Module Specification

Foundation Human Biology

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Contents

Part 1: Information

Module title: Foundation Human Biology

Module code: UZYRFK-15-0

Level: Level 3

For implementation from: 2023-24

UWE credit rating: 15

ECTS credit rating: 7.5

Faculty: Faculty of Health & Applied Sciences

Department: HAS School of Health and Social Wellbeing

Partner institutions: None

Field: Allied Health Professions

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: Not applicable

Features: Not applicable

Educational aims: See Learning Outcomes.

Outline syllabus:

Basic characteristics of all living organisms:

Role and structure of cells

Cellular, tissue, organ and system levels of organisation
Structure of cells as seen using an optical and electron microscope
Functional relationships between the main organelles

Biochemical basis of life:
Structure and importance of carbohydrates, proteins and lipids
Main source of carbohydrates, proteins and lipids for heterotrophic nutrition and DNA
Analysis of food for the presence or absence of carbohydrates, proteins and lipids.

Transport in and out of cells:
Diffusion, osmosis, facilitated and active transport

Structure of the skeletal system and its functional role:
Principle bones in the human body
Functions of skeletal system
Structural components of long bones and their functions
Microscopic structure of cartilage, spongy and compact bone and their functions

Development and maintenance of bone:
Dietary needs for healthy bone growth
Ossification of long bone during growth and development

Structure of joints and their functions in the human body:
Main types of joints and their movement
Components of a synovial joint and their function
Cause, symptoms and treatment for a joint disorder

Structure of skeletal muscle and its functions:
Naming of skeletal muscles
Ultrastructure of skeletal muscle and function
Actin and myosin and sliding filament theory
Structure and function of the neuromuscular junction

Human circulatory system and its functions:

Structure and functions of arteries, veins and capillaries
Double circulatory system
Structure and function of the heart and the cardiac cycle
Mechanisms controlling heart rate (during and after exercise)
Structure and function of components of blood

Human respiratory system and its functions:
Mechanisms of ventilation, inspiration and expiration
Histology of lung tissue and gaseous exchange

Part 3: Teaching and learning methods

Teaching and learning methods:
This module operates on the basis of 150 hours of study in total.

This includes 90 hours of scheduled teaching:

Lectures and workshops 36 hours

Laboratory sessions 36 hours

Tutorials 18 hours

Scheduled learning may include a combination of face to face and online lectures, seminars, tutorials, project supervision, demonstration, practical classes and workshops.

Independent learning includes hours engaged with essential reading, case study preparation, assignment preparation and completion etc.

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

MO1 Explain the relationships between cells, tissues, organs and systems

MO2 Describe the basic characteristics and functions of cells

MO3 Describe the structure of the musculoskeletal, circulatory and respiratory systems and explain their functional roles

MO4 Relate biological theory to health and well-being

MO5 Utilise basic information retrieval skills

MO6 Develop effective study skills

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 60 hours

Face-to-face learning = 90 hours

Total = 150

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/index.html

Part 4: Assessment

Assessment strategy: Regular formative assessment will take place throughout the module delivery to enable students to gauge their progress and learning to date.

Summative assessment will be by means of a 2 hour timed assignment.

Assessment tasks:

Written Assignment (First Sit)
Description: Timed assignment (2 hours)
Weighting: 100 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3, MO4, MO5, MO6

Written Assignment (Resit)

Description: Timed assignment (2 hours)

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4, MO5, MO6

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Health Professions [COBC] Found 2023-24