Module Specification

Skills for Biosciences

Version: 2023-24, v4.0, 31 May 2023

Contents

Part 1: Information

Module title: Skills for Biosciences

Module code: USSKA6-30-1

Level: Level 4

For implementation from: 2023-24

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: Not in use for Modules

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: As biological scientists you need to be equipped with skills and knowledge that allow you to work in a safe, competent and confident manner. This module will introduce you to analytical techniques, data handling and statistical

methods used within the research process. In this module you will be introduced to a range of practical and transferable skills including scientific writing, teamwork and research practices. Aspects of personal development will be discussed and employment/career options assessed. The skills you will learn within this module will form the basis for your work at level 2.

Outline syllabus: You will cover:

The principles and application of different analytical techniques used to carry out work in a biological laboratory.

How to determine which statistical analysis is needed to interpret data.

The use of statistical methods to analyse and describe experimental data sets.

An introduction to health and safety in the laboratory.

An introduction to independent learning with reference to academic reading, searching of the literature, scientific writing, referencing and plagiarism.

Reflection upon your personal development and acquisition of graduate skills including teamwork, numeracy and academic integrity.

Part 3: Teaching and learning methods

Teaching and learning methods: See assessment strategy

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

MO1 Demonstrate the ability to apply and interpret statistical methods to example data

MO2 Understand how different experimental techniques are used to carry out work in a biological laboratory

MO3 Understand the concepts of accuracy and precision, SI units, molar and % solutions, dilutions and pH

MO4 Carry out laboratory procedures safely to analyse sets of data

MO5 Begin to evaluate, manage and discuss information drawn from a variety of sources

MO6 Begin to develop the skills necessary for independent study

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 232 hours

Face-to-face learning = 68 hours

Total = 300

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link https://uwe.rl.talis.com/modules/usska6-30-1.html

Part 4: Assessment

Assessment strategy: The assessment strategy for this module has been designed to support and enhance the development of both subject-based and generic key skills, whilst ensuring that the modules learning outcomes are attained.

The literature review provides the opportunity for the student to complete an overview of their selected topic by reviewing and synthesising information from published research.

The poster assignment provides students with experience in presenting, interpreting and discussing data from the practical sessions. This assignment represents a scaffold which will be developed further at levels 2 (Research Skills) and 3 (Research experimental project/dissertation).

Assessment task A is an online examination with a 24 hour window for completion. This method of assessment allows students to present their knowledge and understanding of the subject and to demonstrate their ability to undertake calculations, display data and interpret statistical tests.

Opportunities for formative assessment and feedback are built into the assignments and through review of past exam papers and scheduled revision sessions. All work is marked in line with the Faculty Generic Assessment Criteria and conforms to the University policies for the setting, collection, marking and return of student work. Assessments are described in the Module handbook that is supplied at the start of module.

Assessment components:

Poster (First Sit)
Description: Poster
Weighting: 45 %
Final assessment: No
Group work: No
Learning outcomes tested: MO2, MO3, MO4, MO6

Written Assignment (First Sit)
Description: Essay – literature review (500 words)
Weighting: 15 %
Final assessment: No
Group work: No
Learning outcomes tested: MO5, MO6

Examination (Online) (First Sit)
Description: Online examination (24 hours)
Weighting: 40 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3

Poster (Resit)
Description: Poster
Weighting: 45 %
Final assessment: No
Group work: No
Learning outcomes tested: MO2, MO3, MO4, MO6

Written Assignment (Resit)
Description: Essay – literature review (500 words)
Weighting: 15 %
Final assessment: No
Group work: No
Learning outcomes tested: MO5, MO6

Examination (Online) (Resit)
Description: Online examination (24 hours)
Weighting: 40 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Biological Sciences [Frenchay] MSci 2023-24

Biological Sciences [Frenchay] BSc (Hons) 2023-24

Biological Sciences {Foundation} [Frenchay] MSci 2022-23

Biological Sciences {Foundation} [Frenchay] BSc (Hons) 2022-23