



Module Specification

Biology in Practice

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Contents

Module Specification	1
Part 1: Information	2
Part 2: Description	2
Part 3: Teaching and learning methods	3
Part 4: Assessment.....	4
Part 5: Contributes towards	7

Part 1: Information

Module title: Biology in Practice

Module code: USSKCJ-30-0

Level: Level 3

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: Frenchay Campus

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: This module will cover the broad range of biological principles which underpin the applied sciences.

Features: Not applicable

Educational aims: This module aims to provide students with the underlying biology knowledge required for success at level 4 in any of the programmes in applied sciences.

Outline syllabus: This module will introduce you to the central themes in biology, including the following topics:

The criteria of life, the cell as the unit of life and the establishment and use of the genetic blueprint.

Biomolecules as building blocks of life.

Metabolic biochemistry with an emphasis on catabolism and energy capture.

Membrane structure and function.

Comparative animal physiology.

Comparative aspects of whole organism physiology.

Principles of taxonomy and classification.

Evolution.

Ecology.

Ecosystems and the stresses upon the environment.

Plants – form and function.

Microbiology and biotechnology.

Part 3: Teaching and learning methods

Teaching and learning methods: Scheduled learning will include lectures, laboratory classes, tutorial classes and themed drop-in sessions .

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

MO1 Describe the principles of organism taxonomy and classification of organisms into Kingdoms, Phyla, genera, species and sub-species groups

MO2 Demonstrate a knowledge of the criteria of life and the cell as the unit of life, together with its component organelles

MO3 Show an understanding of the principles and mechanisms of genetics and evolution, metabolic pathways and biological energetics

MO4 Understand how knowledge of biology can be utilised in application areas including biomedical, forensic, ecology, conservation and environmental sciences

MO5 Conduct practical laboratory methods used in biological study and interpret and report their observations

MO6 Use library systems and information retrieval for biological study

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 234 hours

Face-to-face learning = 66 hours

Total = 300

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/modules/usskcj-30-0.html) via the following link <https://uwe.rl.talis.com/modules/usskcj-30-0.html>

Part 4: Assessment

Assessment strategy: Component A :

Online Examination (24 hours): 40% of module.

This assessment has been selected to assess the students' knowledge acquired during lectures, tutorials and practical sessions, in addition to their own independent learning. Students are supported in this assessment through the discussion of specimen exam papers in tutorial classes. Themed drop-in sessions cover approaches to exam preparation and completion.

Component B

Work Item B1: Essay (500 words): 30% of module

Students will write an essay, on a set topic related to their lecture and tutorial material. The essay is designed to encourage students to use library systems and practice information retrieval and referencing using the UWE Harvard system. Students are supported in this assessment through sessions with library staff (in USSKCL-30-0), essay writing tutorial classes and drop-in sessions.

Work Item B2: Laboratory Report (1000 words): 30% of module

Students will undertake laboratory experiments designed to learn basic biological and microbiological laboratory investigations. Their ability to interpret and report their results and observations will be formally assessed by a laboratory practical write-up. Students are supported by tutorial classes on how to write a laboratory report and review examples in class.

Assessment components:**Examination (Online) - Component A (First Sit)**

Description: Online Exam (24 hours)

Weighting: 40 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Written Assignment - Component B (First Sit)

Description: Essay

Weighting: 30 %

Final assessment: No

Group work: No

Learning outcomes tested: MO3, MO4, MO6

Laboratory Report - Component B (First Sit)

Description: Laboratory Practical Write-up

Weighting: 30 %

Final assessment: No

Group work: No

Learning outcomes tested: MO4, MO5, MO6

Examination (Online) - Component A (Resit)

Description: Online Exam (24 hours)

Weighting: 40 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Written Assignment - Component B (Resit)

Description: Essay

Weighting: 30 %

Final assessment: No

Group work: No

Learning outcomes tested: MO3, MO4, MO6

Laboratory Report - Component B (Resit)

Description: Laboratory Report

Weighting: 30 %

Final assessment: No

Group work: No

Learning outcomes tested: MO4, MO5, MO6

Part 5: Contributes towards

This module contributes towards the following programmes of study:

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

Biomedical Science {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2022-23

Biomedical Science {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2022-23

Biomedical Science {Foundation} [Sep][SW][Frenchay][6yrs] MSci 2022-23

Biomedical Science {Foundation} [Sep][FT][Frenchay][5yrs] MSci 2022-23

Biological Sciences {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2022-23

Biological Sciences {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2022-23

Healthcare Science (Blood Science) {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2022-23

Healthcare Science (Infection Science) {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2022-23

Healthcare Science (Tissue Science) {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2022-23

Healthcare Science (Genetic Science) {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2022-23

Forensic Science {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2022-23

Forensic Science {Foundation} [Sep][FT][Frenchay][5yrs] MSci 2022-23

Forensic Science {Foundation} [Sep][SW][Frenchay][6yrs] MSci 2022-23

Environmental Science {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2022-23

Environmental Science {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2022-23

Environmental Science {Foundation} [Sep][SW][Frenchay][6yrs] MSci 2022-23

Wildlife Ecology and Conservation Science {Foundation} [Sep][SW][Frenchay][6yrs] MSci 2022-23

Wildlife Ecology and Conservation Science {Foundation} [Sep][FT][Frenchay][5yrs] MSci 2022-23

Environmental Science {Foundation} [Sep][FT][Frenchay][5yrs] MSci 2022-23

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

Forensic Science {Foundation} [Frenchay] BSc (Hons) 2022-23

Forensic Science {Foundation} [Frenchay] MSci 2022-23

Biological Sciences {Foundation} [Sep][SW][Frenchay][6yrs] MSci 2022-23

Biological Sciences {Foundation} [Sep][FT][Frenchay][5yrs] MSci 2022-23

Forensic Science {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2022-23