



Module Specification

Wildlife Biology

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Contents

Module Specification	1
Part 1: Information	2
Part 2: Description	2
Part 3: Teaching and learning methods	4
Part 4: Assessment.....	5
Part 5: Contributes towards	6

Part 1: Information

Module title: Wildlife Biology

Module code: USSKAE-30-1

Level: Level 4

For implementation from: 2025-26

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: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: This module will provide an understanding of the breadth of the diversity of life on Planet Earth and teach the skills needed to identify and group species based on their ecological requirements. Students will learn to effectively identify and understand the differences between major animal and plant groups and how taxon- and species-specific adaptations allow organisms to exploit and survive across varied environmental niches. This foundational knowledge is essential if students are to effectively evaluate, identify and design appropriate conservation interventions, as

is necessary within their Level Five studies, and for the workplace if following a career in conservation or ecology.

Features: Not applicable

Educational aims: This module aims to integrate aspects of traditional approaches to anatomy and physiology, and the relationship between structure and function, with the ecology of wild animals. Some major animal and plant taxa will be covered in more depth and we will bring together the physiological and ecological principles covered. This will be delivered through both theory and practical sessions including in the lab, on field trips, during computer workshops and through access to the zoos taxonomic artefacts and live species collections.

Outline syllabus: The indicative syllabus of the module is as follows:

This module investigates how species are adapted to their environment. It integrates anatomy and physiology, and the relationship between structure and function, with the ecology and conservation of wild animals. While the emphasis will be on vertebrates, invertebrates and plants are also included.

Taxonomy:

Principles of organism taxonomy; classification of organisms in the animal kingdom and major plant phyla and their distinguishing characteristics.

Homeostasis and physiology:

Principles of thermoregulation— ectothermy and endothermy, torpor and hibernation. Strategies for water conservation and osmotic challenges for aquatic animals. Principles of circulation and respiration. Adaptation to terrestrial, aquatic and extreme environments.

Sensory and neurobiology:

How animals react to and process environmental stimuli. Structure and function of neurons and neurotransmission, comparative morphology of the nervous system.

Energy and foraging:

Principles of energetics and metabolism – measuring metabolic rate in animals –

body size and metabolism. Adaptations in herbivores and carnivores – dentition – cellulose digestion.

Reproductive strategies:

Contrasting reproductive strategies in fish, amphibia, reptiles, birds and mammals, relating this to conservation.

Part 3: Teaching and learning methods

Teaching and learning methods: Scheduled learning includes interactive lectures, workshop and supervised fieldwork and practical classes.. The zoo provides the opportunity to directly observe some of the species of plants and animals discussed in class.

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

MO1 Identify the key distinguishing characteristics of major taxonomic groups and their relationship to evolutionary principles.

MO2 Describe how the morphological and physiological adaptations of species enable them to exploit an ecological niche.

MO3 Contrast how species' survive and reproduce across differing environmental conditions.

MO4 Understand and relate species-specific adaptations to a conservation context.

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](https://uwe.rl.talis.com/modules/usskae-30-1.html) via the following link <https://uwe.rl.talis.com/modules/usskae-30-1.html>

Part 4: Assessment

Assessment strategy: Assessment 1: Report (1500 words)

Comparison of species adaptations.

A written report which requires students to compare how different species utilise different traits to survive in their environments, focusing on foraging and sensory ecology, with a commentary on their evolutionary background.

Assessment 2: Project (1500 words)

A project utilising zoo enclosure design as a means to understand a species' physiological and biological requirements, and using this to explore reproduction in an ex-situ environment.

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, and problem-solving workshops.

Assessment tasks:

Report (First Sit)

Description: Comparison of species adaptations (1500 words).

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2

Project (First Sit)

Description: Optimising ex situ conservation (1500 words).

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3, MO4

Report (Resit)

Description: Comparison of species adaptations (1500 words).

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2

Project (Resit)

Description: Optimising ex situ conservation (1500 words).

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3, MO4

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Integrated Wildlife Conservation [Zoo] FdSc 2025-26

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