Module Specification

Contemporary Conservation Science

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Contents

Part 1: Information

Module title: Contemporary Conservation Science

Module code: USSK5J-30-3

Level: Level 6

For implementation from: 2024-25

UWE credit rating: 30

ECTS credit rating: 15

College: College of Health, Science & Society

School: CHSS School of Applied Sciences

Partner institutions: None

Field: Applied Sciences

Module type: Module

Pre-requisites: Conservation in Practice 2024-25

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: Contemporary Conservation Science is a module which allows students to develop new emerging conservation skills and possess the capability to analyse relevant and topical issues. Students will be taught how to use this information to inform effective solutions to conservation problems that are embedded in social, political, and economic reality.

Features: Not applicable

Educational aims: This module provides advanced knowledge and practical experience of contemporary issues and solutions to the problems faced by species of conservation concern.

Outline syllabus: Taught elements of the course will include horizon scanning, emerging technologies, stakeholder engagement, behavioural change, natural resource economics and ecological consultancy.

Additional content may include the following:

Conservation Genetics:
Use of genetics in practical conservation.
DNA barcoding, DNA fingerprinting and monitoring elusive and cryptic species.
Studbook genetics and captive breeding.
Measuring historic and current gene flow between natural populations.
Phenotypic plasticity and the shifting climate.
The GM debate.

Landscape-scale Conservation:
What is landscape-scale conservation?
Economic and political drivers of land use change.
Monitoring species, habitats and ecosystem services across landscapes.
Working with land owners.
Methods of effecting change at the landscape level.
Measuring and enhancing connectivity.

Restoration Ecology:
Species versus habitat versus ecosystem restoration.
Methods of restoring ecological function.
Rewilding.
Dealing with the legacies of past land use e.g. nutrient enrichment, soil degradation, loss of seed bank.
Restoring disturbance regimes.

Funding Conservation and Environmental Entrepreneurship:
Agri-environment schemes and the Common Agricultural Policy.
Payments for Ecosystem Services.
Biodiversity Offsetting.
Nature Tourism.
Conservation-Grade produce.
Corporate Social Responsibility.
Grants.
Memberships, sponsors, legacies and major donors.
Social Enterprise and Community Interest Companies.
Enterprise schemes.
The role of ecological consultancy in conservation.

Future Issues for Conservation:
Synthetic Life and Lab-grown meat.
Nanotechnology.
Micro-plastic pollution.
Impacts of economic growth in Developing World.
Resurrection of extinct species.

Practical Skills:
Database creation and management.
Use of MS Access and GIS geodatabases.
Networking events.
Advocacy and engagement with the political process at local and national levels.
Surveys for consultancy.
Calculating Ecosystem Services.
Reporting and communication, press releases.

Part 3: Teaching and learning methods

Teaching and learning methods: Lectures will be complimented with case studies from staff working at the forefront of conservation efforts. Students will also benefit from practical activities e.g laboratory classes, computer practicals and/or fieldwork.

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

MO1 Critically evaluate the effectiveness of contemporary conservation strategies around the world

MO2 Review and evaluate threats to and opportunities for conservation presented by current technological advances and societal changes

MO3 Develop and plan conservation projects which incorporate innovative or current best-practice techniques for biodiversity conservation

MO4 Communicate effectively their work to others by a variety of methods, including written, oral, social media

MO5 Exhibit the knowledge and ability to advocate to, and engage with, the decision making process at local and national levels

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 228 hours

Face-to-face learning = 72 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/ussk5j-30-3.html

Part 4: Assessment

Assessment strategy: The Assessment Strategy has been designed to support and enhance the development of both subject-based and employability skills, whilst ensuring that the module's Learning Outcomes are attained, as described below. The assessments are designed to underpin students' learning and skills acquisition

in the module and to provide for learning beyond the material delivered in the classroom. Assessments include both summative (assessment that contributes to module mark) and formative (assessment that does not contribute to module mark) assessment and feedback opportunities.

Assessment 1 is a presentation on a conservation topic that the student has an interest in and wants to focus on in their future career. For this assignment, the student will be asked to provide an overview of their interests in conservation issues, wildlife species, particular habitats, alongside future career plans. A bespoke question will be set for each student to answer during their presentation. This will build on content taught within the module, alongside their wider understanding of conservation learnt through their degree and wider research. For students not planning to continue with a career in conservation, a multidisciplinary question will be asked which allows the student to assess how their future career can incorporate the knowledge they have gained during the degree and their wider conservation knowledge.

Assessment 2 is a Conservation Portfolio. Within the portfolio, students will complete their choice of three out of five activities focused around the key themes taught within Contemporary Conservation Science (Emerging technologies, Ecological statistics and modelling; Transferable skills in conservation science; Public engagement and advocacy; Key skills within the Conservation Sector). Tasks within these themes may take a number of forms, including: writing a funding bid for a small achievable conservation project, writing blog posts about a conservation topic aimed at the general public, and discussing how emerging technologies could be used to solve a particular conservation issue.
Opportunities for formative assessment are embedded in the module teaching and take a variety of forms, including: in class and on-line tests and quizzes, problem-solving workshops, and review of model coursework.

Assessment tasks:

Portfolio (First Sit)
Description: Conservation portfolio (3000 words)

Weighting: 75 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO4, MO5

Presentation (First Sit)
Description: Ten minute presentation on conservation interests.
Weighting: 25 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1, MO2, MO4

Presentation (Resit)
Description: Ten minute presentation on conservation interests.
Weighting: 25 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1, MO2, MO4

Portfolio (Resit)
Description: Conservation portfolio (3000 words)
Weighting: 75 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO4, MO5

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Wildlife Ecology and Conservation Science [Zoo] BSc (Hons) 2022-23

Wildlife Ecology and Conservation Science {Foundation} [Sep][SW][Frenchay][6yrs] MSci 2020-21

Wildlife Ecology and Conservation Science [Sep][SW][Zoo][4yrs] BSc (Hons) 2021-22

Wildlife Ecology and Conservation Science {Foundation} [Sep][FT][Zoo][4yrs] BSc (Hons) 2021-22

Wildlife Ecology and Conservation Science {Foundation} [Sep][SW][Zoo][5yrs] BSc (Hons) 2020-21

Wildlife Ecology and Conservation Science [Frenchay] MSci 2022-23

Integrated Wildlife Conservation {Top-Up} [Frenchay] BSc (Hons) 2024-25

Wildlife Ecology and Conservation Science [Sep][SW][Frenchay][5yrs] MSci 2021-22

Wildlife Ecology and Conservation Science {Foundation} [Sep][FT][Frenchay][5yrs] MSci 2021-22