BS371-12 Environmental Science and Management

20/21

Department
Life Sciences
Level
Undergraduate Level 3
Module leader
Kevin Purdy
Credit value
12
Module duration
10 weeks
Assessment
20% coursework, 80% exam
Study location
University of Warwick main campus, Coventry

Description

Introductory description

The module gives students with a predominantly cell and molecular biology background the opportunity to gain a scientific and interdisciplinary perspective of the earth, changes to its climate and environment and species responses to disturbances. The specific aims of the module are to examine major environmental issues and possible solutions to some of them, to translate into reality the ideas and theory and concepts learned through assessing and considering data and environmental states across the world.

Module web page

Module aims

By the end of the module students should be able to understand the concept of environmental degradation and global change and the role of human populations in environmental change especially climate change. They should also understand how natural processes can influence a changing climate as well as feedback loops and tipping points. They should have an understanding of the use of remote and in-situ technologies for natural resource measurement and different approaches to environmental problem solving. As part of this problem solving will include

the principles and practice of conservation techniques and environmental management.

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.

The following topics will be included
Natural events and processes
Space time interactions
Biodiversity
Environmental disturbance
Global change
Rapid field assessment and Monitoring systems
Case studies (these will be changed annually to match recent well-publicised events).
Conservation and Protected areas

Learning outcomes

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

- Understand the concept of environmental degradation and global change.
- Understand the role of human populations in environmental change especially climate change.
- Understand the use of remote and in-situ technologies for natural resource measurement
- Understand the principles and practice of conservation techniques including the use of protected areas
- Understand different approaches to environmental problem solving.

Indicative reading list

Environmental Management Barrow CG (1999)
Climate Change 2001: Synthesis Report. IPCC (2001)
Living in the Environment: Principles, Connections and Solutions Miller GT (2004)

More use will be expected of current primary literature.

Subject specific skills

a. Demonstrate clear understanding of the scientific topic

b. Contain evidence of extended reading and lateral integration of material not covered in the lectures

c. Demonstrate independent thought and deep understanding

d. Specifically answer the set question using information from multiple lectures and sources

e. Be structured and formatted in a way that demonstrates understanding and logical flow

f. Use multiple sources to construct complex scientific arguments and integrating these to build and develop the student's own scientific conclusions.

Transferable skills

1. Critical appraisal of source material
2. Self directed learning
3. Adult learning

Study

Study time

Type	Required
Lectures	20 sessions of 1 hour (17%)
Private study	100 hours (83%)
Total	120 hours

Private study description

100 hrs self-study and directed reading

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

Assessment component	Weighting	Study time	Eligible for self-certification
Group Poster	20%		No

	Weighting	Study time	Eligible for self-certification
Reassessment component is the same			
Assessment component			
Written Examination	80%		No
Reassessment component is the same			

Feedback on assessment

Pastoral meetings with personal tutor

Past exam papers for BS371

Availability

Courses

This module is Core for:

- Year 3 of UBSA-3 Undergraduate Biological Sciences

This module is Optional for:

- Year 4 of ULFA-C113 Undergraduate Biological Sciences (with Placement Year)
- Year 3 of ULFA-C1A5 Undergraduate Biological Sciences with Industrial Placement (MBio)

This module is Option list A for:

- UBSA-3 Undergraduate Biological Sciences
  - Year 3 of C100 Biological Sciences
  - Year 3 of C105 Biological Sciences with Molecular Genetics
  - Year 3 of C107 Biological Sciences with Virology
- Year 3 of ULFA-C1A1 Undergraduate Biological Sciences (MBio)

This module is Option list B for:

- UBSA-3 Undergraduate Biological Sciences
  - Year 3 of C102 Biological Sciences with Cell Biology
  - Year 3 of C104 Biological Sciences with Microbiology