Module Specification

Human Physiology

Version: 2025-26, v3.0, Approved

Contents

Part 1: Information

Module title: Human Physiology

Module code: USSJXV-30-2

Level: Level 5

For implementation from: 2025-26

UWE credit rating: 30

ECTS credit rating: 15

College: College of Health, Science & Society

School: CHSS School of Applied Sciences

Partner institutions: None

Field: Applied Sciences

Module type: Module

Pre-requisites: Human Anatomy and Physiology 2024-25, Human Anatomy and Physiology 2025-26

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.

Pre-requisites: Students must have passed USSKA3-30-1 Human Anatomy and Physiology before starting this module

Features: Not applicable

Educational aims: This module aims to equip students with a fundamental understanding of human physiology, from cellular mechanisms to whole-body systems, with a focus on homeostasis and regulatory processes. Students will develop critical analytical skills to interpret physiological data and explore the impact of disease states on normal physiological function.

Outline syllabus: The indicative syllabus of the module is as follows:

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: The module is delivered as a mixture of interactive lectures and 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 Apply physiological principles to interpret how different organ systems respond to stress and pathological conditions.

MO3 Demonstrate competency in practical investigative techniques used in human physiology, including data collection, analysis, and interpretation.

MO4 Critically analyse experimental and clinical data to assess physiological function and relate findings to real-world applications in health and disease.

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 228 hours

Face-to-face learning = 72 hours

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link https://uwe.rl.talis.com/modules/ussjxv-30-2.html

Part 4: Assessment

Assessment strategy: Assessment 1: Portfolio (Maximum 2000 words)
A scientific portfolio spanning the breadth of the practical classes. This assessment will require the application of learning from across the taught course. Students will be supported with early submission feedback opportunities.

Assessment 2: Examination (online 24 hours)
This assessment will provide a valuable learning experience through recalling, applying and demonstrating knowledge which will be of benefit when progressing to final year modules. This assessment will test knowledge and application of key theoretical concepts. Students are supported to succeed by a specimen exam paper and formative feed-forward through a revision and exam preparation session.

Assessment tasks:

Portfolio (First Sit)
Description: Scientific portfolio (2000 words)
Weighting: 50 %
Final assessment: No
Group work: No
Learning outcomes tested: MO3, MO4

Examination (Online) (First Sit)
Description: Online examination (24 hours)
Weighting: 50 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2

Portfolio (Resit)
Description: Scientific portfolio (2000 words)
Weighting: 50 %

Final assessment: No
Group work: No
Learning outcomes tested: MO3, MO4

Examination (Online) (Resit)
Description: Online examination (24 hours)
Weighting: 50 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Rehabilitation {JEP} [Hainan] BSc (Hons) 2023-24

Biological Sciences {Foundation} [Frenchay] BSc (Hons) 2023-24

Biological Sciences {Foundation} [Frenchay] MSci 2023-24

Biomedical Science [Frenchay] BSc (Hons) 2023-24

Biomedical Science {Foundation} [Frenchay] BSc (Hons) 2023-24

Biomedical Science [Frenchay] MSci 2023-24

Biomedical Science {Foundation} [Frenchay] MSci 2023-24

Biomedical Science [Frenchay] - WITHDRAWN MSci 2024-25

Biomedical Science [Frenchay] BSc (Hons) 2024-25

Biological Sciences [Frenchay] BSc (Hons) 2024-25

Biological Sciences [Frenchay] - WITHDRAWN MSci 2024-25

Biomedical Science [Frenchay] BSc (Hons) 2024-25

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

Biomedical Science [Frenchay] MSci 2022-23