Undergraduate Programme Specification

Session	2024/25	**Last Modified**	21/08/24
Named Award Title	BSc (Hons) Applied Bioscience and Zoology (Sandwich) Single		
Award Title for Each Award	BSc (Hons) Applied Bioscience and Zoology (Sandwich) BSc Applied Bioscience and Zoology Dip HE Science Cert HE Science		
Date of Approval	August 2024		
Details of Cohort Applies to	All students entering in 2024-25		
Awarding Institution	University of the West of Scotland	**Teaching Institution(s)**	University of the West of Scotland
Language of Instruction & Examination		English	
Award Accredited by		BSc (Hons) Applied Bioscience and Zoology is accredited by the Royal Society of Biology	
Maximum Period of Registration		8 years	
Duration of Study			
Full-time	4 years	**Part-time**	8 years
Placement (compulsory)	NA		
Mode of Study	☒ Full-time ☒ Part-time		
Campus	☐ Ayr ☐ Dumfries	☒ Lanarkshire ☐ London ☐ Paisley	☐ Online / Distance Learning ☐ Other (specify)
School	**Health and Life Sciences**		
Divisional Programme Board	**Biological Sciences Health**		
Programme Leader	Richard Thacker		

Admissions 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:

SQA National Qualifications Year 1 Entry Standard Entry Requirements: Scottish Highers: ABBB (114 UCAS Tariff points) including Biology or Human Biology

Minimum Entry Requirements: Scottish Highers: BBBB (108 UCAS Tariff points) including Biology or Human Biology

Year 2 Entry Scottish Advanced Highers: BBC (136 UCAS Tariff points) including Biology / Human Biology

Or GCE
Year 1 Entry A levels: BCC (104 UCAS Tariff points) including Biology or Human Biology

OTHERS Irish Leaving Certificate: H1 H2 H2 H2 including Biology or Human Biology

International Baccalaureate (IB) Diploma: 24 points, 3 @ HL including Biology or Human Biology

Year 2 Entry A levels: BBC (112 UCAS Tariff points) including Biology

Or SQA National Qualifications / Edexcel Foundation
An appropriate HNC/HND award with the level of entry and/or credit awarded being subject to the content of the HN programme.

For year 2 entry HNC in Applied Science, Bioscience, Animal Care or equivalent qualification.

For year 3 entry DipHE/HND in Applied Biological Science, Applied Science, Biotechnology, Biomedical Science, Environmental Sciences, Animal Care or equivalent qualification.

Other Required Qualifications/Experience
NA

Further desirable skills pre-application
NA

General Overview
The Applied Bioscience and Zoology programme comprises a specialism within the 'life' programmes (Applied Bioscience, Biomedical Science, Environmental Health). A key feature within the programme comprises the use of applied zoological knowledge. In years 1 and 2 students take courses that provide preparation for more specialised study. Modules taken in years 1 and 2 include Foundations of Life, Diversity of Life, The Biosphere and Man, Genetics, Animal Behaviour, Vertebrate Physiology and Microbiology. Specialised study in years 3 and 4 includes Entomology, Parasitology, Wildlife Biology, Animal Diversity, Conservation, Aquatic Ecology, Pest Management, Environmental Adaptation and Population Ecology. In year 3 there is a compulsory module entilted Field Biology that requires a financial contribution from students.

The Applied Bioscience and Zoology graduate would be a student well versed in a range of practical problem solving skills and thorough knowledge of animal biology which would provide opportunities in a wide range of careers from animal research through to science teaching, educational leisure centres, pest control, etc. Employability skills and careers

information are integrated into the programme throughout all years. Students also have access to careers information via the university. Graduates with an appropriate classification of honours degree will be well placed to continue their studies at M.Sc. or Ph.D. level. The qualification is also acceptable to all Schools of Education as an acceptable entry qualification to the Post Graduate Diploma in Education for Biology & General Science teaching.

The revised benchmark statement for Biosciences continues to emphasise the breadth of the subject area and also places significant importance on the development of practical skills. 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 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 the biological sciences. To develop creativity and innovation in students.

The above, particularly work-based skills, will be enhanced following completion of the work experience module at L9.

Typical Delivery Method
On campus

Any additional costs

Graduate Attributes, Employability & Personal Development Planning
Graduates in vocationally relevant employment – Education or the Health Service or the Life Science Industry - will be continuously engaging with Continuous Professional Development or Lifelong Learning activities. It is fundamental that to engage with and profit from these activities, students embrace PDP as a central strategy and integral to their learning process from day 1.

They 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.

It is the intention of the School of Health and Life Sciences to utilise the additional allocated time to develop not only the generic aspects of PDP but also to focus on the equally

important discipline specific skills. To these ends the core modules at each level will be seminal to the entire process. Notwithstanding the previous remarks, all module leaders and teaching teams will be encouraged to support the implementation of the University's PDP Policy wherever and whenever possible in situations that make sense educationally and are subject relevant.

The timetabled PDP sessions will be associated with the following core modules for the BSc (Hons) Applied Bioscience and Zoology programme:

Level 7 Term 2 Diversity of Life

Level 8 Term 1 Practical skills (P) Analytical techniques (H)

Level 9 Term 1 Work related learning

Level 10 Term 1 Environmental Research Project

Level 10 Term 2 Environmental Research Project

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 you 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

A placement year, generally between levels 9 and 10, or a shorter period of placement-based WRL (20 credit module at level 9), are components within the programme.

Without some form of vocational experience students find that entry into the job market is at best problematical. The purpose of the sandwich placement is to allow the student to experience the world of work on an extended basis. This opportunity allows the student to put in to practice, often within a rigidly controlled Quality Assurance environment, the skills, techniques and knowledge gained throughout the course.

Students who successfully complete the placement sandwich are better prepared for their honours project in the following year.

The mechanism by which students are selected for a particular placement is very employer dependant; some wish to interview; others will select solely on the basis of supplied CVs while others will trust the judgment of the Placement Co-ordinator. Factors which are important are the student's interests (academically speaking) and ease of travel to and from the Placement.

Prior to the Placement there will be a series of face to face tutorial sessions covering topics such as CV writing; interview technique; mock interviews; learning logs and aspects of QA that they will encounter while on placement. Not only will these tutorials prepare the student for the placement but the results may also be included in the student's Personal Development Planning).

There are three instruments of assessment in this module: A questionnaire that the employer completes on the student's contribution (in the widest sense) to the organisation: A log book / diary – the log book is a key component of the QA process in most if not all life science industries. A report describing the organisation, the work carried out and reflection on what has been learned and how the student's attitudes have changed.

Successful completion of the placement will serve students well either when competing for appropriate employment or in their approach to the honours project in the following year.

The Work Placement is in compliance with University's regulations and criteria for placement settings and in accordance with the Precepts detailed in the Code of Practice for the Assurance of Quality and Standards in Higher Education: Section 9 – Work Based and Placement Learning – September 2007.

The sandwich placement is designed for students to gain and reflect on work experience attained during their time in the workplace. The experience may also contribute towards meeting the membership requirements of a Professional body. Students undertaking a sandwich placement are required to undertake PDP and maintain a portfolio from which they will be required to produce a comprehensive learning log report charting their development during placement. This is assessed on a pass /fail basis only with the majority of ongoing assessment being formative in nature. The student will be required, through reflection, to explore their own role within their placement organisation and to take account of the roles and responsibilities of themselves and others in the context of the structures in which they operate. On successful completion of the placement, the learner will be more employable as a result of having developed their ability to integrate essential generic skills and attributes with subject/discipline related knowledge.

The placement will be governed by a tripartite learning agreement between the student, placement provider and the University which defines the learning outcomes and confirms elements of support and commitment from all parties. The agreement will be signed by each party prior to the start of the placement and it is expected that Schools will continue to use their existing placement systems for the management of such agreements.

Learning Outcomes.

At the end of the placement the student will be able to:

L1.Critically relate elements of the placement work experience to the main themes and issues of academic study of [subject discipline] relevant within the workplace and be confident in articulating this to others.

L2. Analyse organisational cultures and structures with particular relevance to the current workplace and exhibit the ability to critically evaluate employee roles in an applied setting.

L3. Recognise, critically assess and be able to clearly demonstrate to others the personal development and application of essential employability skills and attributes within a real work situation.

Assessment

Assessment will be based on pass/fail only and all assessment elements must be passed for progression as part of the Sandwich programme. Assignments will be open to external examination in accordance with University regulations. In order to submit for assessment students need to: - Attend the workplace(s) in which they have been placed for a minimum total of 36 weeks (180 full workingdays) and have their employer(s) confirm their attendance. - Receive a satisfactory assessment of work performance from their workplace supervisor(s) and academic tutor (based on two interviews and other evidence as required). - Maintain a PDP portfolio and use this to submit a satisfactory learning log report reflecting on the placement experience (minimum 2,000 words). - Successfully complete a subject related project (minimum 3,000 words or equivalent). Where a student’s sandwich placement is made up of two separate planned periods of work experience (i.e. a “Thin Sandwich”), the PDP portfolio

report and subject related report will normally be submitted and assessed during the second period of placement. Assessment of the first period of placement will relate to satisfactory performance in the workplace. Extenuating circumstances will be taken into consideration in accordance with University regulations.

Attendance and Engagement

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 programme, academic engagement equates to the following:

Attend all on campus classes

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.

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

Learning Outcomes

SCQF LEVEL 7 Learning Outcomes	
Knowledge and Understanding	
A1	Demonstrate a broad awareness of the diversity of the subject area of bioscience 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
A3	
A4	
A5	
Practice - Applied Knowledge and Understanding	
B1	Use of basic and routine practical skills in the biological sciences
B2	An ability to collect and record biological data
B3	Be able to work safely in a laboratory environment
B4	
B5	
Communication, ICT and Numeracy Skills	
C1	Use relevant computing technologies to display biological data
C2	
C3	
C4	
C5	
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Present and evaluate biological information
D2	
D3	
D4	
D5	
Autonomy, Accountability and Working with Others	
E1	Exercise initiative in undertaking laboratory reports and other written material
E2	Demonstrate an ability to work in a group or as part of a team
E3	
E4	
E5	

Level 7 Modules

CORE

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
7	APPD07001	ASPIRE	20	☒	☒	☐	
7	BIOL07022	Chmeistry for Environmental & Biosciences	20	☒	☒	☐	
7	BIOL07020	Diversity of Life	40	☐	☒	☐	
7	BIOL07023	Fundamentals of Life	40	☒	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
Footnotes for Core Modules							

Level 7 Modules

OPTION

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
Footnotes for Option Modules							

Level 7
Criteria for Progression and Award
Please refer to UWS Regulatory Framework for related regulations

Progression for L7 to L8 is in accordance with University Regulations. Refer to University Regulations regarding progression with credit deficit, note, the decision to permit a proceed with carry is not automatic. The exit award is the Certificate in Higher Education in Science, the requirements for which are 120 credits SCQF 7 or higher.

SCQF LEVEL 8 Learning Outcomes	
Knowledge and Understanding	
A1	Demonstrate a broad knowledge of the essential facts, major concepts, principles and core theories associated with the biological sciences
A2	Be able to formulate simple hypotheses
A3	
A4	
A5	
Practice - Applied Knowledge and Understanding	
B1	Use a range of basic and routine practical skills in the biological sciences
B2	Formulate and test hypotheses using scientific methods
B3	Appreciate the importance of safety in both laboratory and field environments when collecting biological data
B4	
B5	
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 data.
C3	Ability to interpret different sets of data
C4	
C5	
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Evaluate biological information
D2	Use different approaches to formulate evidence-based solutions
D3	
D4	
D5	
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 also to follow instructions in relation to laboratory work
E3	Development of the ability to manage time in respect of laboratory practical work
E4	
E5	

Level 8 Modules

CORE

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
8	BIOL08027	Animal Behaviour	20	☒	☐	☐	
8	BIOL08001	Vertebrate Physiology	20	☒	☐	☐	
8	BIOL08002	Practical Skills in Biomed. and Env. Health	20	☒	☐	☐	
8	BIOL08012	Genetics	20	☐	☒	☐	
8	BIOL08004	Introductory Microbiology	20	☐	☒	☐	
8	BIOL08025	Humans and the Global Biosphere	20	☐	☒	☐	
Footnotes for Core Modules							

Level 8 Modules

OPTION

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
Footnotes for Option Modules							

Level 8
Criteria for Progression and Award
Please refer to UWS Regulatory Framework for related regulations

Refer to University Regulations regarding progression with credit deficit, note, the decision to permit a proceed with carry is not automatic but is subject to detailed discussion at the Board of Examiners. The exit award is the Diploma in Higher Education in Science the requirements for which are 240 credits with at least 90 credits being at SCQF 8 or higher.

SCQF LEVEL 9 Learning Outcomes (Maximum of 5 per heading)	
Knowledge and Understanding	
A1	Demonstrate a broad and integrated knowledge of ideas, concepts and facts relating to the biosciences in situations ranging from the basic to the complex, in a variety of cellular and/or environmental systems, with an emphasis on the applied aspects of the subject.
A2	Be able to formulate and to test hypotheses as they relate to biological knowledge
A3	
A4	
A5	
Practice - Applied Knowledge and Understanding	
B1	Use a range of basic and routine practical skills, and a few specialized skills in the biological sciences
B2	Show an ability to interpret experimental evidence
B3	Appreciate the importance of safety and develop the skills required to carry out a risk assessment
B4	
B5	
Communication, ICT and Numeracy Skills	
C1	Evaluate qualitative and quantitative data and recognize the difference between these data sets
C2	Be able to use appropriate IT to manipulate, statistically analyse, and present biological data
C3	
C4	
C5	
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Critically evaluate and synthesize biological information
D2	Be able to identify routine professional problems and issues
D3	
D4	
D5	
Autonomy, Accountability and Working with Others	
E1	Exercise initiative in undertaking laboratory reports and other written material
E2	Be able to deal with ethical issues associated with the biological sciences
E3	
E4	
E5	

Level 9 Modules

CORE

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
9	BIOL09008	Animal Diversity	20	☒	☐	☐	
9	BIOL09010	Biological Conservation	20	☒	☐	☐	
9	BIOL09013	Entomology & Parasitology	20	☒	☐	☐	
9	BIOL09035	Field Biology	20	☐	☒	☐	
9	BIOL09037	Widlife Biology	20	☐	☒	☐	
9	BIOL09022	Work Related Learning 20	20	☐	☒	☐	
Footnotes for Core Modules							

Level 9 Modules

OPTION

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
Footnotes for Option Modules							

Level 9
Criteria for Progression and Award
Please refer to UWS Regulatory Framework for related regulations

The exit award from the programme is a Scottish Bachelors Degree, BSc (Ordinary) Applied Bioscience and Zoology, the requirements for which are 360 credits, with at least 90 of these at SCQF 9 or higher. An award with distinction will be made in accordance with University regulations. For progression to SCQF 10 the requirements for the exit award, and the prerequisites for the modules in the programme at the next level, must normally be satisfied. Where progression involves a placement this will normally precede the honours programme. Specific objectives for the sandwich award include the development of work-based skills in the applied biosciences that are related to the placement. The specific nature of these would relate to the actual placement that is undertaken. Where the Scottish Bachelors Degree exit award is taken following completion of the placement the award will be with sandwich.

SCQF LEVEL 10 Learning Outcomes (Maximum of 5 per heading)	
Knowledge and Understanding	
A1	Show an awareness of current developments in applied bioscience and their applications, noting philosophical and ethical issues that have arisen and which affect the quality and sustainability of life.
A2	Demonstrate a critical understanding of key principles, theories, and concepts within the applied biosciences and applications of these.
A3	Develop specific hypotheses for testing in a research project in either one of the joint disciplines.
A4	
A5	
Practice - Applied Knowledge and Understanding	
B1	Use a wide range of basic and routine practical skills, and a few specialized skills in the biological sciences
B2	Execute a defined research project in either one of the joint disciplines, being able to accurately collect and record specific data
B3	Identify and retrieve scientific information
B4	Present information clearly and accurately
B5	
Communication, ICT and Numeracy Skills	
C1	Be able to convey complex ideas and to make formal presentations on specialised topics to a wide range of audiences
C2	Be able to use different statistical packages to analyse, manipulate and present data sets
C3	
C4	
C5	
Generic Cognitive Skills - Problem Solving, Analysis, Evaluation	
D1	Be able to identify routine professional problems and issues and to offer professional insights and interpretations
D2	Critically identify, define and conceptualize issues within the applied biosciences and the applications of the discipline
D3	Be able to review and consolidate knowledge and to make judgments where the information available is limited
D4	
D5	
Autonomy, Accountability and Working with Others	
E1	Evidence of the development of independent research work and associated management of time
E2	Be able to deal with complex ethical issues in the applied biosciences.
E3	

E4	
E5	

Level 10 Modules

CORE

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
10	BIOL10011	Behavioural Ecology		☐	☒	☐	
10	BIOL10026	Environmental Research Project		☒	☒	☐	
10	BIOL10004	Applied Aquatic Ecology		☒	☐	☐	
10	BIOL10015	Pest Management		☒	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
Footnotes for Core Modules							

Level 10 Modules

OPTION

SCQF Level	Module Code	Module Title	Credit	Term			Footnotes
				1	2	3	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
				☐	☐	☐	
Footnotes for Option Modules							

Level 10
Criteria for Award
Please refer to UWS Regulatory Framework for related regulations

At least 480 credits, of which a minimum of 180 are at SCQF 9 and 10 (honours year) including a minimum of 90 at SCQF 10 are required for the award of a Scottish Bachelors Degree with honours in Applied Bioscience and Zoology. Where the award is a sandwich award the specific objectives for the sandwich award include the development of work-based skills in the applied biosciences that are related to the placement. The specific nature of these would relate to the actual placement that is undertaken. Where the Scottish Bachelors Degree (with honours) exit award is taken following completion of the honours year after the sandwich year, the award will be with sandwich.

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 a Combined Studies award (please see Regulation 1.61). 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.

Version no: 1

Change/Version Control

What	**When**	**Who**