



## **Module Specification**

### Microbiology

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## Part 1: Information

**Module title:** Microbiology

**Module code:** USSKNF-15-1

**Level:** Level 4

**For implementation from:** 2023-24

**UWE credit rating:** 15

**ECTS credit rating:** 7.5

**Faculty:** Faculty of Health & Applied Sciences

**Department:** HAS Dept of Applied Sciences

**Partner institutions:** None

**Field:** Applied Sciences

**Module type:** Module

**Pre-requisites:** None

**Excluded combinations:** None

**Co-requisites:** None

**Continuing professional development:** No

**Professional, statutory or regulatory body requirements:** None

## Part 2: Description

**Overview:** Not applicable

**Features:** Not applicable

**Educational aims:** This module aims to introduce students to practical microbiological laboratory skills and their theoretical underpinning.

**Outline syllabus:** This module will cover the following topics within the area of microbiology:

Three principal themes will underpin the delivery of this module: Medical, Industrial and Ecological. These themes run throughout the syllabus.

Growth and identification of microorganisms:

Students will develop knowledge of the identification, characterisation and identification of microorganisms. Students will also investigate growth characteristics of microorganisms and variety of nutritional requirements.

Roles of microorganisms in various ecosystems:

Students will develop an understanding of the role and significance of microorganisms in marine and terrestrial ecosystems and their importance in biogeochemical cycles.

Microorganisms in health and disease:

Students will develop an understanding of the role of the normal flora of the human body in both health and disease. Students will be introduced to a variety of infectious diseases, anti-microbial agents and current issues of antibiotic resistance.

Microbial biotechnology:

Students will develop an understanding of the utility of microorganisms within industry and scientific research.

### **Part 3: Teaching and learning methods**

**Teaching and learning methods:** This module is delivered as both laboratory practical classes with underpinning theory delivered through interactive lectures. Students are further supported through the module with data analysis workshops and study skills seminars.

**Module Learning outcomes:** On successful completion of this module students will achieve the following learning outcomes.

**MO1** Investigate the diversity of microorganisms and their roles in e.g. human health; industry; the environment and communicate findings in a presentation format

**MO2** Apply analytical skills to evaluate the efficacy of microbiological techniques in the identification and classification of microorganisms

**MO3** Demonstrate understanding of the efficacy of antimicrobial agents as inhibitors of microbial growth.

**MO4** Understand practical techniques carried out in a microbiology laboratory; analyse and evaluate data derived from laboratory study of microorganisms

**Hours to be allocated:** 150

**Contact hours:**

Independent study/self-guided study = 105 hours

Face-to-face learning = 45 hours

Total = 150

**Reading list:** The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/modules/ussknf-15-1.html) via the following link <https://uwe.rl.talis.com/modules/ussknf-15-1.html>

## **Part 4: Assessment**

**Assessment strategy:** Assessment 1:

A 10 minute oral presentation, followed by a 5 minute Q&A session. This assessment will provide students with an opportunity to demonstrate both their knowledge and science communication skills.

This assessment is underpinned by seminars in which in-class discussions include the presentation topics. This assessment was selected to scaffold to presentation assessments in Research Skills and Laboratory Project USSKNN-30-2 and Work Based Learning USSKNK-15-2.

**Assessment 2:**

Data analysis tasks based on experiments undertaken during laboratory practical classes (2000 words).

This assessment assesses understanding and application of the practical learning experiences provided within this module. This assessment also underpins the practical laboratory assessments for USSKNG-30-1, Practical Cell Biology and Biochemistry.

This assessment is underpinned by supportive workshops and seminars, where experimental results are discussed and analysed.

**Assessment tasks:****Presentation (First Sit)**

Description: Oral Presentation (10 minutes; 5 minute Q+A)

Weighting: 30 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1

**Report (First Sit)**

Description: Data Analysis (2000 words)

Weighting: 70 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3, MO4

**Presentation (Resit)**

Description: Oral Presentation (10 minutes; 5 minute Q+A)

Weighting: 30 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1

**Report (Resit)**

Description: Data Analysis (2000 words)

Weighting: 70 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3, MO4

**Part 5: Contributes towards**

This module contributes towards the following programmes of study:

Biological Laboratory Sciences [UCW] FdSc 2023-24