Module Definition Form (MDF)

Module code: MOD007176	**Version:** 5 **Date Amended:** 10/Jul/2025

1. Module Title
Animal Physiology and Behaviour

2a. Module Leader
Sarah Hart

2b. School
School of Life Sciences

2c. Faculty
Faculty of Science and Engineering

3a. Level
4

3b. Module Type
Standard (fine graded)

4a. Credits
30

4b. Study Hours
300

5. Restrictions

Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:			

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

The ways in which animals cope with the demands of everyday life, from feeding, moving and respiring to sensing the outside world and each other are as diverse as the animals themselves Within this module you will examine the ways in which an animal’s anatomy, physiology and behaviour allow them to adapt for survival and reproduction. You will examine the variety of ways in which an

animal's anatomy and physiology are adaptations to the many tasks it faces to survive. Particular emphasis will be placed on comparing the solutions evolved to similar tasks by the various animal groups both vertebrate and invertebrate.

Through a series of integrated lectures, practical sessions and active learning, you will examine main themes of cell biology, homeostasis, communication, locomotion and the function of the different organ systems in a variety of different organisms.

Our study of animal behaviour will investigate the philosophy and multidisciplinary origins of the scientific study of behaviour. A synthesis of the fields of psychology and animal behaviour will be presented to you using a framework of proximate (developmental and mechanistic) and ultimate (functional and phylogenetic) explanations. You will also investigate behaviour through evolutionary processes, gene expression and environmental contributions.

You will develop a strong scientific foundation in animal physiology and behaviour and the ecology of the animal. You will also develop transferable employability skills including self-management, organisational skills, resilience, critical thinking. IT, teamwork and communication & literacy; necessary in subsequent modules and biological careers.

6b. Outline Content

History, philosophy of animal behaviour

Psychological & ethological approaches/ techniques

Evolutionary processes and adaptive behaviour

Genetic & environmental influences on behaviour

Proximate & ultimate explanations on behaviour

Tinbergen's four why's

Describe & measure behaviour

Ethics

Application of behaviour techniques (especially welfare)

Physiology:

Feeding

Alimentary systems

Gaseous exchange

Circulation

Homeostasis

Cell communication

Nervous system

Endocrine system

Locomotion.

6c. Key Texts/Literature

The reading list to support this module is available at: https://readinglists.aru.ac.uk/

6d. Specialist Learning Resources

Lab equipment and models

7. Learning Outcomes (threshold standards)		
No.	**Type**	**On successful completion of this module the student will be expected to be able to:**
1	Knowledge and Understanding	Demonstrate knowledge of comparative physiology and cell biology
2	Knowledge and Understanding	Relate the normal functions and anatomy in animal organisms
3	Knowledge and Understanding	Discuss the multidisciplinary and philosophical origins of, and the importance of applying scientific methodology in the study of pure and applied animal behaviour.
4	Knowledge and Understanding	Develop proximate and ultimate hypotheses for the behaviour of animals
5	Intellectual, practical, affective and transferrable skills	Demonstrate the ability to perform a literature search, critically evaluate and synthesise the information, and draw a literature supported conclusion for a report
6	Intellectual, practical, affective and transferrable skills	Collect, summarise and statistically analyse biological data, presenting it in an appropriate format

8a. Module Occurrence to which this MDF Refers				
Year	**Occurrence**	**Period**	**Location**	**Mode of Delivery**
2025/6	ZZF	Template For Face To Face Learning Delivery		Face to Face

8b. Learning Activities for the above Module Occurrence			
Learning Activities	**Hours**	**Learning Outcomes**	**Details of Duration, frequency and other comments**
Lectures	46	1-4	20 x 2 hrs lectures/active learning + 2 x 2 hr revision + 2 x 1 hr test
Other teacher managed learning	28	1,2	9 x 2 hrs practicals + 2 x (5-hour) day field trips
Student managed learning	226	1-6	Background reading, online activities, preparation for lectures and practicals, and completion of assessments
TOTAL:	300		

9. Assessment for the above Module Occurrence					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
010	Coursework	2,4,5,6	60 (%)	Fine Grade	30 (%)
Coursework (2000 words equivalent)					

Assessment components for Element 010				
Component No.	**Assessment Title**	**Submission Method**	**Weighting (%)**	**Components needed for Mark Calculation?**
010/1	Practical skills report (Tri 1)		50 (%)	All
010/2	Practical skills report (Tri 2)		50 (%)	

Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
011	Coursework	1,3,4	40 (%)	Fine Grade	30 (%)
In-class test – one per trimester (60 min per test; 1000 word equivalent each)					

Assessment components for Element 011				
Component No.	**Assessment Title**	**Submission Method**	**Weighting (%)**	**Components needed for Mark Calculation?**
011/1	Animal Behaviour test		50 (%)	All
011/2	Animal Physiology test		50 (%)	

In order to pass this module, students are required to achieve an overall mark of 40% (for modules at levels 3, 4, 5 and 6) or 50% (for modules at level 7*).

In addition, students are required to:
(a) achieve the qualifying mark for each element of fine graded assessment as specified above
(b) pass any pass/fail elements

[* the pass mark of 50% applies for all module occurrences from the academic year 2024/25 – see Section 3a of this MDF to check the level of the module and Section 8a of this MDF to check the academic year]