Module Descriptor

Title	Core Biomedical Science		
Session	2026/27	**Status**	Published
Code	BIOL08019	**SCQF Level**	8
Credit Points	20	**ECTS (European Credit Transfer Scheme)**	10
School	**Health and Life Sciences**		
Module Co-ordinator	Fraser Craig		

Summary of Module

Core Biomedical Science allows students to gain an insight into the major disciplines that make up biomedical science. This module forms the focus in Year 2/Level 8 for the training and education of students intending to have a career in Biomedical Science.

Through studying the biomedical science disciplines in conjunction with selected organ systems students will gain experience in generating information 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. We then discuss importance of accreditation schemes for clinical laboratories in the UK, and internal and external quality control/assurance schemes.

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

Laboratory work, tutorial work and case studies are used to underpin understanding of quality issues, relevant statistical analysis approaches and the importance of Point of Care Testing.

This module will work to develop several of the key “I am UWS” Graduate Attributes: Critical thinker, Analytical, Inquiring, Knowledgeable, Digitally literate, Problem-solver.

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	Understand the importance of quality management in healthcare provision including QA/QC, EQA and audits.
L2	Describe the role of haematology and transfusion science and clinical immunology in healthcare provision.
L3	Describe the role of clinical biochemistry in the diagnosis and management of disease in healthcare provision.
L4	Introduce the role of pathology in the diagnosis and management of disease in healthcare provision.
L5	Be able to carry out apply relative statistical analysis to biomedical and health science data.

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 core biomedical science disciplines and their application in disease diagnosis and management.
Practice: Applied Knowledge and Understanding	**SCQF 8** Use the theoretical knowledge gained to perform experiments and interpret the results.
Generic Cognitive skills	**SCQF 8**

[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

	Use a range of approaches to formulate appropriate responses to problems in biomedical science.
Communication, ICT and Numeracy Skills	**SCQF 8** Communicate effectively orally and in writing. Analyse and interpret data where appropraite.
Autonomy, Accountability and Working with Others	**SCQF 8** Working in teams to perform practical work will require time management, organisational skills and awareness of professional practice.

Prerequisites	**Module Code** BIOL07022 BIOL07023	**Module Title** Chemistry for Environmental and Biosciences Fundamentals of Life
	Other Only Available for students on the Programmes BSc (Hons) Applied Biomedical Science), BSc (Hons) Biomedical Science and BSc (Hons) Science.	
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. 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** (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture / Core Content Delivery	24
Tutorial / Synchronous Support Activity	8
Laboratory / Practical Demonstration / Workshop	16
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:

Biomedical Science Practice: Experimental and Professional Skills (Fundamentals of Biomedical Science) 3rd Edition. Glencross H., Ahmed N. & Wang Q. (2022), OUP, ISBN: 978-0198831228

Clinical Biochemistry (Fundamentals of Biomedical Science) 2nd Edition : Ahmed N. (2016), OUP, 978-0199674442 (new version to be published September 2025)

Immunology (Fundamentals of Biomedical Science): Hall A. & Yates C. (2016) OUP, 978-0199657650

Haematology (Fundamentals of Biomedical Science) 3rd Edition: Moore G., Knight G. & Blann A. (2021) 978-0198826095

Histopathology (Fundamentals of Biomedical Science) 2nd Edition: Orchard G. & Nation B. (2017) 978-0198717331

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)

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 synchronous sessions (lectures, practicals, workshops, and tutorials), completion of asynchronous 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	Amelie Juin
External Examiner	S Haliti
Accreditation Details	IBMS/ HCPC
Module Appears in CPD catalogue	☐ **Yes** ☒ **No**
Changes / Version Number	4

Assessment (also refer to Assessment Outcomes Grids below)
Assessment 1
In order to meet IBMS accreditation requirements, to pass students must achieve an aggregate mark of at least 40%, with no component of assessment lower than 40%. Three x Class test (written, closed book)
Assessment 2
Laboratory / Clinical / Field notebook
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**
Class test (written)	☒	☒	☒	☒	☒	40	3

Component 2							
Assessment Type	**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**Weighting of Assessment Element (%)**	**Timetabled Contact Hours**
Laboratory/ Clinical/ Field notebook	☒	☒	☒	☒	☒	60	0

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

Change Control

What	**When**	**Who**
Module Coordinator, moderator	Feb 2025	J McLean
Indicative resources, compensation information	July 2025	F Menzies
Module Summary updated, Learning outcomes updated, assessment type updated	Jan 2026	F Menzies