



## **Module Specification**

# **Scientific Basis of Physiological Sciences**

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## Part 1: Information

**Module title:** Scientific Basis of Physiological Sciences

**Module code:** USSJQY-45-1

**Level:** Level 4

**For implementation from:** 2024-25

**UWE credit rating:** 45

**ECTS credit rating:** 22.5

**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 provides the comprehensive science background to provide apprentices with an introduction to appropriate knowledge in anatomy, physiology, pharmacology, biochemistry, genetics and physics, required for the role of a physiological scientist within Healthcare Science.

**Features:** Not applicable

**Educational aims:** The overall aim of this introductory module is to provide all apprentices with a broad knowledge and understanding of clinical science and scientific knowledge, contextualised to the practice of healthcare science and the services provided by their HCS division/specialism. As an introductory module it will provide an overview and reinforcement of key concepts with respect to the organisation, structure and function of the body, and the introduction to health and disease, clinical pharmacology and therapeutics, genomics, personalised medicine and patient centred care.

**Outline syllabus:** This module is designed to provide apprentices with an introduction to broad scientific knowledge to underpin their future practice, and to provide the foundations for study in healthcare science. The syllabus includes an introduction to:

- the organisation of the human body, from molecular to systems level.
- the structure and function of body systems, including embryology, anatomy, physiology, immunology and biochemistry.
- genetics and genomics in the context of your specialism.
- the disease and pathological processes, in the context of your specialism.
- pharmacology , therapeutics and clinical management in the context of your specialism.
- epidemiology, microbiology and infection control, health informatics and patient centred care and wellbeing in physiological sciences.
- physiological measurement techniques and instrumentation in the context of your specialism.
- Healthcare Science and multidisciplinary working in the clinical setting.

### **Part 3: Teaching and learning methods**

**Teaching and learning methods:** This module will be delivered via a blended approach of on-campus practical and skills development activities held during block release weeks, and online lectures, seminars and tutorials, held throughout the academic year

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

**MO1** Demonstrate a broad knowledge base of the structure and function of body systems and to be able to apply that knowledge to practice within physiological science specialisms.

**MO2** Demonstrate an understanding of disease processes relevant to the practice of physiological science specialisms within Healthcare Science.

**MO3** Demonstrate an understanding of therapeutics in the context of your healthcare science discipline.

**MO4** Demonstrate an understanding of the science that underpins physiological measurement and instrumentation.

**MO5** Demonstrate the importance of patient centred care and multidisciplinary working.

**Hours to be allocated:** 450

**Contact hours:**

Independent study/self-guided study = 102 hours

Face-to-face learning = 108 hours

Total = 210

**Reading list:** The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/modules/ussjqy-45-1.html) via the following link <https://uwe.rl.talis.com/modules/ussjqy-45-1.html>

## **Part 4: Assessment**

**Assessment strategy:** The assessments within this module will allow the apprentices to demonstrate knowledge of the science underpinning disease and patient management, with the physiological sciences. Apprentices will be supported in their training, during block week practical and demonstration sessions, online tutorials, and work-based training throughout the academic year. Specific

coursework tutorial/guidance sessions will be provided for each assessment on this module, including guidance on peer assessment.

#### Assessment 1: Written Assignment

A 2000 word written assignment where apprentices will describe the holistic patient journey from point of referral to outcome. This assignment will include details of the patient presentation, symptoms and referral, the disease and science underpinning the pathophysiology, diagnostic techniques and treatment strategy, and future care.

#### Assessment 2: Set Exercise (3 hours)

A team based activity involving inter-specialism collaboration, enabling apprentices to demonstrate their knowledge and understanding of their own physiological science discipline, and how this relates to other specialisms within the physiological sciences. This assessment will comprise a series of 6-8 scenarios. For each scenario, the apprentices will be presented with a task, and they will need to work together, using their knowledge of basic and clinical science to find an appropriate outcome. This assessment will involve peer marking where each apprentice will mark the contribution of the other team members, as well as marks awarded by service users involved in the scenarios, and academic staff observing and scoring the activities.

#### **Assessment tasks:**

##### **Written Assignment (First Sit)**

Description: A 2000 word written assignment.

Weighting: 70 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

##### **Set Exercise (First Sit)**

Description: A team based activity involving inter-specialism collaboration. (3 hours)

Weighting: 30 %

Final assessment: Yes

Group work: Yes

Learning outcomes tested: MO1, MO2, MO3, MO4, MO5

**Written Assignment (Resit)**

Description: A 2000 word written assignment.

Weighting: 70 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

**Set Exercise (Resit)**

Description: A team based activity involving inter-specialism collaboration.

Weighting: 30 %

Final assessment: Yes

Group work: Yes

Learning outcomes tested: MO1, MO2, MO3, MO4, MO5

**Part 5: Contributes towards**

This module contributes towards the following programmes of study:

Healthcare Science (Cardiac Physiology) {Apprenticeship-UWE} [Frenchay] BSc (Hons) 2024-25

Healthcare Science (Neurophysiology) {Apprenticeship-UWE} [Frenchay] BSc (Hons) 2024-25

Healthcare Science (Respiratory & Sleep Physiology) {Apprenticeship-UWE} [Frenchay] BSc (Hons) 2024-25