

## MODULE DESCRIPTOR

### Module Title

Applied Microbiology

Reference	PL1010	Version	1
Created	May 2022	SCQF Level	SCQF 7
Approved	June 2022	SCQF Points	15
Amended	August 2021	ECTS Points	7.5

### Aims of Module

To provide students with a broad knowledge and understanding of microbiology and its application.

### Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Demonstrate knowledge of the main groups of microbes and their diversity in structure and function.
- 2 Demonstrate knowledge of the factors affecting the growth and survival of microbes.
- 3 Demonstrate an understanding of the positive and negative associations of microbes with humans.
- 4 Demonstrate knowledge and understanding of key aspects of practical microbiology.

### Indicative Module Content

History and scope of microbiology. Microbial diversity, structure and function. Microbial growth and its control. Destruction of microbes. Antimicrobial agents. Human indigenous microflora. Public health microbiology, sources of infection, spread of disease, disease control, and hospital infections. Major microbial human diseases. Food pathogens. Toxins. Food spoilage. Applied environmental, industrial, forensic, and clinical microbiology. Microbiological hazards and risk assessment. Collection and preservation of samples. Aseptic technique. Enumeration, isolation and identification of microbes.

### Module Delivery

This is a lecture based module supplemented by tutorials, practical laboratory classes, on-line support material and guided reading.

**Indicative Student Workload**

	Full Time	Part Time
Contact Hours	50	N/A
Non-Contact Hours	100	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

**ASSESSMENT PLAN**

If a major/minor model is used and box is ticked, % weightings below are indicative only.

**Component 1**

Type:	Coursework	Weighting:	100%	Outcomes Assessed:	1, 2, 3, 4
Description:	One exam consisting of objective questions.				

**MODULE PERFORMANCE DESCRIPTOR****Explanatory Text**

Component 1 (EX1) comprises 100% of the module grade. A minimum of a Grade D is required to pass the module.

Module Grade	Minimum Requirements to achieve Module Grade:
<b>A</b>	A
<b>B</b>	B
<b>C</b>	C
<b>D</b>	D
<b>E</b>	E
<b>F</b>	F
<b>NS</b>	Non-submission of work by published deadline or non-attendance for examination

**Module Requirements**

Prerequisites for Module	None, in addition to course entry requirements.
Corequisites for module	None.
Precluded Modules	None.

**INDICATIVE BIBLIOGRAPHY**

- MADIGAN, M.T. et al. 2021, *Brock biology of microorganisms*. 16th ed. Pearson.
- TODAR, K. 2022, *Todar's online textbook of bacteriology*. Todar. .