

This Version is No Longer Current

The latest version of this module is available here

| MODULE DESCRIPTOR | | | | | |
|----------------------|------------|-------------|--------|--|--|
| Module Title | | | | | |
| Applied Microbiology | | | | | |
| Reference | AS1010 | Version | 8 | | |
| Created | April 2021 | SCQF Level | SCQF 7 | | |
| Approved | May 2011 | SCQF Points | 15 | | |
| Amended | April 2021 | 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 knowledge and understanding of key aspects of practical microbiology.

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 |
| TOTAL | 150 | N/A |
| Actual Placement hours for professional, statutory or regulatory body | | |

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

| Туре: | Examination | Weighting: | 100% | Outcomes Assessed: | 1, 2, 3, 4 |
|--------------|---|------------|------|--------------------|------------|
| Description: | One exam consisting of objective questions. | | | | |

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

To pass this module, candidates must achieve a Module Grade D or better. Module Grade Minimum Requirements to achieve Module Grade:

| ule Grade | Minimum Requirements to achieve Module Grade: |
|-----------|--|
| Α | Mark of 70% or greater in C1. |
| В | Mark of between 60-69% in C1. |
| С | Mark of between 50-59% in C1. |
| D | Mark of between 40-49% in C1. |
| E | MARGINAL FAIL. Mark of between 35-39% in C1. |
| F | FAIL. A mark of less than 35% in C1. |
| 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.