



Module Specification

Nursing Biosciences

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Part 1: Information

Module title: Nursing Biosciences

Module code: UZZY3B-15-3

Level: Level 6

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: Mental Health and Learning Disability

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: For this module the student cohort will be taught as a group with opportunities to join field specific seminars and lectures facilitated parallel on the respective BSc pathways.

Outline syllabus: The syllabus includes:

Homeostasis and health: levels of organisation in the human body, cell structure and function, integrated functioning of organ systems, principles of homeostasis, structure and function of skin

Body fluids and transport: blood and other body fluids, structure and functions of heart and blood vessels, control of blood pressure, hydration, physiology of shock

Feeding and nutrition: regulation of eating and swallowing, principles of nutrition, physiology of the digestive system, structure and functions of liver

Movement and stability: control of posture and movement, bones, joints and skeletal muscle physiology

Respiration: respiratory structures, ventilation, gas exchange, control of breathing

Excretion: kidney function, control of fluid balance, biological basis of continence

Communication and control: structure and function of different divisions of the nervous system, structure and functions of the nerve cells, synapses and neurotransmission, roles of hormones, physiology of stress

Pain: physiology of pain and pain pathways, pain theories, physiological basis of pharmacological therapies and non-pharmacological strategies to manage pain

Growth and development: cell proliferation, life cycle changes, brain development, biology of ageing, reproductive physiology, introduction to genetics

Sleep and rest: functions and the physiology of sleep, sleep patterns, physiological basis for interventions that promote sleep

Defence mechanisms: introduction to micro-organisms; introduction to immunology, non-specific immune response, cell-mediated immunity and humoral immunity

Pharmacology: principles of pharmacodynamics and pharmacokinetics, commonly used medicine groups and their actions, uses, side effects, and nursing implications

Part 3: Teaching and learning methods

Teaching and learning methods: A variety of approaches will be used which may include:

Lectures

Seminars

Lecturer facilitation and support

Workshops

Service user and carer perspectives

Directed and independent learning

Reflective approaches to learning

A total of 36 hours in the form of seminars/workshops, lectures and online activities. The module will also take advantage of virtual learning environments (VLEs) and technology enhanced learning activities including, for example, podcasts.

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

MO1 Identify physiological needs and key processes necessary for maintaining homeostasis

MO2 Describe the structure and function of cells, tissues and physiological systems and the complex nature of their interactions

MO3 Coherently demonstrate understanding of the role of genes in health and in the manifestation, modification and prevention of disease relevant to nursing practice

MO4 Demonstrate comprehensive knowledge and understanding of the ways health sciences inform nursing practice

MO5 Demonstrate a sound understanding of how the human functions in health, and ill health

MO6 Demonstrate a competent understanding of pharmacology including pharmacodynamics and pharmacokinetics, commonly used medicine groups and their actions, uses, side effects, and nursing implications

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 114 hours

Face-to-face learning = 36 hours

Total = 150

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/index.html) via the following link <https://uwe.rl.talis.com/index.html>

Part 4: Assessment

Assessment strategy: The summative assessment will take the form of a 1.5 hour multiple choice and short answer examination. This format of examination will enable assessment across the module learning outcomes to ensure students have a broad, detailed and field specific understanding of the core concepts in physiology and pharmacology.

The opportunities for formative assessment will include on-line multiple choice questions which will provide instant feedback for students. The seminars will provide opportunities for students to apply physiology and pharmacology concepts to case studies from their field of practice. Small group activities and short presentations within seminars will provide opportunities for formative assessment by peers and academic staff.

Assessment tasks:

Examination (First Sit)

Description: Exam 1.5 hours

Weighting: 100 %

Final assessment: Yes

Group work: No

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

Examination (Resit)

Description: Exam 1.5 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: