



## Module Descriptor

<b>Title</b>	Infection and Immunity		
<b>Session</b>	2024/25	<b>Status</b>	Published
<b>Code</b>	BIOL09034	<b>SCQF Level</b>	9
<b>Credit Points</b>	20	<b>ECTS (European Credit Transfer Scheme)</b>	10
<b>School</b>	Health and Life Sciences		
<b>Module Co-ordinator</b>	Roderick Williams		
<b>Summary of Module</b>			
<p>In this module, students will be introduced through lectures, and practical lab sessions to microorganisms which pose a threat to human health. Emphasis will be placed on:</p> <ul style="list-style-type: none"> <li>(a) commensals, pathogenic and opportunistic pathogens</li> <li>(b) Healthcare associated infections</li> <li>(c) Virulence factors associated with pathogenic microorganisms</li> <li>(d) Methods used for microbial isolation and identification</li> <li>(e) Host immune response to infections from pathogenic microorganisms</li> <li>(f) the use of chemotherapy, prophylaxis and vaccinations for curative and preventive strategies</li> </ul> <p>This module will work to develop a number of the key “I am UWS” Graduate Attributes to make those who complete the module, have Universal skills, that will make them Work Ready and Successful</p>			

<b>Module Delivery Method</b>	<b>On-Campus<sup>1</sup></b> <input checked="" type="checkbox"/>	<b>Hybrid<sup>2</sup></b> <input type="checkbox"/>	<b>Online<sup>3</sup></b> <input type="checkbox"/>	<b>Work -Based Learning<sup>4</sup></b> <input type="checkbox"/>
<b>Campuses for Module Delivery</b>	<input type="checkbox"/> Ayr <input type="checkbox"/> Dumfries	<input checked="" type="checkbox"/> Lanarkshire <input type="checkbox"/> London	<input type="checkbox"/> Online / Distance Learning	

<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>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>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>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

		<input type="checkbox"/> Paisley	<input type="checkbox"/> Other (specify)
<b>Terms for Module Delivery</b>	Term 1	<input checked="" type="checkbox"/>	Term 2 <input type="checkbox"/> Term 3 <input type="checkbox"/>
<b>Long-thin Delivery over more than one Term</b>	Term 1 – Term 2	<input type="checkbox"/>	Term 2 – Term 3 <input type="checkbox"/> Term 3 – Term 1 <input type="checkbox"/>

<b>Learning Outcomes</b>	
<b>L1</b>	Understand the virulence factors associated with microbial infections
<b>L2</b>	Critically evaluate ways by which microorganisms can be isolated, identified and treated
<b>L3</b>	Carry out standard microbiological and cytotoxicity protocols, hands-on and virtually, important for isolation and identification of microorganisms, preventive and curative strategies with emphasis on safety as defined in the local microbiological safety regulations.
<b>L4</b>	Understand the principles of immunology, in particular the immunological response to infection.
<b>L5</b>	Understand immunological response can be used for the identification of microorganisms

<b>Employability Skills and Personal Development Planning (PDP) Skills</b>	
<b>SCQF Headings</b>	<b>During completion of this module, there will be an opportunity to achieve core skills in:</b>
<b>Knowledge and Understanding (K and U)</b>	<b>SCQF 9</b> Demonstrate knowledge and understanding of essential facts and principles in respect of medical microbiology including the life cycle of selected pathogens; the infection cycle, demonstrate an awareness of inter-relationships between pathogens and host for the development of preventive and curative strategies
<b>Practice: Applied Knowledge and Understanding</b>	<b>SCQF 9</b> Use a range of standard and specialised practical skills to culture bacteria and undertake cytotoxicity assays in a safe working environment
<b>Generic Cognitive skills</b>	<b>SCQF 9</b> Link together different content strands when writing standard scientific reports and laboratory logbook.
<b>Communication, ICT and Numeracy Skills</b>	<b>SCQF 9</b> Be able to communicate effectively in writing scientific reports using data analysis and statistics and be able to communicate key findings orally
<b>Autonomy, Accountability and Working with Others</b>	<b>SCQF 9</b> Be able to work individually or in teams as appropriate; show initiative in preparation of laboratory reports and demonstrate an ability to manage time to meet specific deadlines.

<b>Prerequisites</b>	<b>Module Code</b> BIOL08004	<b>Module Title</b> Introductory Microbiology
	<b>Other</b> Students are recommended to have taken Introductory Microbiology, BIOL08004, prior to taking this module	
<b>Co-requisites</b>	<b>Module Code</b>	<b>Module Title</b>

### 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.

<b>Learning Activities</b>	<b>Student Learning Hours</b>
During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	(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
Please select	
Please select	
<b>TOTAL</b>	200

### Indicative Resources

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

Microbiology by Bauman, R.W. (2007) Pearson: Benjamin Cummings Pearson International Edition

Infection and Immunity by Playfair and Bancroft Oxford. 2013

Basic Immunology Abbas and Lichtman, Saunders Elsevier

Additional textbooks are also available at the libraries on the University's Campuses

Useful website: Public Health Scotland (<https://www.publichealthscotland.scot/>)

**(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 regularly attending and participating in timetabled on-campus 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:**

Attendance at all synchronous sessions (lectures, tutorials and practicals), completion of asynchronous activities, and submission of assessments to meet the learning outcomes of the module. This module has a practical element as part of the Royal Society of Biology (RBS) and the Institute of Biomedical Science (IBMS) accreditation which must be attended.

### 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.

Please refer to the UWS Equality and Diversity Policy at the following link: [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)**

### Supplemental Information

<b>Divisional Programme Board</b>	<b>Biological Sciences Health</b>
<b>Overall Assessment Results</b>	<input type="checkbox"/> Pass / Fail <input checked="" type="checkbox"/> Graded
<b>Module Eligible for Compensation</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>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.</b>
<b>School Assessment Board</b>	BSH L7-11
<b>Moderator</b>	F. Menzies
<b>External Examiner</b>	
<b>Accreditation Details</b>	This module is part of the BSc (Hons) Biomedical Science programme; accredited by Institute of Biomedical Science (IBMS). Approval awaited for another PSRB. This module is part of the BSc (Hons) Applied Bioscience and BSc (Hons) Applied Bioscience with Forensic Investigation programmes; accredited by Royal Society of Biology (RSB).
<b>Module Appears in CPD catalogue</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Changes / Version Number</b>	2

**Assessment (also refer to Assessment Outcomes Grids below)****Assessment 1**

Two written class/lab Tests on the Infection (30%) and Immunity (30%) components, 60% of final mark

**Assessment 2**

Coursework, Scientific report (30%) and logbook (10%), 40% of final marks

**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/lab Tests	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	60	4

**Component 2**

Assessment Type	LO1	LO2	LO3	LO4	LO5	Weighting of Assessment Element (%)	Timetabled Contact Hours
Scientific Report and Logbook	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	40	0

**Component 3**

Assessment Type	LO1	LO2	LO3	LO4	LO5	Weighting of Assessment Element (%)	Timetabled Contact Hours
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>Combined total for all components</b>						100%	4 hours

**Change Control**

What	When	Who