

Programme Specification

Part 1: Basic Data			
Primary Programme Title	BSc (Hons) Biological Sciences (Biology)		
Target Award Titles	Mode and Typical Duration of Study	Professional Accrediting Body Links	Study Abroad / Exchange / Credit Recognition
BSc (Hons) Biological Sciences	Stage 0 entry: Full time, 4 years, Part time, 8 years Stage 1 entry: Full time, 3 years, Part time, 6 years	None	None
BSc (Hons) Biological Sciences with integrated placement year	Stage 0 entry: Full time, 5 years, Part time, 9 years Stage 1 entry: Full time, 4 years, Part time, 7 years	None	None
Interim Award Titles	BSc Biological Sciences BSc Biological Sciences with integrated placement year Diploma of Higher Education in Biological Sciences Certificate of Higher Education in Biological Sciences Undergraduate Certificate in Biological Sciences Certificate in Academic Skills Higher Education Foundation Certificate in Academic Skills		
Teaching Delivery Method	On-site		
Awarding Institution	Hartpury University		
Teaching Institution	Hartpury University		
Delivery Location	Hartpury		
Department Responsible for Programme	Animal and Agriculture		
Unit-E Code	BSHABSXX		
Entry Criteria Information	Applicants will have achieved entry criteria appropriate for the stage of entry, which can be found through the Hartpury website (www.hartpury.ac.uk).		
Most Recent Validation Date	20 February 2024	Due for Re-validation By	01 September 2029
Amendment Approval Date		Approved With Effect From	V1.0 - 01 September 2024
Professional Accrediting Body Approval Date	N/A	Date For Re-accreditation	N/A
Version	1.0		

Part 2: Programme Overview

The BSc (Hons) Biological Sciences programme empowers the graduates to foster a deep life-long passion for the wider study of life. Graduates have core skills in plant and animal biology as well as the skills necessary to apply their knowledge to real-world issues and challenges. Graduates have essential skills and knowledge in life sciences to enable them to navigate the intricate biology of living organisms, understand their interactions within ecosystems, and appreciate the diversity of life on our planet. They are well-prepared to apply these skills to conduct biological research, analyse data and communicate scientific findings. They are able to explore different ideas and points of view and will have the independent critical thinking skills necessary for the fast-changing world of biology. The skills developed throughout the course allow them to widen their horizons and explore cross-disciplinary collaboration involved in designing a sustainable future for the planet.

The BSc (Hons) Biological Sciences with integrated placement year programme empowers the graduates to foster a deep life-long passion for the wider study of life. Graduates have core skills in plant and animal biology as well as the skills necessary to apply their knowledge to real-world issues and challenges. Graduates have essential skills and knowledge in life sciences to enable them to navigate the intricate biology of living organisms, understand their interactions within ecosystems, and appreciate the diversity of life on our planet. They are well-prepared to apply these skills to conduct biological research, analyse data and communicate scientific findings. They are able to explore different ideas and points of view and will have the independent critical thinking skills necessary for the fast-changing world of biology. The skills developed throughout the course allow them to widen their horizons and explore cross-disciplinary collaboration involved in designing a sustainable future for the planet. An optional year work placement gives them the opportunity to apply their learning in a practical context, reflecting on and evaluating their performance within industry.

Part 3: Programme Structure

This structure diagram demonstrates the student journey from enrolment through to graduation for a typical **full time student on the primary programme**, including:

- level and credit requirements
- award requirements that are in addition to those described in the Hartpury University Academic Regulations
- module diet, including core and optional modules.

Please note:

*PAB – these modules are subject to additional and variant regulations as part of an accreditation by a professional accrediting body

+ core modules marked + are not eligible for compensation

	Core Modules	Optional Modules	Target and Interim Awards
Stage 0	HANVQX-15-3 Academic Literacy for University Studies HANVFP-30-3 Animal Studies HANVQK-30-3 Biological Principles for Land-Based Scientists HANVRR-15-3 Exploring Current Concepts HANVRD-30-3 Professional Development in Practice	None	<u>Higher Education Foundation Certificate in Academic Skills</u> <u>Certificate in Academic Skills</u>
	To progress to Stage 1 you must achieve at least 90 credits. This must include Biological Principles for Land-Based Scientists.		
Stage 1	HANXKK-15-4 Animal Health and Disease HANVQS-30-4 Cell and Systems Biology HANVP4-30-4 Genetics, Evolution and Biodiversity HANXNY-15-4 Introduction to Biochemistry HANVN3-15-4 Principles of Ecology HANVMJ-15-4 Professional and Academic Skills in Animal Biology	None	<u>Undergraduate Certificate in Biological Sciences</u> <u>Certificate of Higher Education in Biological Sciences</u>

	To progress to stage 2 you must achieve at least 90 credits from Stage 1.		
Stage 2	<p>HANVQ3-30-5 Animal Disease and Parasitology</p> <p>HANXRK-15-5 Animal Microbiology</p> <p>HANV9D-30-5 Conservation Biology</p> <p>HANVR8-15-5 Plant Science</p> <p>HANVKV-15-5 Research Methods for Agricultural and Animal Scientists</p>	<p>HANVP7-15-5 Biochemistry and Toxicology</p> <p>OR</p> <p>HANXSY-15-5 Field Course</p> <p>OR</p> <p>HANVMV-15-5 Professional Experience in the Animal Sector 1</p>	<u>Diploma of Higher Education in Biological Sciences</u>
Optional Year	<p>HANVK6-15-5 Integrated Placement Year</p>	None	
	To progress to stage 3 you must achieve at least 210 credits. This must include Animal Microbiology.		
Stage 3	<p>HANV4T-15-6 Advanced Animal Microbiology</p> <p>HANV39-15-6 Biodiversity and Conservation</p> <p>HANVKS-45-6 Animal and Agriculture Dissertation</p> <p>HANVRL-30-6 Environmental Health and Climate Change</p> <p>HANV3H-15-6 Epidemiology</p>	None	<p><u>BSc (Hons) Biological Sciences</u></p> <p><u>BSc (Hons) Biological Sciences</u> <u>Must include the Integrated Placement Year module.</u></p>

Part time:

The part time student journey from entry through to graduation is individually negotiated with the student.

Part 4: Programme Learning Outcomes

Modules in bold are core modules and modules not emboldened are optional modules.

A denotes a module that assesses a learning outcome and B denotes a module aligned with a learning outcome.

Learning Outcomes:	Genetics, Evolution and Biodiversity	Cell and Systems Biology	Principles of Ecology	Introduction to Biochemistry	Animal Health and Disease	Professional and Academic Skills in Animal Biology	Plant Science	Research Methods for Agricultural and Animal Scientists	Animal Microbiology	Conservation Biology	Animal Disease and Parasitology	Professional Experience in the Animal Sector 1	Field Course	Biochemistry and Toxicology	Integrated Placement Year	Environmental Health and Climate Change	Animal and Agriculture Dissertation	Epidemiology	Advanced Animal Microbiology	Biodiversity and Conservation
A) Knowledge and Understanding of:																				
1. the scientific basis of the study of living systems from the molecular to cellular level, and from organism to ecosystem.	A	A	A	B			A		A	A			B	A		A			A	B
2. the complexity and diversity of life and the interrelationships between organisms and with their environment.	A	B	A		B		A		B	A	B		B			A		B	B	B
3. the problems and new insights in the field of biological science including issues pertaining to global changes.	B		B				B			A	B			B		A		B		A
4. the major concepts, principles and theories associated with organisation and function of life.	A	A	B	B			A		B					B				B	B	B

5. the process for robust scientific interrogation, including appropriate techniques for data collection and analysis, as well as awareness of risks, bias, ethical concerns and sustainability of research.		B	B					A	A				A		B	B	A		B	
6. the ethical, equality and sustainability issues associated with the biological sciences, and the application of biological knowledge globally.	B		B			B	A	B	B	A						A	A	B		B
7. the role of biological sciences in shaping local and global policies, as well as its contribution to the innovations and sustainable solutions to current and future challenges.	A	B	B				B		B	A			B			A	B	B		B
B) Intellectual Skills																				
1. Use problem solving skills to explore the challenges and develop new insights in biological sciences.		B				B		B	A	B	B		A	B		B	A		B	A
2. Critically analyse and evaluate current developments across the field of biological sciences and apply them to concepts of sustainability and global health.	B	B			B		A			A	B			B		A	B	B		A
3. Recognise and apply subject-specific theories, paradigms, concepts or principles to real-world case studies and practical scenarios.		B	B		B			A	B				A			A	A	B		B
4. Challenge knowledge and practice through critical analysis, evaluation and application.		B				B	A	A		B			A		A	A	A			B
5. Explain and evaluate the contribution of biological sciences to solving interdisciplinary challenges and the role of interdisciplinary thinking in solving scientific problems.	B		B				B			B	A		B		B	A		B	B	B
C) Performance and Practice																				
1. Select and carry out appropriate quantitative and qualitative practical (laboratory and field) techniques to solve real-world problems.	B	A	A	B	B		A		A		B		A	B			A		B	
2. Acquire, interpret, and analyse biological information and data using mathematical and statistical concepts.		B	B	B		A	B	A	A				A		B	B	A	A	B	
3. Apply computational techniques and tools to investigate biological concepts and report outcomes using appropriate terminology.	A	A	B			A	B	A	A				B			A	A		B	
4. Apply the results of investigations in the global context, and provide solutions to challenges.	B		B		B		B	A	B	A		B	B		B	A	A			B

5. Effectively communicate scientific concepts to a wide range of diverse audiences using a variety of means.			B		A	A	B		A	A		A	A			A	A			B
6. Undertake investigations in a safe and ethical manner and recognise moral / ethical dilemmas and issues.	B	B	B	B	B	A	B	B	A				B	B	B	A	A		B	
7. Describe, document and enact safe working practices in terms of managing biological, laboratory or field-based risk, through knowledge-based risk assessments and practical activities.	B	B	B	B	B	A		B	A			B	A	B	B	B	A		B	
D) Setting, Personal and Enabling Skills																				
1. Act professionally, with due regard for legal, ethical and societal responsibilities, modelling good practice that promotes positive, sustainable and inclusive perceptions of the biological sciences.					A	B		B	B		B	A	B		A	A	A		B	
2. Utilise problem solving skills in a variety of situations.			B	B	A	A	B	A	B	A		B	B		B	A	A		B	B
3. Recognise the employability and social benefits of working individually and as a part of a team, including a practical understanding of equity, diversity and inclusivity in teams.			A		A	B			B	B		A	B		A	A	A	B	B	
4. Effectively manage time and prioritise workloads to manage own wellbeing.						A		B				A			B	B	A			B
5. Evaluate their own academic, vocational and professional performance supported by feedback and personal reflection.						A		A				A			A		B			

Part 5: Learning, Teaching and Assessment

Learning, Teaching and Assessment Journey:

The BSc (Hons) Biological Sciences programme encompasses a wide range of face-to-face teaching and assessment approaches, aiming to provide a comprehensive understanding of biological principles and their applications. Throughout the programme, students will engage in a wide range of activities, from ecological and field work to empirical studies in the laboratory, allowing them to gain skills applicable to various industry settings. During each stage of their programme a student will be allocated an academic personal tutor.

The proximity of the campus facilities, such as classrooms, estate and laboratories, helps to enhance the understanding of all levels of biological functioning and its application to real-world scenarios and concepts. This proximity provides scope to link sample collection on the estate with laboratory analysis and interpretation of the collected data in one location, which then feeds to effective communication of the findings. Students will have an opportunity to participate in ongoing research both on campus through the various projects on Hartpury estate, and in the laboratory facilities and wider opportunities through staff collaborations, as well as design their own investigations.

The programme has been developed to align with the QAA Subject Benchmark Statement for Biosciences through designing the Programme Learning Outcomes and embedding them in the module content.

The teaching and assessment strategies embedded within modules focus on supporting students to develop into graduates who can identify trends, patterns, and propose well-justified solutions to real-world problems.

Students will experience a variety of assessments in the wide range of modules provided, including coursework, written examinations, oral presentations, project reports and practical skills logbooks. There will be a range of assessments at each stage to support students to build confidence in applying their written, oral, and practical skills as they progress through the course towards their final dissertation and to ensure they have the skills to excel in employment or further study.

The programme will have the following distinct features for each stage of delivery:

Foundation Stage: The focus will be on establishing clear underpinning knowledge and study skills to support students as they progress through higher levels of the programme. Theoretical lectures, practicals, seminars and debates, industry-based visits and guest speakers from industry enhance the students' academic knowledge. Practical and academic skills will be strengthened through a range of practical sessions and professional development activities. Assessments are designed to support students to develop their academic skills to prepare them for the first stage of their chosen degree. They will gain feedback on oral presentation skills, written examinations and reports to allow them to enter the next stage confidently with the required attributes to achieve. Within the Foundation Stage students are supported to adjust to studying at University through spiral induction and embedded academic personal tutoring activities that facilitate the development of skills essential to academic study and professional success.

Stage 1: Delivery is focused on providing a scientific foundation in biological sciences, and to support students' academic and interpersonal skill development. To achieve this, Stage 1 concentrates on the development of fundamental knowledge of biological systems, including cell function and genetics, as well as animal health. Students will explore the main principles of ecology and appreciate global biodiversity as well as beginning to gain an appreciation of animal disease and biochemical processes. Intellectual skills are developed through lectures, seminars, practical sessions and academic workshops. These skills will then be applied during time spent in the laboratory and field work on Hartpury estate, supporting the development of a wide range of practical skills expected of a biological sciences graduate.

Assessments are designed to support students' development in key academic skills appropriate to Stage 1 by providing a range of assessment types that will support their progression through the programme. Laboratory reports, case study reports and examinations are a key feature of the assessments at stage one to replicate basic industry requirements and ensure they have the underpinning knowledge to progress to stage 2. Students will also be encouraged to work in a systematic manner and produce artefacts throughout the year that contribute to the Practical Skill Logbooks. Written skills will gain feedback to allow students to build their intellectual skills to show they have gained the core skills to analyse and evaluate research and practice. Students will receive formative feedback on their applied skills in the lab and field, together with the summative feedback on the findings they produce as a result of these applied sessions.

Stage 2: Delivery and assessment aim to consolidate the knowledge and skills developed in Stage 1. Students will continue to apply their knowledge and understanding through evidence-based learning and application into practice. Exploring real-world problems will be a particular focus at this level, especially in the context of the role of biosciences in shaping the environment and understanding disease spread and management of organisms and ecosystems. The laboratory and field work on Hartpury estate will be enhanced by experimental projects where students will be able to explore ideas further and explore concepts in practice.

Some assessments at this stage will reflect this applied learning and provide students an opportunity to demonstrate their knowledge and understanding via practical skills assessments. Optional modules allow students to begin to focus on their chosen career path, with choices to include professional experience or participation in a longer field study. Delivery will encourage students to develop their autonomy, engage in reflection and will reinforce the competencies developed in Stage 1.

Integrated Placement Year (optional): Students have the opportunity to further develop their employability and can experience different methods used within biosciences industries in either a regional, national or an international environment. A reflective assessment encourages students to consider the impact of this experience and the skills gained.

Stage 3: Delivery and assessment aim to provide students with opportunities to apply research and the skills they have developed into practice, facilitating individual specialisation within their chosen career path. The final stage concentrates on the individual development of the student and the expansion of their specialist career path. Taught content will focus on evaluation of global issues, such as climate change and loss of biodiversity, affecting life and ecosystems on the planet. Students will be encouraged to engage in critical review and evidence-based learning, with opportunities to put this into practice during industry, real life-based case studies or research focused projects. Assessment will focus on intellectual skills, challenging students to demonstrate their

ability to critically evaluate and analyse, synthesise knowledge from a wide range of robust sources and contribute to knowledge through their dissertation project.

Throughout their studies, students are encouraged to engage with volunteering opportunities to develop their practice and apply their subject knowledge to various real-life scenarios and issues.

Teaching will incorporate access to various resources on site at the institution, including the laboratories, animal collection, farm, equine centre and the habitats on the wider estate. A range of equipment is available for students to develop their vocational skills in a safe teaching environment. This equipment is updated on a regular basis to reflect current practice in industry, and the needs of research activities. The teaching team have a high degree of industry-relevant experience that covers all aspects of the programme and are actively engaged in research and knowledge exchange activities.

Students have access to the University Library to support their studies, where they can access a wide range of textbooks and journals (both printed and online) alongside ICT facilities. There are dedicated areas for individual study, group study and a higher education flexible study zone. These facilities are all available to students to support their studies. Students with specific learning requirements will be supported through the Achievement and Success Centre and Disability Services, which work with the individual student to facilitate them accessing support through government schemes, provides them with study advice to maximise their chances of success and where necessary guides them through applying for alternative means of assessment.

Careers: To support students' career preparations, personnel from the careers department will provide students with opportunities to map progress towards chosen career paths and develop effective CVs or interview techniques. Industry professionals will also visit the institution on an annual basis, as part of a Careers Insight day, to support students to develop their employability prospects and engage directly with employers. A range of online resources linked to employability will also be signposted to students via the programme's Moodle page, Innovations, Careers, and Enterprise team, and academic tutors. Tutors will typically offer subject specific careers advice through module sessions or within individual tutorials.

This programme will be assessed according to the approved Academic Regulations.

Students registered on this programme will have access to the Hartpury University support services.

The distinctive module used by the Programme Examination Board to inform recommending differential awards for students when considering borderline performance profiles will be:

Animal and Agriculture Dissertation

Professional Accrediting Body documents to which this programme is mapped and or aligned: None

Assessment Map

		Type of Assessment*							
		Coursework	Report	Portfolio	Written Examination	Written Test	Practical Skills Examination	Practical Skills Assessment	
Core Modules Stage 0	Academic Literacy for University Studies							A (100) Graduate Skills Logbook	
	Professional Development in Practice			A (100) Industry Experience Portfolio					
	Exploring Current Concepts	A1 (20) Coursework A2 (80) Essay Based on a Case Study							
	Animal Studies				A (50) Written Examination				B (50) Group Oral Presentation with Questions, individually marked
	Biological Principles for Land-Based Scientists					B (50) Test Series		A (50) Practical Skills Logbook	
Core Modules Stage 1	Cell and Systems Biology							A (100) Practical Skills Logbook	
	Genetics, Evolution and Biodiversity					A (50) Test		B (50) Practical Skills Logbook	

	Principles of Ecology		A (100) Poster Report						
	Introduction to Biochemistry				A (100) Written Examination				
	Animal Health and Disease								A (100) Group Oral Assessment, individually marked
	Professional and Academic Skills in Animal Biology							A (100) Practical Skills Logbook	
Core Modules Stage 2	Plant Science							A (100) Practical Skills Logbook	
	Research Methods for Agricultural and Animal Scientists	B (50) Coursework				A (50) Test Series			
	Animal Microbiology								A (100) Poster Defence
	Animal Disease and Parasitology	B (40) Coursework			A (60) Written Examination				
	Conservation Biology		B (50) Report		A (50) Open-Material Written Examination				
Optional Modules Stage 2	Biochemistry and Toxicology			A (100) Coursework Portfolio					
	Professional Experience in the Animal Sector 1			A (100) Industry Experience Portfolio					
	Field Course		B (75) Project Report						A (25) Oral Presentation

Optional Year	Integrated Placement Year			A (100) Industry Experience Portfolio					
Core Modules Stage 3	Environmental Health and Climate Change							B (50) Practical Skills Artefact	A (50) Group Debate, individually marked
	Animal and Agriculture Dissertation		A (90) Project Report					A (10) Practical Skills Assessment	
	Epidemiology		A (100) Case Study Report						
	Biodiversity and Conservation	A (100) Coursework							
	Advanced Animal Microbiology		A (100) Report						

*Indicative assessment types for new students enrolling on this programme after the date this specification takes effect (Part 1) are shown in terms of either **Coursework**, **Written Examination**, or **Practical Examination** as indicated by the colour coding above.

This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if they take full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of individual modules can be found through Hartpury's website (www.hartpury.ac.uk).

Approved Programme Amendment Log

Primary Programme Title:	BSc (Hons) Biological Sciences
Programme Code:	BSHABSXX
Initial Approval Date:	20 February 2024

Changes: *Most recent at the top of the page*

Outline Change Details: New programme.	
Approval Committee and Date:	CVC Deputy Chair's action (SB) 2024 02 20
Change approved with effect from:	01 September 2024
Resulting new version number:	1.0