**Module Descriptor**

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|---|---|---|---|
| **Title** | Biology of Disease | | |
| **Session** | 2026/27 | **Status** | Published |
| **Code** | BIOL10001 | **SCQF Level** | 10 |
| **Credit Points** | 20 | **ECTS (European Credit Transfer Scheme)** | 10 |
| **School** | **Health and Life Sciences** | | |
| **Module Co-ordinator** | Gary Boyd | | |

**Summary of Module**

This module builds upon provision of physiology, pathophysiology and haematology at previous levels and focusses on aspects of human disease including pathological haematology, transfusion science and major, current disease issues in the developed world.

To include:

The theory and practice of transfusion science.

The pathogenesis of blood disorders such as anaemias; haemoglobinopathies; thalassaemias; blood cancers; disorders of haemostasis; aetiology and pathogenesis of disease; disease processes at cell and tissue levels.

Atherosclerosis

Movement & movement disorders: Parkinson's disease; Huntingdon's disease; ALS. Learning & memory: mechanisms; deficits & dementias; Alzheimer's disease, prion diseases; treatments for memory deficit.

This module will work to develop a number of the key "I am UWS" Graduate Attributes to make those who complete the module; Universal (Critical thinker, analytical, inquiring, research minded), Work Ready (Knowledgeable, Digitally literate, Effective communicator) and Successful (Autonomous).

| **Module Delivery Method** | **On-Campus[1]** | **Hybrid[2]** | **Online[3]** | **Work -Based Learning[4]** |
|---|---|---|---|---|
| | ☒ | ☐ | ☐ | ☐ |

[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

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| **Campuses for Module Delivery** | ☐ Ayr<br>☐ Dumfries | | ☒ Lanarkshire<br>☐ London<br>☐ Paisley | | ☐ Online / Distance Learning<br>☐ 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** | |
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| **L1** | Apply knowledge of physiology and pathophysiology to evaluate current issues in areas of major clinical importance, including neuropathology, diabetes mellitus, cardiovascular disease and neoplasia. |
| **L2** | Develop a critical appreciation of pathological haematology, including haemostatic disorders and haematological neoplasia. |
| **L3** | Develop a thorough appreciation of transfusion science. |
| **L4** | |
| **L5** | |

| **Employability Skills and Personal Development Planning (PDP) Skills** | |
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| **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**<br>Develop a detailed knowledge and understanding of the pathological areas covered by the module. |
| **Practice: Applied Knowledge and Understanding** | **SCQF 10**<br>Applying scientific knowledge to solve practical problems; gain practical expertise in transfusion practice. |
| **Generic Cognitive skills** | **SCQF 10**<br>Develop the ability to extract and analyse relevant information from published research papers. |
| **Communication, ICT and Numeracy Skills** | **SCQF 10**<br>Clearly and critically explain ideas gained from analysis of spoken, written and online resources. |
| **Autonomy, Accountability and Working with Others** | **SCQF 10**<br>Work with others in teams to pursue research in pathophysiology. |

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| **Prerequisites** | **Module Code**<br>BIOL09034 | **Module Title** Infection and Immunity |
| | **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.

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**<br>During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below: | **Student Learning Hours**<br>(Note: Learning hours include both contact hours and hours spent on other learning activities) |
|---|---|
| Lecture / Core Content Delivery | 29 |
| Tutorial / Synchronous Support Activity | 7 |
| Independent Study | 164 |
| n/a | |
| n/a | |
| n/a | |
| **TOTAL** | 200 |

**Indicative Resources**

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

Hofffbrand, A.V., Moss, P.A.H. & Pettit, J.H – Essential Haematology (9th ed). (2024) Blackwell.

Mader S. S. Human Biology, 17th Ed. (2022) McGraw Hill

Marieb, E. Human Anatomy and Physiology (11th Edn), Benjamin Cummings (2018)

Martini F. H. & Bartholomew E. F. (2020) Essentials of Anatomy & Physiology, 8th Ed. Prentice-Hall

Nowak, T.J. & Handford, A.G. Pathophysiology - Concepts and Applications for Health Care Professionals (2003) McGraw Hill

Transplantation and Transfusion Science (Fundamentals of Biomedical Science) 2nd Edition. Avent, N (2018) Oxford University Press

**(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:** |
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| Students are expected to attend all scheduled classes, to contribute to class discussions and submit the requested coursework. |

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

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| **Divisional Programme Board** | **Biological Sciences Health** |
| **Overall Assessment Results** | ☐ **Pass / Fail** ☒ **Graded** |
| **Module Eligible for Compensation** | ☐ **Yes** ☒ **No**<br>**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** | Jamie Whitelaw |
| **External Examiner** | S Haliti |
| **Accreditation Details** | IBMS/ HCPC/ RSB |
| **Module Appears in CPD catalogue** | ☐ **Yes** ☒ **No** |
| **Changes / Version Number** | 3 |

| **Assessment (also refer to Assessment Outcomes Grids below)** |
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| **Assessment 1** |
| Coursework 1 40% of final mark |
| **Assessment 2** |
| Coursework 2 30% of final mark |
| **Assessment 3** |
| Coursework 3 30% of final mark |
| (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** |
| Essay | ☒ | ☐ | ☐ | ☐ | ☐ | 40 | 0 |

| **Component 2** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Assessment Type** | **LO1** | **LO2** | **LO3** | **LO4** | **LO5** | **Weighting of Assessment Element (%)** | **Timetabled Contact Hours** |
| Class test (written) | ☒ | ☐ | ☐ | ☐ | ☐ | 30 | 2 |

| **Component 3** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Assessment Type** | **LO1** | **LO2** | **LO3** | **LO4** | **LO5** | **Weighting of Assessment Element (%)** | **Timetabled Contact Hours** |
| Class test (written) | ☒ | ☒ | ☒ | ☐ | ☐ | 30 | 2 |
| **Combined total for all components** | | | | | | 100% | 4 hours |

**Change Control**

| **What** | **When** | **Who** |
|---|---|---|
| Pre-requisites<br>Indicative resources updated | July 2025 | F Menzies |
| New Moderator added | Dec 2025 | G Boyd |
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