# MODULE SPECIFICATION

| Part 1: Information | | | |
|---|---|---|---|
| Module Title | Life Sciences for Paramedics | | |
| Module Code | UZYSVA-30-1 | Level | Level 4 |
| For implementation from | 2020-21 | | |
| UWE Credit Rating | 30 | ECTS Credit Rating | 15 |
| Faculty | Faculty of Health & Applied Sciences | Field | Allied Health Professions |
| Department | HAS Dept of Allied Health Professions | | |
| Module type: | Standard | | |
| Pre-requisites | None | | |
| Excluded Combinations | None | | |
| Co- requisites | None | | |
| Module Entry requirements | None | | |

## Part 2: Description

**Educational Aims:** See learning outcomes.

**Outline Syllabus:** The Human Body: Key Concepts:

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

Homeostasis and major homeostatic processes.

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 health and illness.

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.

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

Integumentary System.

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

**Teaching and Learning Methods:** Scheduled learning includes lectures and seminars, also tutorials.

Independent learning includes hours engaged with essential reading, reflective, comprehensive interactive online learning materials, revision.

Students will engage in twelve, 3-hour 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. In addition, email contact with staff is available throughout the module and during scheduled tutorial time.

**Part 3: Assessment**

Summative assessment

Component A: an online examination with a 24 hour window for completion at the end of semester 2 will assess 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 students 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. | | | |
| | | | |
| First Sit Components | **Final Assessment** | **Element weighting** | **Description** |
| Examination (Online) - Component A | | 50 % | Online examination (24 hours) |
| Practical Skills Assessment - Component B | ✓ | 50 % | Structured oral and practical examination |
| Resit Components | **Final Assessment** | **Element weighting** | **Description** |
| Practical Skills Assessment - Component B | ✓ | 50 % | Structured oral and practical examination |
| Examination (Online) - Component A | | 50 % | Online examination (24 hours) |

**Part 4: Teaching and Learning Methods**

Learning Outcomes

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

| **Module Learning Outcomes** | **Reference** |
|---|---|
| Describe the essential concepts in biological chemistry and cell biology | MO1 |
| Identify the fundamentals of human anatomy and physiology, recognising the dynamic relationships between anatomical structure and function | MO2 |
| Explain the principles of homeostasis and major homeostatic processes | MO3 |
| Understand basic immunology and response to infection and injury | MO4 |
| Recognise the role of nutrition in health and illness | MO5 |
| Outline the factors influencing variations in human ability and health status, including the key concepts in genetics | MO6 |
| Apply anatomical and physiological concepts to inform paramedic practice | MO7 |
| Demonstrate the ability to communicate knowledge and understanding in a fluent and coherent manner | MO8 |

Contact Hours

| | |
|---|---|
| **Independent Study Hours:** | |
| Independent study/self-guided study | 228 |
| **Total Independent Study Hours:** | 228 |
| **Scheduled Learning and Teaching Hours:** | |
| Face-to-face learning | 72 |

| | | |
|---|---|---|
| | **Total Scheduled Learning and Teaching Hours:** | 72 |
| | **Hours to be allocated** | 300 |
| | **Allocated Hours** | 300 |
| Reading List | *The reading list for this module can be accessed via the following link:*<br><br>https://uwe.rl.talis.com/modules/uzysva-30-1.html | |

| **Part 5: Contributes Towards** |
|---|
| This module contributes towards the following programmes of study:<br><br>Paramedic Science [Sep][FT][Glenside][3yrs] BSc (Hons) 2020-21<br>Paramedic Science [Feb][FT][Glenside][3yrs] BSc (Hons) 2020-21 |