



## **Module Specification**

### **Research Skills and Laboratory Project**

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## Part 1: Information

**Module title:** Research Skills and Laboratory Project

**Module code:** USSKNN-30-2

**Level:** Level 5

**For implementation from:** 2022-23

**UWE credit rating:** 30

**ECTS credit rating:** 15

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

**Department:** HAS Dept of Applied Sciences

**Partner institutions:** None

**Delivery locations:** University Centre Weston

**Field:** Applied Sciences

**Module type:** Standard

**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:** The module aims to develop research, initiative and project managements skills in students.

**Outline syllabus:** This module will cover the following topics:

- Designing of appropriate experimental procedures to carry out a research project in a biological laboratory. The design of experiments will include choosing the most appropriate methodologies, the use of controls, preparing materials and collection of data.
- Planning and management of a research project will be considered, including health and safety, ethics and use of genetically modified organisms. Discussions will include how to carry out risk assessments for biological sciences work, both in the laboratory and in the field. The use of Material Safety Data Sheets (MSDS) information and Control of Substances Hazardous to Health (COSHH) forms for risk assessment will be included.
- Determination and selection of the appropriate statistical analysis will be employed to interpret the data and carry out appropriate analysis correctly.
- Practical approaches, which will enable students to set up experiments, collect appropriate data, analyse and evaluate data appropriately and present the study to a wider audience.

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

**Teaching and learning methods:** The module is delivered through taught lectures, seminars and practical sessions to promote application of knowledge acquired and analytical and problem-solving skills.

Independent learning includes hours engaged with essential reading around the subject, project preparation and completion.

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

**MO1** Work collaboratively to develop a research proposal and design a project to address the research question.

**MO2** Communicate scientific research effectively in both oral and written formats.

**MO3** Apply effective experimental procedures to gather data and apply appropriate analytical models including statistical analysis.

**MO4** Evaluate and critically discuss research methodology and findings with appropriate links to published data.

**MO5** Evidence team and independent working skills in a research environment.

**Hours to be allocated:** 300

**Contact hours:**

Independent study/self-guided study = 210 hours

Face-to-face learning = 90 hours

Total = 300

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

## **Part 4: Assessment**

**Assessment strategy:** Component A:

A ten minute presentation followed by a ten minute Viva voce.

Students individually present their group research proposal and demonstrate their understanding of the research process through the subsequent Viva voce.

This assessment has been selected to build collaborative working and research skills and to ensure that the scope and nature of the project is both feasible and justified.

This assessment is underpinned by the presentation assessment in USSKNF-15-1 (Microbiology) and by discursive sessions where students work with staff on research skills and methodologies.

Component B:

A research project report. The report contains a background, which justifies the project; a methodology; results with appropriate data analysis and a discussion of the results in the context of the wider literature.

This assessment has been selected to develop research, analytical and academic communication skills. Opportunities for formative feedback are built into teaching and practical sessions, through discussion, analysis of collected data and evaluation of current research.

**Assessment components:****Presentation - Component A (First Sit)**

Description: Oral Presentation (10 minutes) and 10 minute viva.

Weighting: 30 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO4, MO5

**Project - Component B (First Sit)**

Description: Research project (3500 words)

Weighting: 70 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3, MO4, MO5

**Presentation - Component A (Resit)**

Description: Oral Presentation (10 minutes) and 10 minute viva.

Weighting: 30 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO4, MO5

**Project - Component B (Resit)**

Description: Research project (3500 words)

Weighting: 70 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3, MO4, MO5

## **Part 5: Contributes towards**

This module contributes towards the following programmes of study:

Biological Laboratory Sciences [Sep][FT][UCW][2yrs] FdSc 2021-22