Module Definition Form (MDF)

Module code: MOD002793	**Version:** 10 **Date Amended:** 13/Jun/2024

1. Module Title
Invertebrate Biology

2a. Module Leader
Peter Brown

2b. School
School of Life Sciences

2c. Faculty
Faculty of Science and Engineering

3a. Level
5

3b. Module Type
Standard (fine graded)

4a. Credits
15

4b. Study Hours
150

5. Restrictions

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

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

We share our world with a vast array of invertebrates, which account for over 99% of the 1.2 million or so animal species so far described. In this module you will be introduced to the diverse world of invertebrates focussing on aspects of their biology, ecology and behaviour. You will learn about invertebrate classification and you will practise relevant sampling and identification skills. Coverage of structural biology leads on to physiological functioning and consideration of adaptations that allow invertebrates to fill a range of specialised ecological niches. The major impacts that invertebrates have on both natural and man-made ecosystems lead on to applied topics, such as the impact of insect pests in agriculture. You will also consider various other aspects of invertebrate biology, such as their role in decomposition, the biology of social insects, insect-plant interactions, pollination and their survival in extreme environments. Since most invertebrate species remain to be discovered, anyone equipped with a few basic observational and experimental skills can make a significant contribution to this fascinating area of science. Field- and laboratory-based practical sessions are an important component of what you will gain from this module. The fieldwork and identification skills you will be introduced to are important in ecological consultancy and research-based careers. You will also gain further practice in transferable skills such as data analysis and written communication skills that are valuable in a wide range of careers.

6b. Outline Content

- classification of invertebrates - functional anatomy and physiology - pest ecology and beneficial invertebrates - insect-plant interactions – decomposition – sociality – natural enemies – development and life-histories – invertebrates and microbes – surviving extreme environments

6c. Key Texts/Literature

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

6d. Specialist Learning Resources

Appropriate laboratory Technical support

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	Identify a range of invertebrates based on their structure and anatomy, and understand the taxonomic classification of those invertebrates.
2	Knowledge and Understanding	Explain how invertebrates are studied and defined in terms of their ecology, structure and function.
3	Knowledge and Understanding	Analyse, evaluate and present data derived from quantitative practical techniques used to study invertebrate ecology and/or behaviour.
4	Intellectual, practical, affective and transferrable skills	Carry out fieldwork techniques to sample invertebrates, and use simple standard methods and information sources to identify specimens into their major taxonomic groups.

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	20	1-3	5 x 3 hrs + 5 x 1 hr lectures/active learning
Other teacher managed learning	16	1-4	5 x 2 hrs practicals + 1 x 3 hr Field trip + 1 x 1 hr assessment literacy + 2 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	1-4	50 (%)	Fine Grade	30 (%)
Coursework (1500 words)					

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

Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
011	Examination Cambridge	1-4	50 (%)	Fine Grade	30 (%)
Examination (1.5 hours)					

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]