Module Descriptor

Title	Integrative Human Physiology		
Session	2026/27	**Status**	Published
Code	BIOL10017	**SCQF Level**	10
Credit Points	20	**ECTS (European Credit Transfer Scheme)**	10
School	**Health and Life Sciences**		
Module Co-ordinator	Gary Litherland		

Summary of Module

This module extends material delivered on the nervous, cardiovascular, respiratory, renal and digestive systems at Level 8, developing these at an integrative level. Fundamental physiological principles in each of the systems are consolidated and further developed, with specific examples of integrative functions considered.

Nervous system includes discussion of the autonomic nervous system and motor sensory pathways.

Cardiovascular system overviews discussion of cardiac output, vascular regulation, blood pressure and capillary exchange.

Respiratory system includes discussion of gas transfer, respiratory mechanics and lung capacities.

Renal system outlines urine formation (glomerular filtration and tubular processing), urine concentrating mechanisms and renal control.

Digestive system overviews the processes of ingestion, digestion, absorption and defecation and includes discussion of associated accessory structures/organs in situ. As appropriate, pathophysiological examples are used to consolidate fundamental physiological principles.

Specific examples scenarios will be presented and discussed that illustrate the significance of functional integration between these systems.

Module develops key “I am UWS” Graduate Attributes (details provided later).

Module Delivery Method	On-Campus[1] ☒	Hybrid[2] ☐	Online[3] ☐	Work -Based Learning[4] ☐
Campuses for Module Delivery	☐ Ayr ☐ Dumfries	☒ Lanarkshire ☐ London ☐ Paisley	☐ Online / Distance Learning ☐ Other (specify)	

Terms for Module Delivery	Term 1	☐	Term 2	☒	Term 3	☐
Long-thin Delivery over more than one Term	Term 1 – Term 2	☐	Term 2 – Term 3	☐	Term 3 – Term 1	☐

Learning Outcomes	
L1	Describe in detail the normal structure and function of key human physiological systems (comprising the nervous, cardiovascular, respiratory, renal and digestive systems).
L2	Explain principal control mechanisms of key human physiological systems (comprising the nervous, cardiovascular, respiratory, renal and digestive systems) and, where appropriate, disturbances to this control.
L3	Discuss in detail the integrative functions of the above systems in the context of examples such as acid-base balance, response to dynamic exercise or other relevant scenarios.
L4	Report on aspects of key human physiological systems (comprising the nervous, cardiovascular, respiratory, renal and digestive systems) through analysis of laboratory-based results and data.
L5	

Employability Skills and Personal Development Planning (PDP) Skills	
SCQF Headings	**During completion of this module, there will be an opportunity to achieve core skills in:**
Knowledge and Understanding (K and U)	**SCQF 10** Developing general and integrated understanding of major physiological systems in humans, including fundamental concepts and specialised terminology (Graduate Attribute-Successful-Professional-driven). Self-evaluation of information derived from experiment to determine priority value of data (Graduate Attribute-Universal-Academic-critical thinking)

[1] Where contact hours are synchronous/ live and take place fully on campus. Campus-based learning is focused on providing an interactive learning experience supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus contact hours will be clearly articulated to students.

[2] The module includes a combination of synchronous/ live on-campus and online learning events. These will be supported by a range of digitally-enabled asynchronous learning opportunities including learning materials, resources, and opportunities provided via the virtual learning environment. On-campus and online contact hours will be clearly articulated to students.

[3] Where all learning is solely delivered by web-based or internet-based technologies and the participants can engage in all learning activities through these means. All required contact hours will be clearly articulated to students.

[4] Learning activities where the main location for the learning experience is in the workplace. All required contact hours, whether online or on campus, will be clearly articulated to students

Practice: Applied Knowledge and Understanding	**SCQF 10** Trained to apply skills and techniques important in monitoring basic physiological parameters (blood pressure; urinalysis; etc). Aptitude in collecting data from human volunteers (Graduate Attribute-Universal-Personal-ethically minded). Constructing dose-response curves using standard pharmacological preparations.
Generic Cognitive skills	**SCQF 10** Developing a working hypothesis; designing an experiment to test hypothesis (Graduate Attribute-Work Ready-Academic-problem solver); analysing data to accept / reject hypothesis. Performing routine urinalysis and interpreting the results. Investigating the cardiorespiratory response to static vs. dynamic exercise. Evaluating histology specimens to identify with supporting rationale.
Communication, ICT and Numeracy Skills	**SCQF 10** Data analysis and tabular/graphical presentation of data collected during laboratory (Graduate Attribute-Successful-Academic-autonomous) and exercise mini-project assignment. IT communication with student peers as part of group cohesion in mini-project assignment (Graduate Attribute-Work Ready-Personal effective communicator).
Autonomy, Accountability and Working with Others	**SCQF 10** Develop the ability to work productively as part of an integrated group to perform and monitor the body's responses to exercise, to analyse the resulting data and form part of a group presentation. Assume responsibility for delegated component of integrated work (Graduate Attribute-Universal-Professional collaborative).

Prerequisites	**Module Code** BIOL08003/ BIOL08030	**Module Title** Human Biology/ IBMS Human Biology
	Other BIOL08019 Core Biomedical Science OR BIOL 08001 Vertebrate Physiology, depending upon programme of study, or suitable equivalent.	
Co-requisites	**Module Code**	**Module Title**

Learning and Teaching	
In line with current learning and teaching principles, a 20-credit module includes 200 learning hours, normally including a minimum of 36 contact hours and maximum of 48 contact hours. During completion of this module, the learning activities undertaken to achieve the module learning outcomes will include formal lectures, structured tutorials, laboratory classes/simulations and independent study. VLE-based support materials will be available to support the module.	
Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	**Student Learning Hours** (Note: Learning hours include both contact hours and hours spent on other learning activities)

Lecture / Core Content Delivery	26
Tutorial / Synchronous Support Activity	4
Laboratory / Practical Demonstration / Workshop	6
Independent Study	164
n/a	
n/a	
TOTAL	200

Indicative Resources

The following materials form essential underpinning for the module content and ultimately for the learning outcomes:

Anatomy & Physiology (Openstax - Free online textbook) (https://openstax.org/details/books/anatomy-and-phsyiology-2e)

Principles of Anatomy & Physiology (16th Ed). Tortora, G (2023) Wiley. ISBN: 9781394212835

Essentials of Anatomy & Physiology, 8th Ed. Martini F. H. & Bartholomew E. F. (2020) Pearson Education Inc. ISBN 978-0135203804

Vander's human physiology : the mechanisms of body function (2019) McGraw-Hill Education

(N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Attendance and Engagement Requirements

In line with the Student Attendance and Engagement Procedure, Students are academically engaged if they are attending and participating in all timetabled programme activities including on-campus and online teaching sessions, asynchronous online learning activities, placement, work-based elements, course-related learning resources, and complete assessments and submit these on time.

For the purposes of this module, academic engagement equates to the following:

Attendance at all sessions (lectures, tutorials and practicals), completion of any online activities, and submission of assessments to meet the learning outcomes of the module.

Equality and Diversity

The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: UWS Equality, Diversity and Human Rights Code.

In line with current legislation (Equality Act, 2010) and the UWS Equality, Diversity, and Human Rights Code, our modules are accessible and inclusive, with reasonable adjustment for different needs where appropriate. Module materials comply with University guidance on inclusive learning and teaching, and specialist assistive equipment, support provision and adjustment to assessment practice will be made in accordance with UWS policy and regulations. Where modules require practical and/or laboratory based learning or assessment required to meet accrediting body requirements the University will make reasonable adjustment such as adjustable height benches or assistance of a 'buddy' or helper.

(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)

Supplemental Information

Divisional Programme Board	**Biological Sciences Health**
Overall Assessment Results	☐ **Pass / Fail** ☒ **Graded**
Module Eligible for Compensation	☐ **Yes** ☒ **No** **If this module is eligible for compensation, there may be cases where compensation is not permitted due to programme accreditation requirements. Please check the associated programme specification for details.**
School Assessment Board	Biology
Moderator	Robin Freeburn
External Examiner	S Haliti
Accreditation Details	IBMS/ RSB
Module Appears in CPD catalogue	☐ **Yes** ☒ **No**
Changes / Version Number	3

Assessment (also refer to Assessment Outcomes Grids below)
Assessment 1
Coursework (40%) derived from laboratory reports and data analysis, in form of abstracts, posters, short practical reports, histology identification tables.
Assessment 2
Written class test (60%) in form of essays from a choice of questions.
Assessment 3
(N.B. (i) Assessment Outcomes Grids for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed. (ii) An indicative schedule listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Module Handbook.)

Component 1							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Clinical/ Fieldwork/ Practical skills assessment/ Debate/ Interview/ Viva voce/ Oral	☒	☒	☒	☒	☐	40	0

Component 2							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Class test (written)	☒	☒	☒	☒	☐	60	0

Component 3							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
	☐	☐	☐	☐	☐		
Combined total for all components						100%	0 hours

Change Control

What	**When**	**Who**
Pre-requisites Indicative resource list	July 2025	F Menzies
Accreditation Details	February 2026	G Litherland