



Module Specification

Genetics

Version: 2023-24, v2.0, 16 Jun 2023

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	5

Part 1: Information

Module title: Genetics

Module code: USSKFQ-15-2

Level: Level 5

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: Cells, Biochemistry and Genetics 2022-23, Human Biological Systems 2022-23

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: Pre-requisites: students must take one out of USSKA4-30-1 Cells, Biochemistry & Genetics OR USSJRU-30-1 Human Biological Systems .

Features: Not applicable

Educational aims: Genetics is concerned with the study of genes and function, the techniques that enable their study and inherent genetic variation and change within

organisms. This module is about the key molecules that underpins this – DNA, RNA and proteins – providing the key to our understanding of life.

Outline syllabus: The module reviews our current understanding of our genetic blueprint & the current techniques which have enabled this analysis and the significance such knowledge has for both health and society.

Part 3: Teaching and learning methods

Teaching and learning methods: The module will be delivered by a combination of key lecture topics and themes providing opportunities for linking through to current publications and tutorial support to encourage independent study. Practical experience and skills will be gained through the embedded extended research practicals.

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

MO1 Compare the structure & organization of genomes within organisms, contrasting the processes of gene expression & regulation in prokaryotes and eukaryotes appreciating the importance of the epigenome .

MO2 Review the current techniques used for the isolation, manipulation, cloning and characterization of genes & their products within organisms with a focus on human genome .

MO3 Describe current & potential applications of genetics and ethical issues raised .

MO4 Have acquired an appreciation of the research process through gaining practical experience of molecular genetics & be able to interpret data obtained, using appropriate information technology resources to seek, retrieve, interpret & present subject specific material to appropriate 'audiences' .

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 114 hours

Face-to-face learning = 36 hours

Total = 150

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/lists/219D938B-8336-0D14-DD69-84706A8D8422.html) via the following link <https://uwe.rl.talis.com/lists/219D938B-8336-0D14-DD69-84706A8D8422.html>

Part 4: Assessment

Assessment strategy: The assessment strategy for this module is follows:

Assessment 1 is an extended research practical assessment, which involves the isolation, cloning & characterisation of genes from a eukaryotic organism. It will provide an opportunity to gain the practical skills necessary to clone genes and extend key skills by writing up the findings in a research paper format. As this involves both individual and group working the opportunity for sharing some good practice is provided alongside gaining unique data, inherently designing out plagiarism.

Assessment 2 is an examination paper, to enable assessment of broad principles along with specific depth and detail in places. Including seen questions will enable prior formative assessment feedback to be used to potentially enhance performance.

The choice of assessment extends the range and diversity of modes of assessment used in the programmes.

Assessment tasks:

Report (First Sit)

Description: Extended research practical report (1500 words)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO3, MO4

Examination (Online) (First Sit)

Description: Written exam (24 hours)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3

Report (Resit)

Description: Extended research practical report (1500 words)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO3, MO4

Examination (Online) (Resit)

Description: Written exam (24 hours)

Weighting: 50 %

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 2022-23

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

Biological Sciences {Foundation} [Sep][SW][Frenchay][6yrs] MSci 2021-22

Biological Sciences {Foundation} [Sep][FT][Frenchay][5yrs] MSci 2021-22

Biological Sciences {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2021-22

Biological Sciences {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2021-22