Module Specification

Life Sciences for Paramedic Practice

Version: 2022-23, v2.0, 09 Jun 2022

Contents

Part 1: Information

Module title: Life Sciences for Paramedic Practice

Module code: UZYSVA-30-1

Level: Level 4

For implementation from: 2022-23

UWE credit rating: 30

ECTS credit rating: 15

Faculty: Faculty of Health & Applied Sciences

Department: HAS School of Health and Social Wellbeing

Partner institutions: None

Delivery locations: Glenside Campus

Field: Allied Health Professions

Module type: Standard

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 will introduce you to the fundamentals of anatomy and physiology that underpin your professional practice. It will cover the basic structure and function of major bodily systems. Students will learn essential principles of anatomical terminology, surface anatomy and planes. You will also examine how knowledge of anatomy and physiology informs paramedic practice. You will learn

how to apply this knowledge when undertaking physical assessment skills for both medical and trauma related illness and injury.

Features: Not applicable

Educational aims: The aims of this module are to explore the fundamentals of anatomy and physiology that underpin paramedic practice. The module will cover the basic structure and function of major bodily systems, whilst also exploring how to apply this knowledge when undertaking physical assessment skills for both medical and trauma related illness and injury.

Outline syllabus: The Human Body, Key Concepts:

- Cell biology: Structure and functions, cell growth and proliferation.

- Homeostasis and major homeostatic processes.

- Medical terminology and directional terms.

- Biological chemistry relevant to paramedic practice.

- Microbiology: the main classes of pathogenic micro-organisms, the spread of infection and infection control.

- Tissue damage, healing and repair.

- Acids, bases and buffers; properties and reactions.

- Immunology and the response to infection and injury.

- The factors influencing individual variations in human ability and health status including the fundamentals of genetics.

- Nutrition and its role in public health and well-being.

The Human Body, A Systems Approach
The anatomy and physiology of the:

- Respiratory System: Including lung volumes, control of respiration, diffusion and gas exchange and pressure and gas laws.

- Cardiovascular System: Including haemodynamics and viscosity in relation to blood flow, control of blood pressure, blood groups, haemostasis, osmosis and fluid and electrolyte balance.

- Nervous System: Including the central, peripheral and autonomic nervous system and neurotransmission.

- Gastro-Intestinal System: Including digestion, absorption, structure and functions of liver, and formation and excretion of bile.

- Genito-Urinary System and reproductive system.

- Endocrine System: Including hormones; types, mechanism of action.

- Integumentary System.

- Lymphatic System.

- Musculoskeletal System: Including bone growth and development, muscle physiology and neuromuscular control.

Part 3: Teaching and learning methods

Teaching and learning methods: Scheduled learning includes lectures and seminars.

Independent learning includes hours engaged with essential reading, reflective,

comprehensive interactive online learning materials, revision.

Teaching will typically be delivered through a number of interactive lecture and seminar days. Students are also given access to bespoke, interactive learning resources for the module, containing audios, games and quizzes giving opportunities to develop knowledge and understanding as they progress through the module.

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

MO1 Describe the structure, function and positional relationships of the systems, organs and tissues that make up the human body.

MO2 Identify the fundamentals of human anatomy and physiology and how these concepts inform patient assessment and treatment.

MO3 Explain the principles of homeostasis and major homeostatic processes and how they are altered in illness and injury.

MO4 Discuss human growth and development across the lifespan, including the factors influencing health status.

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 via the following link https://uwe.rl.talis.com/modules/uzysva-30-1.html

Part 4: Assessment

Assessment strategy: Summative assessment

Component A (50%): a 2 hour unseen written exam assesses the breadth of the student's knowledge and will additionally assess learning from workshops and practicals through short answer questions.

Rationale; to provide an opportunity to assess the student's general knowledge and understanding of all aspects of Life Sciences.

Component B: (50%): A structured oral and practical examination to assess the student's ability to identify anatomical structures and to describe function and purpose.

Rationale: To provide an opportunity for the student to demonstrate knowledge of anatomy and physiology and articulate using the correct anatomical and physiological terminology.

Formative assessment will take place through skills supervision and feedback, also tutorial support and reading by a personal tutor of draft work.

Assessment components:

Examination - Component A (First Sit)
Description: 2 hour unseen written exam
Weighting: 50 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO4

Practical Skills Assessment - Component B (First Sit)
Description: Structured oral and practical examination
Weighting: 50 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO4

Examination - Component A (Resit)

Description: 2 hour unseen exam

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested:

Practical Skills Assessment - Component B (Resit)

Description: Structured oral and practical examination

Weighting: 50 %

Final assessment: No

Group work: No

Learning outcomes tested:

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Paramedic Science [Feb][FT][Glenside][3yrs] BSc (Hons) 2022-23

Paramedic Science [Sep][FT][Glenside][3yrs] BSc (Hons) 2022-23

Paramedic Science [Sep][FT][Glenside][3yrs] BSc (Hons) 2022-23