

Module Title Applied Microbiology	Reference AS1010
	SCQF Level SCQF 7
	SCQF Points 15
	ECTS Points 7.5
Keywords Prokaryotes, eukaryotes, viruses, antimicrobial, infection, aseptic technique, microbial growth, forensic, environmental, clinical.	Created January 2004
	Approved September 2004
	Amended May 2011
	Version No. 4

This Version is No Longer Current

The latest version of this module is available [here](#)

Prerequisites for Module

None, in addition to course entry requirements.

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

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

Learning Outcomes for Module

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

Indicative Student Workload

<i>Contact Hours</i>	Full Time
Assessment	3
Lectures	24
Practicals	17
Tutorials	5

Directed Study

Coursework preparation	35
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Private Study

Private Study	66
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Mode of Delivery

Theoretical material is delivered by lectures and web based materials with supporting tutorials and practical laboratory classes.

Assessment Plan

Learning Outcomes Assessed

1. Describe the main groups of micro-organisms and their diversity in structure and function.
2. Describe the factors affecting the growth and survival of micro-organisms.
3. Describe the positive and negative associations of microbes with humans.
4. Use practical skills in aseptic technique, the safe handling of micro-organisms, and maintain an accurate record of 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.

Component 1	1,2,3
Component 2	4

Component 1 is an examination.

Component 2 is coursework consisting of microbiological laboratory skills and record keeping.

Indicative Bibliography

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

