



Module Specification

Biomedical Skills

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Part 1: Information

Module title: Biomedical Skills

Module code: USSKA5-30-1

Level: Level 4

For implementation from: 2024-25

UWE credit rating: 30

ECTS credit rating: 15

College: College of Health, Science & Society

School: CHSS School 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: This module will bridge the gap between biological and chemical systems and introduce practical skills directly linked to biomedical practice.

Features: Not applicable

Educational aims: This module aims to prepare students for the sorts of problem solving, analytical, professional, and practical skills they will require as practicing biomedical scientists in the NHS. These skills, though rooted in healthcare diagnostic

laboratory practice, are transferable to a range of biomedical related fields, and will help ready them for their case-study based work and research project in later levels of study.

Outline syllabus: Problem solving skills: Covers the development of problem solving numeric and data analysis skills.

Laboratory skills: Covers fundamental techniques and skills required as a practicing scientist, including appropriate equipment use (including but not limited to as pipettes, spectrophotometers), appropriate preparation methods (including but not limited to dilutions, pH readings/buffers), and appropriate recording methods.

Study and Professional skills: Covers necessary digital and academic skills for scientific research and reporting, including scientific writing, statistical packages, presentation and document creation, referencing, experimental design.

Chemistry and Pharmacology: Covers the introduction of pharmacology as it relates to biomedical and healthcare practice, and the relationships between pharmacological development, preparation and use in regard affects on human physiology and disease.

Part 3: Teaching and learning methods

Teaching and learning methods: Scheduled learning includes lectures, tutorials, practical computer classes and laboratory workshops. Practical classes will put skills relevant to the lecture material into practice, with relevant data collection where appropriate. PC practical or mathematical/statistical tutorials will be used to analyse data collected in the practical classes, or to learn how to present data or other findings using the appropriate software package and/or digital skills.

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

MO1 Present, analyse and interpret laboratory data using appropriate mathematical, statistical and communication skills, and perform basic scientific

calculations relevant to healthcare and the biomedical sciences and use statistical methods to describe datasets using a variety of techniques.

MO2 Understand key concepts in drug chemistry and pharmacology, and recognise and describe a range of routine analytical techniques available for the chemical analysis of biological molecules.

MO3 Correctly, safely, and professionally carry out general and specialised laboratory skills and techniques as they relate to clinical and fundamental biomedical science in practice and research

MO4 Demonstrate an understanding and application of key professional skills, including good laboratory practice, as expected of a registered biomedical scientist.

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 228 hours

Face-to-face learning = 72 hours

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/modules/usska5-30-1.html) via the following link <https://uwe.rl.talis.com/modules/usska5-30-1.html>

Part 4: Assessment

Assessment strategy: Assessment 1: Online Assignment

This assessment consists of five (4/5 count) 30 minute online, in-class tests using randomised datasets that assesses a student's ability to work with data, analysis of data, demonstrate understanding of numeracy, and of statistical analysis. Students are supported to succeed in this assessment through unlimited opportunities to engage with practice questions.

Assessment 2: Practical Skills Assessment

A laboratory-based assessment (90 minutes) consisting of several "stations" where

students are expected to carry out previously taught analytical, instrumental, or other fundamental scientific techniques accurately and professionally. Students are supported to succeed in this assessment through multiple practice opportunities within the practical laboratory series and discursive elements within the accompanying tutorials.

Assessment tasks:**Online Assignment (First Sit)**

Description: Numeracy tests (5 x 30 minute in-class tests)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1

Practical Skills Assessment (First Sit)

Description: Practical skills assessment (90 minutes).

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO2, MO3, MO4

Online Assignment (Resit)

Description: Numeracy tests- 3 x 30 minute tests (best 2 count)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1

Practical Skills Assessment (Resit)

Description: Practical skills assessment (90 minutes).

Weighting: 50 %

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:

Biomedical Science {Foundation} [Frenchay] BSc (Hons) 2023-24

Biomedical Science {Foundation} [Frenchay] MSci 2023-24

Biomedical Science [Frenchay] - Withdrawn MSci 2024-25

Biomedical Science [Frenchay] BSc (Hons) 2024-25

Biomedical Science [Frenchay] BSc (Hons) 2024-25

Biomedical Science [Frenchay] BSc (Hons) 2023-24

Biomedical Science [Frenchay] MSci 2023-24

Biomedical Science [Frenchay] - Withdrawn MSci 2024-25

Biomedical Science [Frenchay] BSc (Hons) 2024-25

Biomedical Science [Frenchay] BSc (Hons) 2024-25