.ac.uk>

Upon accessing the reading list, please search for the module using the module code: **BMS3105**

Other information

Resourcefulness & resilience: The assessments for this module rely partly on the ability to interpret and understand primary research literature. The assignments will allow students to develop decision-making, self-efficacy, and confidence.

Global & cultural capabilities: Students will discuss topics in small groups during the tutorial sessions or in class which will encourage students to engage with other students from different cultures and abilities. Students will also be exposed to people from different backgrounds who may have different viewpoints during class or the assessment interview.

Sustainability: This is a key area of discussion for the module. The core ideas will be to explore the issues caused by humans and ways they can be mitigated for a sustainable future.

Digital capabilities: Students engage with self-help videos and in-person class demonstrations to introduce and improve the use of editing software. Students will also utilize the virtual learning environment SurreyLearn and other digital resources.

Employability: Having an understanding of what sustainability is and ways to improve sustainability in the workplace is increasingly important to employers and the planet. The course will explore the theory and practicalities of sustainability.

Programmes this module appears in

| Programme | Semester | Classification | Qualifying conditions |
|--|----------|----------------|---|
| Biological Sciences (Animal Biology and Ecology) BSc (Hons) | 1 | Compulsory | A weighted aggregate mark of 40% is required to pass the module |
| Biological Sciences (Cellular and Molecular Sciences) BSc (Hons) | 1 | Optional | A weighted aggregate mark of 40% is required to pass the module |
| Biological Sciences (Infection and Immunity) BSc (Hons) | 1 | Optional | A weighted aggregate mark of 40% is required to pass the module |
| Biological Sciences BSc (Hons) | 1 | Optional | A weighted aggregate mark of 40% is required to pass the module |
| Veterinary Biosciences BSc (Hons) | 1 | Optional | A weighted aggregate mark of 40% is required to pass the module |

Please note that the information detailed within this record is accurate at the time of publishing and may be subject to change. This record contains information for the most up to date version of the programme / module for the 2024/5 academic year.