



## **Module Specification**

### Wildlife Biology

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## Part 1: Information

**Module title:** Wildlife Biology

**Module code:** USSKAE-30-1

**Level:** Level 4

**For implementation from:** 2023-24

**UWE credit rating:** 30

**ECTS credit rating:** 15

**Faculty:** Faculty of Health & Applied Sciences

**Department:** HAS Dept of Applied Sciences

**Partner institutions:** None

**Delivery locations:** Not in use for Modules

**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:** Not applicable

**Features:** Not applicable

**Educational aims:** See Learning Outcomes

**Outline syllabus:** This module integrates aspects of traditional approaches to anatomy and physiology, and the relationship between structure and function, with

the ecology of wild animals. While the emphasis will be on vertebrates, invertebrates and plants will be included.

The syllabus is divided into six themes:

**Taxonomy:**

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

**Thermoregulation:**

Principles of heat transfer – ectothermy and endothermy – thermoregulation in invertebrate and vertebrate animals. Adaptation to terrestrial, aquatic and extreme environments. Torpor and hibernation.

**Water Relations:**

Strategies for water conservation in animals – kidney structure and function – nitrogenous waste – osmotic challenges for aquatic animals; adaptation in plants.

**Energy:**

Principles of energetics and metabolism – measuring metabolic rate in animals – body size and metabolism. Optimising the energy cost of locomotion. Nutrition and specialised diets – adaptations in herbivores and carnivores – dentition – cellulose digestion.

**Reproductive strategies:**

Principles of r and K selection in animals and plants. Contrasting reproductive strategies in fish, amphibia, reptiles, birds and mammals. Hormonal control of reproduction – delayed implantation.

**The Neurological basis for behaviour:**

Structure and function of neurones and neurotransmission, comparative morphology of the vertebrate central nervous system. Sensory systems. The role of hormones in behaviour.

### **Part 3: Teaching and learning methods**

**Teaching and learning methods:** Scheduled learning: Students can expect to receive a minimum of 66 hours taught material.

Scheduled learning includes interactive lectures, workshop and supervised fieldwork and practicals.

Independent learning: Students are expected to spend 234 hours on independent learning tasks and preparation of assessments.

Independent learning includes hours engaged with essential reading, case study preparation, assignment preparation and completion etc.

A variety of teaching and learning approaches will be employed. The module will be delivered using interactive lectures combined with workshops and some practical work. Lectures will be supplemented by audiovisual materials (video, DVDs) showing specific examples of wild animals in their environment. Material from BBC natural history programmes will prove especially valuable.

Lectures will be used to introduce main concepts and to guide and inform student centred learning while workshops will provide students the opportunity to discuss issues in-depth. These will be further supported by visits to sections of the zoo appropriate to the groups of animals under study and by practical observations of animals in Bristol Zoo Gardens and other institutions.

For 2020-21 some lectures, tutorials and module specific practicals will move online as a result of covid 19

The module places considerable emphasis on recognising and using subject-specific theories, paradigms, concepts and principles. The module will introduce the subject areas in a taxonomic framework and will encourage exploration of the topics with the

evolutionary principles and adaptations in mind. Learning methods include the application of knowledge and understanding to address familiar and unfamiliar issues.

Student learning will be supported through the University's E-Learning Environment, Blackboard. A culture of continuous learning will be developed through the implementation of regular on-line discussion groups which discuss identified topics indepth.

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

**MO1** Describe how the morphology of plants and animals is related to physiological function

**MO2** Compare the strategies that have evolved in different organisms in response to environmental challenges

**MO3** Discuss the role of physiological ecology in the survival of wildlife

**MO4** Calculate a simple energy budget for a specified species, and be able to relate this to its physiological and behavioural adaptations and foraging strategies

**MO5** Describe and identify a range of UK wildlife species of conservation concern

**Hours to be allocated:** 300

**Contact hours:**

Independent study/self-guided study = 234 hours

Face-to-face learning = 66 hours

Total = 300

**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 is a written report which requires students to compare how different species are adapted to their environments (1500 words, worth 30% of total module marks). This will test learning outcomes 1 and 3.

Assessment 2 is a report on zoo enclosure design based around a particular species physiology and ecology and how to accommodate those features (1000 words, worth 30% of module marks). This component will test learning outcomes 1 and 2.

Assessment 3 is an online exam with a 24 hour window for completion (anticipated to take 2 hours to complete) which takes place at the end of the year. The paper consists of long answer questions, designed to test both the breadth of the students' subject knowledge, and their understanding of key concepts. This component will test all the learning outcomes.

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 model answers for past exam questions.

### Assessment components:

#### Report (First Sit)

Description: Written report - Species adaptation

Weighting: 30 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO3

#### Report (First Sit)

Description: Report - Zoo enclosure design

Weighting: 30 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2

**Examination (Online) (First Sit)**

Description: Online examination (24 hours)

Weighting: 40 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4, MO5

**Report (Resit)**

Description: Written report - Species adaptation

Weighting: 30 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO3

**Report (Resit)**

Description: Report - Zoo enclosure design

Weighting: 30 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2

**Examination (Online) (Resit)**

Description: Online examination (24 hours)

Weighting: 40 %

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:

Integrated Wildlife Conservation [Zoo] FdSc 2023-24