University of the West of Scotland

Module Descriptor

Session: 2022/23

Last modified: 22/04/2022 15:43:14
Status: Published

Title of Module: Core Biomedical Science

Code: BIOL08019	**SCQF Level: 8** (Scottish Credit and Qualifications Framework)	**Credit Points: 20**	**ECTS: 10** (European Credit Transfer Scheme)
School:	School of Health and Life Sciences		
Module Co-ordinator:	John McLean		

Summary of Module

Core Biomedical Science allows students to gain an insight into the major disciplines that make up biomedical science and the role of professional and regulatory bodies in monitoring and accrediting biomedical scientists and the laboratories they work in. Students will gain an understanding of expectations of professional behaviour and how they are met. This module will form the focus in Year 2/Level 8 for the training and education of students intending to have a career in biomedical science.

A key component of the course is to introduce the IBMS portfolio, the production of evidence to show HCPC Standards of Proficiency are met. Through studying the biomedical science disciplines in conjunction with selected organ systems students will gain experience in generating evidence for biomedical investigations. Initially, students will cover the basic concepts of biomedical tests in clinical medicine including, reference ranges, accuracy and precision, specificity and sensitivity.

The roles of clinical biochemistry and pathology in biomedical science are introduced through the study of function and disease of the gastrointestinal tract, renal system and respiratory system. Through engaging in lectures, practical work, tutorials and problem students will understand the integrated role of disciplines in diagnosis and management of disease.

This module will work to develop a number of the key “I am UWS” Graduate Attributes:

- Critical thinker
- Analytical
- Inquiring
- Knowledgeable
- Digitally literate
- Problem-solver

Module Delivery Method

Face-To-Face	Blended	Fully Online	HybridC	HybridO	Work-based Learning
			✓		

Face-To-Face
Term used to describe the traditional classroom environment where the students and the lecturer meet synchronously in the same room for the whole provision.

Blended
A mode of delivery of a module or a programme that involves online and face-to-face delivery of learning, teaching and assessment activities, student support and feedback. A programme may be considered “blended” if it includes a combination of face-to-face, online and blended modules. If an online programme has any compulsory face-to-face and campus elements it must be described as blended with clearly articulated delivery information to manage student expectations

Fully Online
Instruction that is solely delivered by web-based or internet-based technologies. This term is used to describe the previously used terms distance learning and e learning.

HybridC
Online with mandatory face-to-face learning on Campus

HybridO

Online with optional face-to-face learning on Campus

Work-based Learning
Learning activities where the main location for the learning experience is in the workplace

Campus(es) for Module Delivery

The module will **normally** be offered on the following campuses / or by Distance/Online Learning: (Provided viable student numbers permit)

Paisley:	Ayr:	Dumfries:	Lanarkshire:	London:	Distance/Online Learning:	Other:
			✓			

Term(s) for Module Delivery

(Provided viable student numbers permit).

Term 1	✓	Term 2		Term 3	

Learning Outcomes: (maximum of 5 statements)

On successful completion of this module the student will be able to:

L1. Understand the role of the regulatory and professional bodies in the training, accreditation and monitoring of biomedical science and biomedical scientists.

L2. Understand the importance of conduct, performance and ethics in meeting HCPC standards of proficiency.

L3. Describe the role of clinical biochemistry in the diagnosis and management of disease.

L4. Describe the role of pathology in the diagnosis and management of disease.

L5. Describe changes in cellular function in immunological responses.

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 Level 8. Demonstrate a broad knowledge of core biomedical science disciplines and their application in disease diagnosis and management.
Practice: Applied Knowledge and Understanding	SCQF Level 8. Use the theoretical knowledge gained to perform experiments and interpret the results.
Generic Cognitive skills	SCQF Level 8. Use a range of approaches to formulate appropriate responses to problems in biomedical science.

Communication, ICT and Numeracy Skills	SCQF Level 8. Communicate effectively orally and in writing. Analyse and interpret data where appropriate.
Autonomy, Accountability and Working with others	SCQF Level 8. Working in teams to perform practical work will require time management, organisational skills and awareness of professional practice.

Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code: APPD07001 BIOL07022 BIOL07023	**Module Title:** Aspire 1 Chemistry for Environmental and Biosciences Fundamentals of Life
	Other:	
Co-requisites	**Module Code:**	**Module Title:**

* Indicates that module descriptor is not published.

Learning and Teaching

It is anticipated that the delivery of this module will include formal lectures, tutorials focused on problem solving and application of theoretical knowledge and practical laboratory work. The module is intended to give students the necessary knowledge and practical underpinning to understand the processes used to diagnose, investigate and manage pathological conditions. Being an introductory course it deals with the role major disciplines of biomedical science looking at selected organ systems. These will be expanded up and extended to other organ systems in later years. The module is also designed to progress the professional training of the students towards becoming professionally accredited Biomedical Scientists. Teaching will involve lectures, tutorials, problem-based learning and laboratory sessions. External speakers from IBMS approved laboratories will contribute to the course.

Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	**Student Learning Hours** (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture/Core Content Delivery	24
Laboratory/Practical Demonstration/Workshop	16
Tutorial/Synchronous Support Activity	8
Independent Study	152
	200 Hours Total

****Indicative Resources: (eg. Core text, journals, internet access)**

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

Biomedical Science Practice: Experimental and Professional Skills (Fundamentals of Biomedical Science) Glencross H., Ahmed N. & Wang Q. (eds), OUP, ISBN: 978-0199533299

Clinical Biochemistry (Fundamentals of Biomedical Science): Ahmed N. (ed), OUP, 978-0199533930

Immunology (Fundamentals of Biomedical Science): Hall A. & Yates C. (eds) OUP, 978-0199534968

Haematology (Fundamentals of Biomedical Science): Moore G., Knight G. & Blann A. (eds) 978-0199568833

Histopathology (Fundamentals of Biomedical Science): Orchard G. & Nation B. (eds) 978-0199574346

HCPC Guidance on Conduct and Ethics for Students.

(**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)

Engagement Requirements

Students are academically engaged if they are regularly engaged with timetabled on-campus and online

teaching sessions, asynchronous online learning activities, course-related learning resources, and complete assessments and submit these on time. Please refer to the Academic Engagement and Attendance Procedure at the following link: Academic Engagement and Attendance Procedure

For the purposes of this module, academic engagement equates to the following:
Attendance at synchronous sessions (lectures, practicals, workshops, and tutorials), completion of asynchronous activities, and submission of assessments to meet the learning outcomes of the module.

Supplemental Information

Programme Board	Biological Sciences and Health
Assessment Results (Pass/Fail)	No
Subject Panel	Biology L7-11
Moderator	John Lockhart
External Examiner	D Stobo
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.
Changes/Version Number	3.12 Mode of Delivery updated Pre-Requisite modules changed Module contact hours updated to reflect 48 hrs.

Assessment: (also refer to Assessment Outcomes Grids below)

Workbook/ Laboratory notebook/ Diary/ Training log/ Learning log

Class test (written)

(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 Handbook.)

Assessment Outcome Grids (Footnote A.)

Component 1

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Learning Outcome (5)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Class test (written)	✓	✓	✓	✓	✓	40	3

Component 2

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Learning Outcome (5)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Workbook/ Laboratory notebook/ Diary/ Training log/ Learning log	✓	✓	✓	✓	✓	60	0
Combined Total For All Components						100%	3 hours

Footnotes
A. Referred to within Assessment Section above
B. Identified in the Learning Outcome Section above

Note(s):
1. More than one assessment method can be used to assess individual learning outcomes.
2. Schools are responsible for determining student contact hours. Please refer to University Policy on contact hours (extract contained within section 10 of the Module Descriptor guidance note).
   This will normally be variable across Schools, dependent on Programmes &/or Professional requirements.

Equality and Diversity

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.
UWS Equality and Diversity Policy

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