



## **Module Specification**

### **Human Physiology**

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

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## Part 1: Information

**Module title:** Human Physiology

**Module code:** USSJXV-30-2

**Level:** Level 5

**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

**Field:**

**Module type:** Module

**Pre-requisites:** Human Anatomy and Physiology 2022-23

**Excluded combinations:** None

**Co-requisites:** None

**Continuing professional development:** No

**Professional, statutory or regulatory body requirements:** None

## Part 2: Description

**Overview:** The module will provide you with an introduction to the science that underpins human health; from cells through to systems that regulate everyday functions. You will explore the core concepts of human physiology with some examples of diseases in order to underpin your understanding of the normal physiology that controls the internal environment of the human body.

**Features:** Not applicable

**Educational aims:** See Learning Outcomes.

**Outline syllabus:** Neuroanatomy and physiology, somatic and autonomic nervous system, structural organization of the central nervous system (CNS) and function of individual regions, organization and function of the peripheral nervous system (PNS), sensory systems: vision, hearing, taste, smell and pain, somatic neuromuscular control; types of muscle as effectors. Disorders of the nervous system.

Cardiovascular system: cardiac muscle and intrinsic properties of the heart; extrinsic control; vascular system and peripheral resistance; regulation of cardiovascular parameters such as blood pressure. How the physiological processes described are evoked and/or altered during various abnormal cardiovascular states.

Respiration: mechanics of lung ventilation; neural and chemical control; gas exchange and transport including acid-base considerations, changes in breathing patterns during physiological stress

Metabolism and growth: digestion; structure and functional differentiation of human digestive tract; examples of integration of neural and endocrine control of motility and digestive secretions; metabolism and energy balance, physiology of vomiting  
endocrinology: selected examples from the endocrine system will be used to illustrate the role of hormones in homeostatic systems; physiological consequences of hormonal imbalance, endocrine disorders.

Renal and bladder physiology: nephron form and function; bladder structure and function, measures of function such as renal clearance, bladder compliance, detrusor pressure, fluid, electrolyte and acid-base balance; endocrinology as appropriate, including ADH, Aldosterone, ANP, Renin-Angiotensin system.

Applied physiology: examples of the integrative functioning of physiological systems under stress, to include dynamic, sustained exercise; extreme heat; stress, high altitude and the general adaptation syndrome.

### Part 3: Teaching and learning methods

**Teaching and learning methods:** You will learn the coupling of different body structures with function through a series of lectures and virtual practical sessions.

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

**MO1** Explain the principles of operation of the major physiological systems (as in the condition of health), with particular reference to homeostasis

**MO2** Relate particular practical investigative instrumentation / techniques in human physiology and pharmacology to the principles of operation noted above

**MO3** Interpret data derived from practical investigations of physiology.

**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/ussjxv-30-2.html) via the following link <https://uwe.rl.talis.com/modules/ussjxv-30-2.html>

### Part 4: Assessment

**Assessment strategy:** Assessment 1:

Assessment 1 is a scientific report. This will require the application of learning from lectures and practicals.

Assessment 2: Examination (online)

Assessment 2 is an online exam. This assessment will test the full range of learning outcomes and will provide a valuable learning experience through recalling, applying

and demonstrating knowledge which will be of benefit when progressing to final year modules.

Students are provided with formative feed-forward for their exam through a revision and exam preparation session.

**Assessment tasks:**

**Report (First Sit)**

Description: Scientific report (2000 words)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3

**Examination (Online) (First Sit)**

Description: Online examination (24 hours)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1

**Report (Resit)**

Description: Scientific report (2000 words)

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3

**Examination (Online) (Resit)**

Description: Online examination (24 hours)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1

## Part 5: Contributes towards

This module contributes towards the following programmes of study:

Biological Sciences [Frenchay] MSci 2022-23

Applied Biomedical Science [Frenchay] BSc (Hons) 2022-23

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

Biomedical Science [Frenchay] BSc (Hons) 2022-23

Biomedical Science [Frenchay] MSci 2022-23

Biomedical Science [Sep][PT][Frenchay][6yrs] BSc (Hons) 2021-22

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

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

Biomedical Science [Sep][PT][Frenchay][8yrs] MSci 2021-22

Biomedical Science {Foundation} [Sep][SW][Frenchay][6yrs] MSci 2021-22

Biomedical Science {Foundation} [Sep][FT][Frenchay][5yrs] MSci 2021-22

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

Biomedical Science [Sep][PT][Frenchay][6yrs] BSc (Hons) 2020-21

Biomedical Science [Sep][PT][Frenchay][8yrs] MSci 2020-21