

MODULE DESCRIPTOR

Module Title

Medical Microbiology

Reference	AS3016	Version	9
Created	August 2021	SCQF Level	SCQF 9
Approved	May 2011	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 Discuss and describe aspects of pathogenic microorganisms that can cause infections in humans.
- 2 Explain 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 knowledge and understanding of the practical aspects of medical microbiology.

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: Examination Weighting: 70% Outcomes Assessed: 1, 2
 Description: An unseen, closed book examination

Component 2

Type: Coursework Weighting: 30% Outcomes Assessed: 3
 Description: A closed book test with multiple-choice type questions based on the laboratory coursework.

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

The first grade represents Component 1 (EX1) weighted as major and the second, Component 2 (CW1), weighted as minor. A minimum of Module Grade D is required to pass the module, with compensation of grade E in Component 1 or Component 2 permitted. Non-submission of either component will result in an NS grade.

Module Grade	Minimum Requirements to achieve Module Grade:
A	AA, AB
B	AC, AD, AE, BA, BB, BC, CA
C	BD, BE, CB, CC, CD, DA, DB
D	CE, DC, DD, DE, EA, EB, EC
E	AF, BF, CF, DF, ED, EE, EF, FA, FB, FC, FD
F	FE, FF
NS	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

- No core text book will be used. Instead recently published scientific papers will form the basis of background material.
- MADIGAN, M.T., et al. *Brock Biology of Microorganisms*. Current Edition. Pearson.