Module Definition Form (MDF)

Module code: MOD002861	**Version:** 9 **Date Amended:** 13/Jun/2024

1. Module Title
Behavioural Ecology

2a. Module Leader
Jacob Dunn

2b. School
School of Life Sciences

2c. Faculty
Faculty of Science and Engineering

3a. Level
6

3b. Module Type
Standard (fine graded)

4a. Credits
15

4b. Study Hours
150

5. Restrictions

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

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

Behavioural ecology has been an established discipline within the natural sciences since the 1970s, bringing together the theoretical understanding of evolution and ecology with the observational practices of early ethologists. The underlying premise is that the survival value of behaviour depends on environmental circumstances, both physical and biological.

You will explore this premise across four major themes: communication; finding resources and avoiding being eaten; living with others of the same species; and producing the next generation.

You will discover the different analytical approaches used by behavioural ecologists, through a wide range of examples and in what context these have been used. You will also examine cost-benefit analysis to predict optimal behavioural strategies, which is a key feature of research in this field.

Through this module, you will take a research-focussed approach, critically evaluating and discussing relevant primary literature from a range of sources. You will acquire a skill base relevant to a range of careers, including any roles that require data interpretation and analysis. In addition, the quantitative and critical evaluation skills you will develop are applicable to a wide range of graduate employment opportunities. You will develop your understanding of this subject through lectures, workshops, group discussions, research seminars, practical exercises and reading textbooks and journal articles.

6b. Outline Content

- Finding food (optimal foraging theory)

- Communication

- Avoiding predation

- Practical and analytical approaches (field observations, experiments, cost-benefit analysis, optimality, game theory)

- Use of space

- Competition

- Levels of sociality and the structure and functioning of groups

- Evolution of sex

- Mating systems

- Sexual selection (mate choice and mate competition)

- Life history

- Human behavioural ecology

6c. Key Texts/Literature

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

6d. Specialist Learning Resources
Computing resources with Excel and SPSS software. Environmental laboratory with technical support. Supporting material available through the intranet and/or module website.

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 a detailed knowledge of the major concepts and theories in behavioural ecology.
2	Knowledge and Understanding	Examine alternative behavioural strategies and predict optimal alternatives under different environmental, social and sexual conditions.
3	Intellectual, practical, affective and transferrable skills	Apply knowledge of behavioural ecology and analytic approaches used in the discipline, including economic modelling and game theory, to solve problems relating to behavioural ecology.
4	Intellectual, practical, affective and transferrable skills	Critically examine and interpret literature and data from the field of behavioural ecology in order to present a clear argument on a relevant topic.

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	18	1-3	9 x 2 hrs lectures/active learning
Other teacher managed learning	18	1-3	9 x 1 hr seminars + 2 x 3 hrs practicals + 3 hrs revision
Student managed learning	114	1-3	Background reading, online activities, preparation for lectures and practicals, and completion of assessments
TOTAL:	150		

9. Assessment for the above Module Occurrence					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
010	Coursework	1-3	20 (%)	Fine Grade	30 (%)
Weekly Quizzes (600 word equivalent)					

Assessment components for Element 010			
Component No.	**Assessment Title**	**Submission Method**	**Components needed for Mark Calculation?**
010/1	Weekly Quiz	Scheduled Activity: Timetabled assessment task	Best 7 out of 8. All components used in calculation are equally weighted
010/2	Weekly Quiz	Scheduled Activity: Timetabled assessment task	
010/3	Weekly Quiz	Scheduled Activity: Timetabled assessment task	
010/4	Weekly Quiz	Scheduled Activity: Timetabled assessment task	
010/5	Weekly Quiz	Scheduled Activity: Timetabled assessment task	
010/6	Weekly Quiz	Scheduled Activity: Timetabled assessment task	
010/7	Weekly Quiz	Scheduled Activity: Timetabled assessment task	
010/8	Weekly Quiz	Scheduled Activity: Timetabled assessment task	

Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
011	Coursework	1-4	80 (%)	Fine Grade	30 (%)
Presentation (1000 word equivalent) & Essay Critique (1500 word equivalent)					

Assessment components for Element 011				
Component No.	**Assessment Title**	**Submission Method**	**Weighting (%)**	**Components needed for Mark Calculation?**
011/1	Presentation 1000 words equivalent	Scheduled Activity: Timetabled assessment task	40 (%)	All
011/2	Essay Critique 1500 words equivalent	Canvas	60 (%)	

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]