

University of the West of Scotland

Undergraduate Programme Specification

Session: 2023/24

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Status: Published

Named Award Title:	BSc (Hons) Applied Biomedical Science Single
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Award Title for Each Award:	BSc (Hons) Applied Biomedical Science BSc Applied Bioscience Dip HE Science Cert HE Science
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Date of Validation:	January 2019
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Details of Cohorts Applies to:	New students entering from September 2019.
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Awarding Institution/Body:	University of the West of Scotland
Teaching Institution:	University of the West of Scotland
Language of Instruction & Examination:	English
Award Accredited By:	BSc (Hons) title is accredited by IBMS and approved by HCPC
Maximum Period of Registration:	
Mode of Study:	Full Time
Campus:	Lanarkshire

School:	School of Health and Life Sciences
Programme Board	Biological Sciences and Health
Programme Leader:	Dr Fiona Menzies

Admission Criteria

Candidates must be able to satisfy the general admission requirements of the University of the West of Scotland as specified in Chapter 2 of the University Regulatory Framework together with the following programme requirements:

SQA National Qualifications

YEAR 1 ENTRY

SQA Highers

Standard Entry: ABBB including Biology or Human Biology or 114 UCAS Tariff Points

Minimum Entry: BBBB including Biology or Human Biology or 108 UCAS Tariff Points

YEAR 2 ENTRY

SQA Advanced Highers: BBC including Biology, and Chemistry at least at Standard Grade/Nat 5/Int2 or 136 UCAS Tariff Points

or GCE

YEAR 1 ENTRY

A-LEVEL: BCC including Biology or Human Biology or 104 UCAS Tariff Points including Biology or Human Biology

OTHERS:

Irish Leaving Certificate: H1H2H2H2 (including Biology or Human Biology), International Baccalaureate (IB) Diploma: 24 points (including 3 subjects at HL one should be Biology or Human Biology)

YEAR 2 ENTRY

GCE A-Levels: BBC (including Biology) or 112 UCAS Tariff Points

International Baccalaureate (IB) Diploma: 30 points (including Biology at HL plus Chemistry at OL) or 136 UCAS Tariff Points

or SQA National Qualifications/Edexcel Foundation

YEAR 2

SQA HNC / BTEC Level 4 HNC: Applied Science; Biomedical Science/Applied Biomedical Science; Industrial Biotechnology

Other Required Qualifications/Experience

There is a minimum entry qualification for competence in the use of the English language of attainment of level 7 in the IELTS (International English Language Testing System) with no score below 6.5.

For the BSc Applied Biomedical Science degree entry to the HCPC register is dependent on the necessary character and health checks.

Applicants may also be considered with other academic, vocational or professional qualifications deemed to be equivalent.

Further desirable skills pre-application

General Overview

Biomedical Science is the branch of medical science specifically concerned with the laboratory diagnosis and monitoring of disease. The aim of the programme is to provide the student with training as a Biomedical Scientist according to the criteria set out by the Health and Care Professions Council, which facilitates entry into NHS accredited hospital laboratories. The degree programme has accordingly been approved by the HCPC. The degree is also accredited by the Institute of Biomedical Science (IBMS). It is an integrated degree in which academic study is integrated with work-based learning in an accredited National Health Service (NHS) laboratory.

Graduates are exceptionally well qualified to enter a range of medically-related professions in a very buoyant employment market. Their skills are sought after by a wide range of employers: NHS clinical laboratories, National Blood Service laboratories, Health Protection Agency, medical/pharmaceutical/veterinary/food/etc research & development laboratories, sales & marketing in health-related commerce, and a wide range of research laboratories.

The programme is carefully prescribed to ensure that the key areas regarded as essential for a Biomedical Scientist have been addressed i.e. human anatomy & physiology, cell biology, biochemistry, genetics, molecular biology, immunology, and microbiology. The theoretical aspects are fully integrated with a high proportion of practical work, so that much of the student's experience involves 'learning by doing'. Experience has shown that students value this approach and become more involved with the subjects so that their motivation to produce high quality work increases. The Honours level research project further refines practical abilities and intensifies the development of independent learning skills, providing an excellent introduction to research-based skills for those intending to pursue a higher degree and consequent research orientated career. Many of the past graduates are now employed in promoted positions throughout the medical and health sector both at home and abroad.

Students are taught using a wide range of innovative teaching approaches that are fully supported by the University Virtual Learning Environment, which also helps provide linkage between different learning environments (e.g. Home, University, & Placement) and aids the transition towards independent learner. There are a wide range of quality facilities, including well-equipped laboratories within the University to support students during the tenure of their degree, and the Life Science staff are renowned for their approachability and concern for student success.

This particular programme places a strong emphasis on the transition from student into Biomedical Scientist, which involves more than just the acquisition of the relevant scientific and technical information. The University places focus on Personal Development Planning (PDP) to emphasise the importance of employability skills. Following graduation, a Biomedical Scientist engages with Continuing Professional

Development as a mandatory aspect of their employment, and since this is the natural successor to PDP, the student will be ideally prepared for the transition. In addition to this, students on the programme are encouraged to engage with the professional governing bodies (HCPC and IBMS) as soon as they embark on the programme and then receive a wide range of opportunities to participate in professionally related activities, including a 15 week period spent in an approved clinical laboratory (SCQF L9 or year 3 of the programme).

Students may register for this programme on entry to the University (L7 or L8 if they have appropriate qualifications), but they will undergo a competitive selection procedure prior to the placement in Level 9 based upon a variety of criteria including development of a professional attitude and their academic achievement, assessed partly through interview.

Students who are unable to progress on this programme will be given the opportunity to transfer to a related programme.

Graduates from this degree programme would be very well equipped to enter a range of health-related professions and would also possess a range of very valuable skills that would make them most suitable for further post-graduate training in life-based scientific research.

The teaching strategy associated with the programme seeks to foster the following:

- To develop critical, analytical problem-based learning skills and the transferable skills to prepare the student for graduate employment.
- To enable the student to engage in lifelong learning, study and enquiry, and to appreciate the value of education to society.
- To assist the student to develop the skills required for both autonomous practice and team-working.
- To develop in the student a knowledge and understanding of the principles governing the biological & biomedical sciences.
- To enable the student to extend knowledge and understanding to a critical assessment of current views and theories in the biological sciences.
- To enable the student to acquire competence in a range of practical methods in biological/biomedical science.

The above, particularly work-related skills, will be enhanced where a student undertakes a placement. All of the modules that support the above utilise a blend of formal lectures and practical work. Practical work includes both laboratory work and field trips. In addition, students at all levels are supported by personal tutors. E-learning is specifically enabled through the use of the Virtual Learning Environment, which is utilised by all modules in the programme to support the delivery of material.

Graduate Attributes, Employability & Personal Development Planning

This programme places a strong emphasis on the transition from student into Biomedical professional, which involves more than just the acquisition of the relevant scientific and technical information. The University places focus on Personal Development Planning (PDP) to emphasise the importance of employability skills. Following graduation, a Biomedical Scientist engages with Continuing Professional Development as a mandatory aspect of their employment, and since this is the natural successor to PDP, it provides an ideal preparation for the transition. In addition to this, students will be encouraged to engage with the professional governing bodies (HCPC) as soon as they embark on the programme, in addition to which they receive a wide range of opportunities to participate in professionally related activities, including a 15 week period spent in an HPC approved clinical laboratory (SCQF L9 or year 3 of the programme).

The development of skills from SCQF 7 through to SCQF 10 follows a carefully planned progression combining generic graduate skills with practical and subject-specific based aspects to encourage independent learning over a supported transition period of 3-4 years. The PDP aspects are being designed to emphasise and encourage self-reflective analysis.

Students will be supported and empowered to develop the skill of purposeful reflection which will lead into planning for, and throughout, their entire educational experience. By engaging with these twin processes of reflection and planning they will develop a set of skills and attributes that will underpin their employability.

Graduate Attributes

The development of UWS graduate attributes is embedded within all years of the programme. Our aim is to provide students at UWS with opportunities to develop academically, professionally and personally: to broaden their ambitions, extend their attitudes, challenge their assumptions, and assist towards unlocking their potential to succeed in their studies and future lives.

Critical Thinker The ability to evaluate yourself and your own thinking; assessing and evaluating complex information from different sources, challenging and questioning presented knowledge and facts, drawing

reflective conclusions and articulating knowledge. Thinking reflectively and logically, being able to explain your thought processes, forming your own conclusions, constructing coherent arguments and taking actions based on your own thinking and relevant information.

Ethically-Minded Understanding ethical principles, awareness and appreciation of the values and beliefs of others in relation to own actions. Knowledge of moral decisions; respect for other people's beliefs and the environment; being non-judgmental.

Collaborative Ability to work with a range of people, receptive to others' views and working well with others to reach shared goals. Being a good communicator, open-minded, flexible, empathetic, a good listener, and proactive.

Autonomous Taking responsibility for own actions to help become an independent learner. Applying learning and knowledge outwith university, having confidence in self, taking responsibility for own actions and making informed decisions. Self-directed, disciplined, using initiative and being self-motivated.

Resilient The ability to weather challenges and setbacks, utilising adversity to build new skills and support others in the future. Being determined, motivated, self-confident and demonstrating will-power. Not fearing failure.

Driven Ambitious; highly motivated to achieve desired outcome; focussed. A willingness to work hard; committed to achieving objectives; highly engaged with self-determination. Pushing personal boundaries and having the confidence to gain new experience.

Problem Solver Identifying what the problems are, including both what is known and what is unknown. Showing the application of knowledge to problematic situations/issues and evaluating a range of creative options; Identifying a problem and then finding solutions. Ability to be creative and knowledgeable enough to ask the right questions and to step up to take ownership of tasks/activities.

Effective Communicator To adapt what you are communicating to a specific audience. Communicating effectively to present ideas, discuss, persuade, negotiate, debate and challenge. Possessing skills to communicate verbally and non-verbally in an engaging and articulate manner. Listening.

Ambitious Aiming to achieve. Know where you want to be, setting goals, targets and making progress to accomplish these.

Individual modules will specify where opportunities to develop these skills occur.

Work Based Learning/Placement Details

Work related learning forms an integral and compulsory part of this programme, as the student engages with a 15 week placement in an approved hospital laboratory during the second term of their third year (SCQF 9).

Students engage with the 15 week placement to provide them with the practical opportunity to acquire evidence of experience for completion of the HCPC Standards of Practice (additional work is undertaken for this in the University). This range of work is described in the Student's Placement Handbook and the accompanying document Record of Competence which is based on the generic West of Scotland Laboratories Clinical Placement Training Manual. The 40 point module Professional Laboratory Training in BMS outlines the work which is taken in conjunction with the module Professional Practice in Biomedical Science.

Students must fulfil certain criteria in order to gain a placement position, which is competitive and involves: a satisfactory Disclosure Scotland check, good academic progress, and development of a professional attitude.

The placement experience has been designed to match the criteria laid down in the HCPC guidelines (e.g. SOP & SETS). The Work Placement is in compliance with University's regulations and criteria for placement settings.

Engagement and Attendance

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 programme, this equates to the following:

Engagement with all classes and asynchronous activities associated with the programme is required.

Equality and Diversity

The University's Equality, Diversity and Human Rights Procedure can be accessed at the following link: [UWS Equality and Diversity Policy](#)

The programme should be suitable for all students who are capable of attending formal lectures, working in computer laboratories and practical laboratories.

Programme structures and requirements, SCQF level, term, module name and code, credits and awards (**Chapter 1, Regulatory Framework**)

A. Learning Outcomes (Maximum of 5 per heading)

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

Knowledge and Understanding	
A1	Demonstrate a broad awareness of the diversity of the subject area Biomedical science and the nature of the main contributing areas.
A2	Demonstrate an awareness of the difference between explanations based in evidence and other forms of explanation and the importance of this difference.
Practice - Applied Knowledge and Understanding	
B1	Use of basic and routine practical skills in Biomedical science.
B2	An ability to collect and record biological/biomedical data.
B3	Be able to work safely in a laboratory environment.
B4	Understand the role of the regulatory and professional bodies in biomedical science.
B5	Understand the importance of conduct, performance and ethics in meeting HCPC standards of proficiency and implications as a student and following graduation.
Communication, ICT and Numeracy Skills	
C1	Use relevant computing technologies to analyse, display, and report biological/biomedical data.
C2	Use and manipulation of numerical data.
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Present and evaluate biological (inc biomedical) information.
Autonomy, Accountability and Working With Others	
E1	Exercise initiative in undertaking laboratory report and other written material.
E2	Demonstrate an ability to work in a group or as part of a team.

Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
7	BIOL07023	Fundamentals of Life	40	✓			
7	APPD07001	ASPIRE 1	20	✓	✓		
7	BIOL07022	Chemistry for Biosciences	20	✓	✓		
7	BIOL07020	Diversity of Life	40		✓		

* Indicates that module descriptor is not published.

Footnotes

Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

* Indicates that module descriptor is not published.

Footnotes

Criteria for Progression and Award

Progression from Level 7 to Level 8 is in accordance with the University regulations.

A Cert HE Science is available in accordance with University regulations. (At least 120 credits are required of which a minimum of 90 are at least SCQF Level 7).

Successful completion of Level 7 will provide the students with the 120 points necessary to progress to the next year of study.

B. Learning Outcomes (Maximum of 5 per heading)

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

Knowledge and Understanding	
A1	Demonstrate a broad knowledge of the essential facts, major concepts, principles and core theories associated with the biological (inc biomedical) sciences.
A2	Demonstrate an understanding of ideas, concepts and facts relating to biology and biomedical science.
A3	Be able to formulate simple hypotheses.
Practice - Applied Knowledge and Understanding	
B1	Use a range of basic and routine practical skills in the biological (inc biomedical) sciences.
B2	Formulate and test hypotheses using scientific methods.
B3	Detailed data collection in the biological (inc biomedical) sciences.
B4	Appreciate the importance of safety in the laboratory environment when collecting biological (inc biomedical) data.
Communication, ICT and Numeracy Skills	
C1	Be able to convey complex ideas to a range of different audiences including peers and academics.
C2	Routine use of IT for the presentation and manipulation of biological (inc biomedical) data.
C3	Ability to interpret different sets of data.
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Evaluate biological (inc biomedical) information.
D2	Use different approaches to formulate evidence-based solutions.
Autonomy, Accountability and Working With Others	
E1	Exercise initiative in undertaking laboratory reports and other written material.
E2	Be able to work in a team and to also follow instructions in relation to laboratory work.
E3	Development of the ability to manage time in respect of laboratory practical work.

Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
8	BIOL08005	Cells & Sugars	20		✓		

8	BIOL08019	Core Biomedical Science	20	✓			
8	BIOL08012	Genetics	20		✓		
8	BIOL08003	Human Biology	20	✓			
8	BIOL08004	Introductory Microbiology	20		✓		
8	BIOL08002	Practical Skills in Biomed. and Env. Health	20	✓			

* Indicates that module descriptor is not published.

Footnotes

Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

* Indicates that module descriptor is not published.

Footnotes

Criteria for Progression and Award

Do criteria for progression/ award differ from the requirements of the University Regulatory Framework? No.

Progression from Level 8 to Level 9 is in accordance with the University regulations.

A Dip HE Science is available in accordance with University regulations. (At least 240 credits are required of which a minimum of 90 are at least SCQF Level 8).

C. Learning Outcomes (Maximum of 5 per heading)

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

Knowledge and Understanding	
A1	Demonstrate an integrated knowledge of ideas, concepts and facts relating to selected areas of biomedical science. Situations ranging from the basic to the complex, in a variety of cellular and organismal systems.
A2	Demonstrate an appreciation and awareness of the complexity and diversity of human life processes through knowledge of the human organism, and the inter-relationships between humans and their environment.
A3	Be able to formulate and to test hypotheses as they relate to biomedical knowledge.
A4	Demonstrate the link between theory and practice in a workplace context.
Practice - Applied Knowledge and Understanding	
B1	Use a range of basic and routine practical skills, and some specialized skills in biomedical science in both laboratory and workplace situations.
B2	Show an ability to interpret experimental evidence in both laboratory and workplace situations.
B3	An understanding of different methods of data collection and recording in the context of a working biomedical science laboratory setting.
B4	Appreciate the importance of safety and develop the skills required to carry out a risk assessment in a workplace context.
Communication, ICT and Numeracy Skills	
C1	Evaluate qualitative and quantitative data and recognize the difference between these data sets.
C2	Be able to convey complex ideas and to make formal presentations to a wide range of audiences.
C3	Be able to use appropriate IT to manipulate, statistically analyse, and present biomedical data.

Generic Cognitive Skills - Problem Solving, Analysis, Evaluation

D1	Critically evaluate and synthesize biomedical information.
D2	Be able to identify routine professional problems and issues.
Autonomy, Accountability and Working With Others	
E1	Exercise initiative in undertaking laboratory reports and other written material.
E2	Be able to take responsibility for the work of others when undertaking group project work.
E3	Be able to deal with ethical issues associated with biomedical science.
E4	Be able to relate to and accept instruction from laboratory supervisors within the workplace.
E5	Demonstrate the ability to work within a team in the context of a professional biomedical science laboratory.

Core Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	
9	BIOL09034	Infection and Immunity	20	✓			
9	BIOL09032	Intermediate Blood Sciences	20	✓			
9	BIOL09033	Molecular & Cellular Pathology	20	✓			
9	BIOL09028	Professional Laboratory Training in BMS	40		✓		
9	BIOL09029	Professional Practice in Biomedical Science	20		✓		

* Indicates that module descriptor is not published.

Footnotes

Optional Modules

SCQF Level	Module Code	Module Name	Credit	Term			Footnotes
				1	2	3	

* Indicates that module descriptor is not published.

Footnotes

Criteria for Progression and Award

Rules for progression are as given in the University's Regulatory Framework.

An ordinary degree in Applied Bioscience may be awarded subject to University regulations. (At least 360 credits are required, of which a minimum of 90 are at least SCQF 9). If appropriate, an award with distinction will be made in accordance with University Regulations.

There is a period of work placement in term 2 of level 9 that requires a double module credit of 40 points. The WBL component is required at this level to satisfy Health and Care Professions Council requirements.

D. Learning Outcomes (Maximum of 5 per heading)

Outcomes should incorporate those applicable in the relevant QAA Benchmark statements

Knowledge and Understanding	
A1	Show an awareness of current developments in biomedical science and their applications, noting philosophical and ethical issues that have arisen and which affect the quality and sustainability of life.
A2	Demonstrate knowledge of the applicability of biomedical science credentials to career development.

* Indicates that module descriptor is not published.

Footnotes

Criteria for Award

An aegrotat award would NOT provide eligibility for admission to the approving professional body's (Health and Care Professions Council) HCPC register. While this is stated here it is not likely to be a problem due to the facility for a resit opportunity at Level 10.

The award of the Honours degree in Applied Biomedical Science requires 480 points, of which 120 are at each of Levels 9 and 10 of the Programme as outlined in the Programme Specification above.

Classification of Honours is outlined in University Regulations.

Regulations of Assessment

Candidates will be bound by the general assessment regulations of the University as specified in the [University Regulatory Framework](#) .

An overview of the assessment details is provided in the Student Handbook and the assessment criteria for each module is provided in the module descriptor which forms part of the module pack issued to students. For further details on assessment please refer to Chapter 3 of the Regulatory Framework.

To qualify for an award of the University, students must complete all the programme requirements and must meet the credit minima detailed in Chapter 1 of the Regulatory Framework.

Combined Studies

There may be instances where a student has been unsuccessful in meeting the award criteria for the named award and for other more generic named awards existing within the School. Provided that they have met the credit requirements in line with the SCQF credit minima (please see Regulation 1.21), they will be eligible for an exit award of CertHE / DipHE or BA / BSc in Combined Studies.

For students studying BA, BAcc, or BD awards the award will be BA Combined Studies.

For students studying BEng or BSc awards, the award will be BSc Combined Studies.

Changes

Changes made to the programme since it was last published: L7 modules updated to reflect new structure

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