



Module Specification

Introduction to Biology of Disease

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Part 1: Information

Module title: Introduction to Biology of Disease

Module code: USSJT7-30-1

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: Frenchay Campus

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 provides apprentices with an underpinning knowledge of biological structures and processes, which are involved in the development of diseases.

Features: Not applicable

Educational aims: This module aims to provide apprentices with the biological basis to understand the diseases that are diagnosed, monitored and treated in their workplaces.

Outline syllabus: Biological chemistry: The properties and structures of biochemical building blocks and macromolecules: key features and properties of nucleic acids, amino acids, proteins, lipids and carbohydrates.

Structure and function of eukaryotic cells and their organelles.

Introduction to genetics including DNA damage, mutation, and disease.

Introduction to the biology of infectious diseases; microbes; infection control parameters.

Introduction to the biology of liver and metabolic disease; carcinogenesis, and neoplasia; arterial disease and atherosclerosis and haemopoiesis; Immunology and inflammation.

Part 3: Teaching and learning methods

Teaching and learning methods: The theoretical material is delivered as interactive lectures and supported by directed reading, laboratory practical activities and directed tasks. The practical work will support and extend lecture material and will include data interpretation.

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

MO1 Demonstrate an understanding of the links between genetics and disease.

MO2 Describe the structure and function of eukaryotic cells and their organelles and the properties and structures of biochemical building blocks and macromolecules.

MO3 Explain the importance of diverse pathogenic microorganisms e.g. bacteria, viruses, fungi and parasites in the context of disease and infection control.

MO4 Describe some of the major causes of non-communicable human diseases and explain their biological basis.

MO5 Apply theoretical knowledge on the biology of disease to the workplace context and communicate this effectively to a scientific audience.

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 228 hours

Face-to-face learning = 72 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/ussjt7-30-1.html) via the following link <https://uwe.rl.talis.com/modules/ussjt7-30-1.html>

Part 4: Assessment

Assessment strategy: Assessment 1:

Presentation to module team. 10 minutes presentation and 5 minute Q+A.

Apprentices will present on a disease of their choosing. This assessment gives apprentices the ability to link the theoretical knowledge gained in the module to their workplace practice. The presentation also allows students to develop their skills with respect to the communication of technical information at appropriate levels.

Apprentices will be supported to succeed in this assessment through coursework support sessions.

Assessment 2:

The set exercise has been selected to assess the breadth of the syllabus and will allow apprentices some flexibility over question choice.

Apprentices will be supported to succeed in this assessment through exemplar questions used at the end of each lecture session and by the provision of practice exercises.

Assessment components:**Presentation (First Sit)**

Description: A 10 minute presentation and 5 minute Q+A.

Weighting: 40 %

Final assessment: No

Group work: No

Learning outcomes tested: MO3, MO4, MO5

Set Exercise (First Sit)

Description: Set Exercise

Weighting: 60 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Presentation (Resit)

Description: 10 minute presentation and 5 minute Q+A

Weighting: 40 %

Final assessment: No

Group work: No

Learning outcomes tested: MO3, MO4, MO5

Set Exercise (Resit)

Description: Set Exercise

Weighting: 60 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Healthcare Science (Respiratory & Sleep Physiology) {Apprenticeship-UWE}
[Frenchay] BSc (Hons) 2023-24

Healthcare Science (Radiation Physics) {Apprenticeship-UWE} [Frenchay] BSc
(Hons) 2023-24

Healthcare Science (Neurophysiology) {Apprenticeship-UWE} [Frenchay] BSc
(Hons) 2023-24

Healthcare Science (Rehabilitation Engineering) {Apprenticeship-UWE} [Frenchay]
BSc (Hons) 2023-24

Healthcare Science (Radiotherapy Physics) {Apprenticeship-UWE} [Frenchay] BSc
(Hons) 2023-24

Healthcare Science (Radiation Engineering) {Apprenticeship-UWE} [Frenchay] BSc
(Hons) 2023-24

Healthcare Science (Cardiac Physiology) {Apprenticeship-UWE} [Frenchay] BSc
(Hons) 2023-24

Healthcare Science (Renal Technology) {Apprenticeship-UWE} [Frenchay] BSc
(Hons) 2023-24

Healthcare Science (Medical Engineering) {Apprenticeship-UWE} [Frenchay] BSc
(Hons) 2023-24

Healthcare Science (Nuclear Medicine) {Apprenticeship-UWE} [Frenchay] BSc
(Hons) 2023-24