Module Specification

Environmental Resilience

Version: 2027-28, v1.0, Approved

Contents

Part 1: Information

Module title: Environmental Resilience

Module code: USSKK6-15-2

Level: Level 5

For implementation from: 2027-28

UWE credit rating: 15

ECTS credit rating: 7.5

College: College of Health, Science & Society

School: CHSS School of Applied Sciences

Partner institutions: None

Field: Applied Sciences

Module type: Module

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: This module evaluates global environmental challenges from a social-ecological perspective, aligning closely with the United Nation's Sustainable Development Goals (SDGs). Students will develop analytical and data analysis skills for examining environmental impacts at the local scale.

Features: Not applicable

Educational aims: This module aims to:
Develop students understanding of global environmental challenges from a social-ecological perspective at the global scale.
Develop students analytical skills in laboratory and field techniques for monitoring, detecting and investigating environmental impacts at the local scale.

Outline syllabus: Module Introduction:
Planetary Boundaries, Resilience, regime shifts, tipping points, social-ecological thinking, and assessment at global, regional and local scales.

Modelling workshop:
Life Cycle Assessment, Biogeochemical models.

Circular Economy:
Ecological Economics, circular economy, ecosystem services.

Atmosphere:
Climate mitigation and adaptation, pollution, monitoring approaches.

Terrestrial and Aquatic systems:
Land-based mitigation, freshwater, monitoring approaches.

Marine environment:
Resource management, monitoring.

These lectures will be followed by 3 weeks of student-led laboratory/field practicals in which students work in groups on one of three chosen topics:

Ecotoxicology of plastics in rivers
Atmospheric pollution
Ecosystem greenhouse gas fluxes dynamics

Lab/field practical - staff led
Lab/field practical - student led

Lab/field practical - student led

Computer workshop - Data analysis

Assessment workshop

Presentation pitch (poster + oral presentation)

Part 3: Teaching and learning methods

Teaching and learning methods: This module will be delivered using lectures, online videos/resources and workshops. Lectures will be used to introduce main concepts and to guide and inform student centred learning while workshops and laboratory/field practical will provide active learning for developing analytical and data analysis skills.

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Gain practical experience of laboratory/field and analytical data analysis approaches to assessing and understanding the presence and/or movement/remediation of pollutants in the environment.

MO2 Understand the impacts human activities have on the environment and discuss strategies and technologies for mitigating environmental change (including land, water and atmosphere).

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 114 hours

Face-to-face learning = 36 hours

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link https://uwe.rl.talis.com/modules/usskk6-15-2.html

Part 4: Assessment

Assessment strategy: Assessment: Presentation (10 minutes)
The assessment for Environmental Resilience comprises a poster presentation, followed by a 10 minute oral defence. This form of assessment allows students to demonstrate their understanding of field monitoring, laboratory analysis and environmental impact while articulating socio-economic aspects and global environmental analysis. Students will be supported through a structured learning schedule including student-led field work, culminating in an assessment workshop prior to the presentation session.

Assessment tasks:

Presentation (First Sit)
Description: Poster presentation with a 10min oral defence
Weighting: 100 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2

Presentation (Resit)
Description: Poster presentation with a 10min oral defence
Weighting: 100 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Environmental Science [Frenchay] BSc (Hons) 2026-27

Environmental Science {Foundation} [Frenchay] BSc (Hons) 2025-26