UNIVERSITY of BRADFORD

# Module Descriptor

| Module Details | |
|---|---|
| Module Title | Human Physiology |
| Module Code | BIS4009-B |
| Academic Year | 2024/5 |
| Credits | 20 |
| School | School of Chemistry and Biosciences |
| FHEQ Level | FHEQ Level 4 |

| Contact Hours | |
|---|---|
| Type | Hours |
| Lectures | 30 |
| Tutorials | 12 |
| Laboratories | 12 |
| Directed Study | 146 |

| Availability | |
|---|---|
| Occurrence | Location / Period |
| BDA | University of Bradford / Academic Year |

## Module Aims

Human diseases have wide and varying impacts on different parts of the human body. For example, Diabetes can cause problems for the cardiovascular system, the renal system, nerves and visual systems. Therefore, it is important to understand how the human body works in health so that changes which happen in disease can be identified and treated.

This module supports the programme by developing learners knowledge of the underlying concepts and core principles of Biomedical Science (PLO1) through the development of an understanding of the functional organisation of the human body using a systems approach to normal anatomy and physiology, and selected examples of pathophysiological changes and disease.

This module will support those students seeking knowledge to support their employment in medicine and medical research. It emphasises the control and integration of cells and systems in the healthy body and outlines some important disease states.

| Outline Syllabus |
| --- |
| Academic content: Anatomy, physiology and pathophysiology of the major systems will be covered including:<br>Central and peripheral nervous system (brain, spinal cord, nerves)<br>Circulatory system (heart, blood vessels, lymphatic system)<br>Musculoskeletal system (bones, connective tissues, muscles)<br>Respiratory system (including metabolic rate)<br>Gastrointestinal system (oesophagus, stomach, intestines)<br>Reproductive and urinary systems (including acid-base balance)<br>Students will also have a basic introduction to Pharmacology and Immunology.<br><br>Employability and enterprise skills:<br>Biomedical knowledge and understanding<br>Communication skills<br>Data analysis<br>Critical thinking<br><br>The following statement applies to learners that are completing this module as part of the Biomedical Scientist Standard Apprenticeship:<br>This module is aimed at these elements of Knowledge Skills and Behaviours:<br>S29, K3, K35, K36, K41, K42, K53, B1, B2, B3, B4, B5. |

| Learning Outcomes | |
| --- | --- |
| Outcome Number | Description |
| 01 | Describe the normal structure and explain the functioning of selected body systems and their control and to recognise gross disturbances of the systems (HCPC Standard 13) |
| 02 | Collect, analyse and interpret physiological data (HCPC Standard 14). |
| 03 | Communicate effectively in written reports relating to laboratory work. |
| 04 | Communicate effectively in written presentations relating to laboratory work. |
| 05 | Demonstrate effective time management (HCPC Standard 1) and responsibility for self-directed learning (HCPC Standard 3). |

## Learning, Teaching and Assessment Strategy

The LTA strategy encompasses education for employability and equal opportunities for learners. Concepts, principles and knowledge will be explored in lectures that are characterised by active learning concepts. This theoretical knowledge will be supported by hands-on learning with the Anatomage and Sectra table. Tutorial sessions will incorporate case study material and be reinforced through physiology laboratory classes. Directed computer-assisted learning (CAL) will be used to support and reinforce some formal teaching sessions. This mix of methodologies will be accessible to different learning styles and will develop critical thinking and interpretative skills through case studies.

Assessment: This module will be assessed by a closed-book MCQ test on semester 1 body system units, a closedbook MCQ exam on semester 2 body system units and a written laboratory report. Formative MCQ tests will be made available via the virtual learning environment (VLE) at the completion of each teaching block as well as at the end of each semester, providing immediate feedback for learners to selfassess their understanding and progress. Formative feedback will be given on a written laboratory report in semester 1. The formal examination will assess breadth and depth of subject knowledge and understanding.

Private study will be facilitated and supported via the use of the VLE which will provide coursework advice and feedback, and revision support.

Reassessment of failed elements will be as per the initial method of assessment. Where reassessment of the laboratory practical element is required, students will be given a data set or an opportunity to complete the laboratory practical on an alternative occasion, whichever is more appropriate.

## Mode of Assessment

| Type | Method | Description | Weighting |
|---|---|---|---|
| Summative | Examination - MCQ | Semester 1 closed book exam - MCQ (LO1) (1hr) | 25% |
| Summative | Examination - MCQ | Semester 2 closed book exam - MCQ (LO1) (1hr) | 25% |
| Summative | Coursework - Written | Written laboratory report (LO 2,3) | 50% |

## Reading List

To access the reading list for this module, please visit https://bradford.rl.talis.com/index.html

*Please note:*
*This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.*

---