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MODULE DESCRIPTOR

Module Title

Applied Microbiology

Reference	AS1010	Version	7
Created	September 2017	SCQF Level	SCQF 7
Approved	May 2011	SCQF Points	15
Amended	March 2018	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 aseptic technique and data handling, analysis, and interpretation skills in relation to microbiological laboratory work.

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:	Examination	Weighting:	70%	Outcomes Assessed:	1, 2, 3
Description:	Unseen closed book written examination.				

Component 2

Type:	Practical Exam	Weighting:	30%	Outcomes Assessed:	4
Description:	Laboratory and data retrieval/interpretation skills tests.				

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

This module is assessed using the two components of assessment as detailed in the Assessment Plan. To pass this module, candidates must achieve a Module Grade D or better.

Module Grade	Minimum Requirements to achieve Module Grade:
A	Final aggregate mark of 70% or greater and a minimum of 35% in C1 and C2
B	Final aggregate mark of between 60-69% and a minimum of 35% in C1 and C2
C	Final aggregate mark of between 50-59% and a minimum of 35% in C1 and C2
D	Final aggregate mark of between 40-49% and a minimum of 35% in C1 and C2
E	MARGINAL FAIL. Final aggregate of between 35-39% and a minimum of 35% in C1 and C2
F	FAIL. A mark of less than 35% in either component
NS	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

- 1 MADIGAN, M.T. et al. 2015, *Brock biology of microorganisms*. 14th ed. Pearson.
- 2 POSTGATE, J.R. 2000, *Microbes and man*. 4th ed. Cambridge University Press.