



## Module Definition Form (MDF)

<b>Module code: MOD002742</b>	<b>Version: 10 Date Amended: 10/Jul/2024</b>
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<b>1. Module Title</b>
General Microbiology

<b>2a. Module Leader</b>
Caray Walker

<b>2b. School</b>
School of Life Sciences

<b>2c. Faculty</b>
Faculty of Science and Engineering

<b>3a. Level</b>
4

<b>3b. Module Type</b>
Standard (fine graded)

<b>4a. Credits</b>
15

<b>4b. Study Hours</b>
150

<b>5. Restrictions</b>			
Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
<b>Courses to which this module is restricted:</b>	Biomedical Science, Bioscience, Life Sciences framework; Laboratory Science Degree Apprenticeship		

## LEARNING, TEACHING AND ASSESSMENT INFORMATION

### 6a. Module Description

Microbiology is the study of microorganisms - organisms that are too small to be seen without magnification. The taxonomic diversity of microorganisms is reflected in the huge diversity of their lifestyles. You will explore the major groups of microorganisms – bacteria, viruses, and fungi - and in doing so will learn the basic concepts of microbiology and apply them to a scientific understanding of the subject area. You will consider the diversity of microorganisms from many different perspectives, including their cell structure, function, taxonomy and ecology.

Microorganisms have a long, often negative, association with humans. You will study their importance as pathogens, as well as useful applications, and the increasingly important area of antimicrobial resistance. You will be introduced to the latest advances in microbiology, through a series of laboratory-based classes, where you will also be trained in handling microorganisms and using aseptic techniques to prepare cultures. You will also gain the fundamental practical skills required by microbiologists and biomedical scientists, including performing Gram stains, viable counts, sub-culturing techniques, and maintaining safe and efficient working practices. You will practise in state-of-the-art lab spaces, working in teams, preparing you for work in lab-based careers particularly in biomedical science environments.

### 6b. Outline Content

- Structure, physiology and biochemistry of microorganisms
- Identification and classification of microorganism
- Control of microorganisms including anti-microbial and anti-viral therapy (including drug resistance)
- Growth cycles of representative species of microorganism
- Environmental and public health microbiology
- Pathogenic mechanisms of a range of microorganisms
- laboratory investigation of a range of infectious diseases including isolation and identification of microorganisms
- Infection control and maintaining safe working practice

### 6c. Key Texts/Literature

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

### 6d. Specialist Learning Resources

N/A

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	Discuss the concepts of microbiology with particular reference to taxonomic diversity.
2	Knowledge and Understanding	Compare the evolution and diverse ecology of microorganisms.
3	Intellectual, practical, affective and transferrable skills	Describe the relevance of microorganisms to humans in medical, environmental and industrial contexts.
4	Intellectual, practical, affective and transferrable skills	Recognise practical and problem-solving skills in handling and identifying microorganisms using appropriate aseptic technique.

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	22	1-3	11 x 2hrs lectures/active learning
Other teacher managed learning	14	1-4	5 x 2 hr practicals + 1 x 1 hr introduction + 1 x 2hr revision + 1 hr test
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	60 (%)	Fine Grade	30 (%)
<b>Coursework 1500 word equivalent</b>					

Assessment components for Element 010				
Component No.	Assessment Title	Submission Method	Weighting (%)	Components needed for Mark Calculation?
010/1	Practical Assessment in Class 1	Scheduled Activity: Timetabled assessment task	33 (%)	All
010/2	Practical Assessment in Class 2	Scheduled Activity: Timetabled assessment task	33 (%)	
010/3	Practical Assessment in Class 3	Scheduled Activity: Timetabled assessment task	34 (%)	

Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
011	Coursework	1-3	40 (%)	Fine Grade	30 (%)

**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]**