

## **Module Descriptor**

Title	Human Biology					
Session	2024/25	Status				
Code	BIOL08003	SCQF Level	8			
Credit Points	20	ECTS (European Credit Transfer Scheme)	10			
School	Health and Life Sciences					
Module Co-ordinator	F Menzies					

### **Summary of Module**

Builds upon level 7 provision which introduced the general organization of the body and the concept of homeostasis. The major organ systems are introduced and their control via hormonal and neural inputs discussed. Pathological conditions that affect these organ systems will be presented to underpin this material.

Principal endocrine organs/tissues will be discussed with specific consideration to role of homeostasis and its disturbance in pathology. The anatomy of the reproductive systems will introduced, and hormonal control of these systems presented in the context of the reproductive cycle and conception and then extended to fetal development and parturition. Functional anatomy of the CVS will be developed further to consider the conducting system of the heart, including discussion of ECG. The cardiac cycle will be presented. Blood vessel structure will be discussed specifically with reference to the functional classification of the different vessel types. Cell growth and the molecular changes associated with the neoplastic process will be presented. The concept of programmed cell death will be introduced. The general arrangement of the nervous system will be introduced. Action potential generation/propagation and structure and function of the special senses will be presented. Structure and function of skeletal, cardiac and smooth muscle will be described.

This module will work to develop a number of the key 'I am UWS' Graduate Attributes to make those who complete this module:

#### Universal

- Critical Thinker
- Ethically-minded
- Research-minded

## Work Ready

- Knowledgeable
- Effective Communicator
- Ambitious

#### Successful

- Autonomous

- Resilient			
- Driven			

Module Delivery Method	On-Camp ⊠	ous¹	ŀ	Hybrid <sup>2</sup> Online <sup>3</sup>		3	Work -Based Learning⁴	
Campuses for Module Delivery	Ayr Dumfri	es		<ul><li>∠ Lanarks</li><li>∠ London</li><li>∠ Paisley</li></ul>	London   Paisley		☐ Online / Distance Learning ☐ Other (specify)	
Terms for Module Delivery	Term 1			Term 2		Term	13	
Long-thin Delivery over more than one Term	Term 1 – Term 2			Term 2 – Term 3		Term Term		

Lear	ning Outcomes
L1	Describe the major endocrine systems, their control by homeostasis and the effect of their hormones on target organs.
L2	Describe the anatomy, hormonal control of the male and female reproductive systems and their role in conception and fetal development.
L3	Describe the structure and function of the CNS, special senses and muscle.
L4	Describe the major components of the CVS, the conducting system, cardiac cycle, blood vessel types and blood.
L5	Describe changes in cellular function in neoplasia.

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 8  Demonstrate a broad knowledge of major physiological systems in humans, including the principles and concepts of homeostasis and its role in control of physiological processes				

<sup>&</sup>lt;sup>1</sup> 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.

<sup>&</sup>lt;sup>2</sup> 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.

<sup>&</sup>lt;sup>3</sup> 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.

<sup>&</sup>lt;sup>4</sup> 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	SCQF 8
Knowledge and Understanding	Trained to apply skills and techniques important in monitoring basic and routine physiological parameters e.g. blood pressure, hormone levels, ECG, and introductory histology.
Generic	SCQF 8
Cognitive skills	Undertake critical analysis, evaluation, of ideas and concepts. Analysing data from; immunological assays and interpreting information based on known endocrinological responses, CVS and respiratory monitoring and histology sections.
Communication,	SCQF 8
ICT and Numeracy Skills	Data analysis and tabular/graphical presentation of data for production of word processor produced laboratory reports
Autonomy,	SCQF 8
Accountability and Working with Others	Co-operate in sharing laboratory equipment and resources. Learn to work both individually and in pairs depending on exercise. Take responsibility for generating data for use in reports.

Prerequisites	Module Code	Module Title
	BIOL07022	Fundamentals of Life
	BIOL07023	Chemistry for Environmental & Biosciences
	Other	·
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.

Learning Activities	Student Learning
During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	Hours (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture / Core Content Delivery	29
Laboratory / Practical Demonstration / Workshop	11
Tutorial / Synchronous Support Activity	8
Independent Study	152
n/a	
n/a	
TOTAL	200

## **Indicative Resources**

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

Online resource: OpenStax Anatomy & Physiology Recommended

Textbooks: Martini F. H. & Bartholomew E. F. (2003) Essentials of Anatomy & Physiology, 3rd

Mader, S. Human Biology (12th Edn), McGraw-Hill Higher Education (2011) ISBN 978-0071315944

Other: Lecture/tutorial notes/laboratory manual (provided via VLE)

(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 <u>Student Attendance and Engagement Procedure</u>, Students are academically engaged if they are regularly attending and participating in timetabled oncampus and online teaching sessions, asynchronous online learning activities, course-related learning resources, and complete assessments and submit these on time.

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

The university is committed to providing a supportive learning environment that actively facilitates student success. In this module, there is a high degree of student-led flexibility. You are academically engaged if you are regularly engaged with scheduled live sessions oncampus and online, including engaging with online learning activities in your own time, course-related learning resources, and with timely completion and submission of assessments.

Whilst we understand that there may be times when conflicting priorities make participation challenging, for you to gain the most from this module it is recommended that you participate in all scheduled live classes and complete your self-directed learning activities in a timely manner.

It may be difficult to pass the assessment associated with this module if you are not regularly engaging with the module work and live classes. We may reach out to check how things are going and offer support if we observe that you have not been attending sessions or completing online activities.

#### **Equality and Diversity**

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

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)

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	BSH L7-11
Moderator	R Thacker
External Examiner	
Accreditation Details	This module is part of the BSc (Hons) Biomedical Science programme; accredited by Institute of Biomedical Science (IBMS) and approved by Health & Care Professions Council (HCPC) as part of BSc (Hons) Applied Biomedical Science programme.
	This module is part of the BSc (Hons) Applied Bioscience, BSc (Hons) Applied Bioscience with Forensic Investigation and BSc (Hons) Applied Bioscience and Zoology programmes; accredited by Royal Society of Biology (RSB)
Module Appears in CPD catalogue	☐ Yes ⊠ No
Changes / Version Number	1

Accordant (also vefer to Accordant Outcomes Ovide heles)
Assessment (also refer to Assessment Outcomes Grids below)
Assessment 1
Class Test: constitutes 50% of the module mark
Assessment 2
Coursework: constitutes 50% of the module mark.
Assessment 3
NA
(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
Class test (written)						50	2

Component 2		

Assessment Type	LO1	LO2	LO3	LO4	LO5	Weighting of Assessment Element (%)	Timetabled Contact Hours
Laboratory/ Clinical/ Field notebook						50	8

Component 3							
Assessment Type	LO1	LO2	LO3	LO4	LO5	Weighting of Assessment Element (%)	Timetabled Contact Hours
NA							
Combined total for all components					100%	10 hours	

# **Change Control**

What	When	Who	