

Module Title Applied Microbiology	Reference AS1010 SCQF Level SCQF 7 SCQF Points 15 ECTS Points 7.5 Created January 2004 Approved September 2004 Amended September 2014 Version No. 5
Keywords Prokaryotes, eukaryotes, viruses, antimicrobial, infection, aseptic technique, microbial growth, forensic, environmental, clinical.	

This Version is No Longer Current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	4
Lectures	24
Practicals	17
Tutorials	5

Directed Study

Coursework preparation	35
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Private Study

Private Study	65
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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

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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. 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

	Learning Outcomes Assessed
Component 1	1,2,3
Component 2	4

Component 1 is an examination.

Component 2 is coursework consisting of microbiological laboratory skills and an open-book data retrieval and interpretation test.

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.

identification of microbes.