

## MODULE DESCRIPTOR

### Module Title

Medical Microbiology

Reference	PL3016	Version	1
Created	April 2023	SCQF Level	SCQF 9
Approved	June 2023	SCQF Points	15
Amended	August 2021	ECTS Points	7.5

### Aims of Module

To enable students to comprehend the nature and role of micro-organisms in infectious disease states, their mechanisms of host pathogenesis, and the action of antimicrobial agents for treatment.

### Learning Outcomes for Module

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

- 1 Demonstrate knowledge and understanding of aspects of pathogenic microorganisms that can cause infections in humans.
- 2 Demonstrate knowledge and understanding of the nature of bacterial pathogenesis and virulence mechanisms involving toxins, diagnostic approaches for pathogen identification and the action of antifungal, antiviral or antibacterial antibiotics.
- 3 Demonstrate a logical and systematic approach to the practical application of medical microbiology methods.

### Indicative Module Content

Biology of pathogenic micro-organisms. Epidemiology and public health microbiology. Normal external and internal flora of the human body. Bacterial genetics, pathogenesis and virulence. examples of infectious diseases such as tuberculosis, streptococcal diseases, sexually transmitted infections and influenza. Diagnostic microbiology and rapid microbial detection. Antifungals, antivirals and antibacterial antibiotics that inhibit nucleic acid synthesis, protein synthesis or peptidoglycan synthesis. Development of antibiotic resistance. Novel approaches for treatment.

### Module Delivery

A lecture based approach supplemented with laboratory practical session involving group learning activities, case studies and revision tutorials will be used.

**Indicative Student Workload**

	Full Time	Part Time
Contact Hours	40	N/A
Non-Contact Hours	110	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:	Practical Exam	Weighting:	100%	Outcomes Assessed:	1, 2, 3
Description:	Objective Structured Practical Examination (OSPE) comprising various stations designed to assess knowledge and practical skills				

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

Component 1 (PE1) comprises 100% of the module grade. A minimum of Module Grade D is required to pass the module. Non-submission of either component will result in an NS grade.

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	Successful completion of Stage 2 of the course or equivalent.
Corequisites for module	None.
Precluded Modules	None.

**INDICATIVE BIBLIOGRAPHY**

- 1 Recently published scientific papers pertinent to the subject.
- 2 MADIGAN, M.T., et al. *Brock Biology of Microorganisms*. 15th Edition, 2018: Pearson.