



## STUDENT AND ACADEMIC SERVICES

### PROGRAMME SPECIFICATION

Part 1: Basic Data	
<b>Awarding Institution</b>	University of the West of England, Bristol
<b>Teaching Institution</b>	University of the West of England, Bristol Bristol Zoo Gardens, Bristol
<b>Delivery Location</b>	University of the West of England, Bristol Bristol Zoo Gardens, Bristol
<b>Faculty responsible for programme</b>	Faculty of Health & Life Sciences.
<b>Department responsible for programme</b>	Department of Applied Sciences
<b>Modular Scheme Title</b>	
<b>Professional Statutory or Regulatory Body Links</b>	None
<b>Highest Award Title</b>	BSc(Hons) Wildlife Ecology and Conservation Science
<b>Default Award Title</b>	
<b>Fall-back Award Title</b>	
<b>Interim Award Titles</b>	BSc Wildlife Ecology and Conservation Science Diploma of Higher Education Wildlife Ecology and Conservation Science Certificate of Higher Education Wildlife Ecology and Conservation Science
<b>UWE Progression Route</b>	
<b>Mode(s) of Delivery</b>	FT / SW / PT/ Foundation
<b>Codes</b>	<b>UCAS:</b> New code will be provided centrally <b>JACS:</b> <b>ISIS2:</b> <b>HESA:</b>
<b>Relevant QAA Subject Benchmark Statements</b>	Biosciences (2007) Earth Sciences, Environmental Sciences and Environmental Studies (2014)

## Part 2: Educational Aims of the Programme

Conservation Science is a new, multi-disciplinary science that has evolved in response to the national and global issues confronting biological diversity and the impact on wildlife. The BSc (Hons) Wildlife Ecology and Conservation Science (with Foundation Year) programme is a four year full-time or five-year sandwich degree designed to provide a comprehensive foundation in science, and graduates with an in-depth understanding of the scientific study of wildlife, the diversity of living organisms and their habitats, and the practical steps that can be taken for effective conservation. It provides an opportunity for students to explore the theory and practice related to wildlife conservation, and to develop both subject-specific and important generic graduate skills, such as practical and analytical skills, work experience, project management, use of technology and communication media. The programme aims to develop in students an in-depth understanding the relationship between wildlife and society, the impacts of human activities on the living world, and an appreciation of the practical steps that can be taken to ameliorate biodiversity decline. It takes a multi-disciplinary approach, considering not only the science underpinning the diversity and ecology of wildlife, their habitats and contemporary scientific approaches to conservation, but also legislative, socio-economic factors and the role of communication. This approach allows students to make an informed evaluation of possible solutions to biodiversity loss and propose conservation action plans.

The design of the programme enables the student to:

- complete a Foundation Year that is designed to prepare learners for success as scientists by studying the breadth and relevance of the natural and social sciences which underpin the BSc (Hons) Wildlife Ecology and Conservation Science;
- explore the complexity and diversity of the living world, its evolution and function at an organismal, population, community and ecosystem scale, and its relationship with the physical environment;
- examine how plants and animals interact with each other and their environment;
- understand the impact of human activities on the living world and the resulting threat to global biodiversity;
- evaluate a range of possible solutions to biodiversity loss, not only from a biological perspective, but also taking into account legislative and socio-economic factors and the role of communication;
- develop subject-specific and generic skills necessary for employment, such as underpinning knowledge, practical and analytical skills, work experience, project management, use of technology and communication media.

The specific aims of the programme are to:

- Provide the educational and resource environment which will enable students to develop:
- an understanding of the living world from a multi-disciplinary and interdisciplinary perspective;
- the field, laboratory, investigative, problem-solving, technical and communication skills necessary to undertake independent investigations and analyses of wildlife conservation problems, and the presentational skills necessary to communicate their findings to audiences with a variety of backgrounds;
- the skills needed by a literate, numerate, technologically agile student capable of independent learning.
- Create a friendly, supportive and contemporary atmosphere that will enable individual students to use the whole learning experience at UWE to create a graduate foundation, on which they can develop their future careers and on-going social and educational development as independent lifelong learners;

## Part 2: Educational Aims of the Programme

- Provide a curriculum that is enhanced by the strong relationship between teaching, research, and professional practice and informed by employers.

### **BSc (Hons) Wildlife Ecology and Conservation Science (with Foundation Year)**

The Foundation Year gives students an appropriate grounding in the subject areas of biology, chemistry, physics, mathematics, and psychology. This grounding, in addition to the development of transferable skills, prepares learners to successfully study the BSc Wildlife Ecology and Conservation Science programme at Level 1 and beyond. BSc Wildlife Ecology and Conservation Science has been developed in consultation with employers so provides graduates with the knowledge and skills necessary to work effectively in the field of national and international wildlife conservation. The programme aims to develop in students an in-depth understanding of the scientific study of wildlife, the diversity of living organisms and their habitats, and the practical steps that can be taken for effective conservation. The programme includes work experience, offers a placement year, and provides opportunities for students to develop generic skills necessary for employment, such as practical and analytical skills, project management, use of technology and communication media.

## Part 3: Learning Outcomes of the Programme

### Knowledge and Understanding (subject specific)

1. The breadth and relevance of the natural and social sciences which underpin the environmental sciences subject area.
2. The structure and functioning of the natural world at an organism, population, community and ecosystem levels.
3. The processes which shape the natural world at different temporal and spatial scales including the influence of human activities.
4. The relationship between plants, animals and micro-organisms, and how they interact with their environment.
5. The terminology, nomenclature and classification systems relevant to wildlife conservation.
6. The threats to global biodiversity, current and contemporary approaches to wildlife conservation.
7. Methods of acquiring, interpreting and analysing information and data with a critical understanding of the appropriate contexts for their use.
8. Awareness of the contribution of their subject to the understanding of biodiversity, its conservation and sustainable management.
9. The importance of a multi-disciplinary and interdisciplinary approach to the study of wildlife conservation.
10. The importance of subject specific and generic skills for employment in wildlife conservation.

### Intellectual skills (generic)

1. Recognising and using subject-specific theories, paradigms, concept and principles.
2. Analysing, synthesising and summarising information critically, including prior research.
3. Collecting and integrating several lines of evidence to formulate and test hypotheses.
4. Applying knowledge and understanding to address familiar and unfamiliar problems.

### Part 3: Learning Outcomes of the Programme

5. Synthesising knowledge as an independent learner and a manager of self.
6. Recognising the moral and ethical issues of investigation and appreciating the need for professional codes of conduct.

#### Subject/Professional/Practical Skills (subject specific)

A successful graduate will be able to:

1. Plan, conduct, and report on scientific investigations, including the use of secondary data.
2. Collect record and analyse data using appropriate techniques in the field and laboratory.
3. Undertake field and laboratory investigations in a responsible and safe manner, paying due attention to risk assessment, rights of access, relevant health and safety regulations, and to display sensitivity to the impact of investigations on the environment and stakeholders.
4. Identify in the field and/or laboratory a range of organisms to family level, and for a specific group of organisms, to species level.
5. Undertake field surveys and develop biodiversity management plans.
6. Use appropriate technology for the analysis, mapping and interpretation of data.
7. Undertake a research project including project design and management and communicate findings using appropriate communication media.
8. Reference work in an appropriate manner and compare findings to published literature.

#### Transferable Skills and other attributes (generic)

A successful graduate will be able to:

1. Receive and respond to a variety of sources of information (eg. textual, numerical, verbal, graphical and electronic).
2. Communicate appropriately to a variety of audiences using a range of formats, approaches and contemporary technologies.
3. Appreciate issues of sample selection, accuracy, calibration, precision, replicability and uncertainty during collection, recording and analysis of data in the field and laboratory.
4. Prepare process, interpret and present data, using appropriate qualitative and quantitative techniques and packages.
5. Solve numerical problems using computer and non-computer based techniques.
6. Use the internet and other electronic sources critically as a means of communication and a source of information.
7. Recognise and respect the views and opinions of others.
8. Evaluate performance as an individual and a team member.
9. Develop the skills necessary for a self-managed active learner and life-long learning (eg working independently, time management and organisation skills).
10. Appreciate the skills for employment, respond to feedback and work towards targets for personal, academic and career development.

The Learning outcomes of the programme are mapped to the **compulsory modules** as shown below. This is to demonstrate that all students are able to achieve all programme outcomes although many outcomes will be re-enforced through **optional modules**.

### Part 3: Learning Outcomes of the Programme

<b>Learning Outcomes:</b>	USSKCJ-30-0 Biology in Practice	USSKCK-30-0 Chemistry in Practice	USSKCL-30-0 Skills for Science	USSKCM-30-0 People and Science	USSK5C-30-1 Life on Earth	USSJFB-30-1 The Earth	USSK5D-30-1 Wildlife & Society	USSK5B-30-1 Field Skills	USSK5G-30-2 Env Field Techniques	USSK5E-30-2 Conservation in Practice	USSK5F-30-2 Ecology and Ecosystem Protection	USSK5H-30-2 Wildlife Ecology	USSK5K-30-3 Research Project	USSKBC-30-3 Dissertation Project	USSK5J-30-3 Contemporary Conservation Science
<b>A) Knowledge and understanding of:</b>															
The breadth and relevance of the natural and social sciences which underpin the subject area.	X	X	X	X	X	X	X	X							
Structure and function of the natural world	X	X	X		X	X	X	X	X		X				
Processes which shape the natural world	X	X	X	X		X	X	X	X						X
Relationship between plants, animals, and environment	X				X	X		X		X	X	X			X
Terminology, nomenclature, classification	X	X	X		X			X	X			X			
Threats to biodiversity, conservation approaches	X						X	X		X	X				X
Methods for acquiring, analyzing, interpreting data	X	X	X	X	X	X		X	X	X	X	X	X		X
Awareness of their contribution to conservation	X						X			X	X				X
Importance of multi-disciplinary & Interdisciplinary approaches			X			X	X	X	X	X	X		X		X
Importance of subject and generic skills for employment							X	X	X	X					X
<b>(B) Intellectual Skills</b>															
Using theories and paradigms	X	X	X	X		X		X	X		X	X	X		
Analyse, synthesize, summarise information	X	X	X	X	X	X	X	X	X	X	X	X	X		X
Collect evidence, test hypotheses	X	X	X	X				X	X		X	X	X		
Apply knowledge to problems	X	X	X	X	X	X			X	X	X		X		X
Independent learning, self-manager	X	X	X	X				X	X	X			X		X
Appreciate moral, ethical issues around investigation				X	X		X	X	X	X			X		
<b>(C) Subject/Professional/Practical Skills</b>															
Plan, conduct report on investigation	X	X						X	X				X		
Collect, record, analyse data	X	X	X		X	X		X	X	X	X	X	X		
Undertake lab, field investigations	X	X			X	X		X	X		X	X	X		X

### Part 3: Learning Outcomes of the Programme

Demonstrate identification skills					X			X	X	X		X			
Field surveys for management plans								X			X				
Use of technology for mapping, analyzing data									X	X			X		X
Undertake research project									X				X		
Reference work and compare to others	X		X	X		X	X				X	X	X		X
<b>(D) Transferable skills and other attributes</b>															
Use a variety of sources of information	X	X	X	X		X	X	X	X	X	X		X		X
Communicate appropriately using contemporary technologies			X	X				X	X	X			X		X
Appreciate issues of accuracy uncertainty	X	X	X		X	X		X	X	X			X		
Prepare, process, interpret data	X	X	X	X	X	X		X	X	X	X	X	X	X	X
Solve numerical problems		X	X	X	X	X		X	X	X			X		
Use internet appropriately for transfer of information	X	X	X	X			X	X	X	X	X	X	X	X	X
Respect views of others	X	X		X	X	X	X	X	X						X
Evaluate individual performance			X	X		X		X	X	X					X
Active & independent learning	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Skills for employment							X	X	X	X					X

### Part 4: Student Learning and Student Support

The Wildlife Ecology and Conservation Science (with Foundation Year) programme is a multi-disciplinary degree which has been developed in consultation with employers so provides graduates with the knowledge and skills necessary to work effectively in the field of national and international wildlife conservation. All students follow a core first year (Year Zero) which is designed to prepare students without a strong background in science for success as scientists by studying the breadth and relevance of the natural and social sciences, including the multivariate contexts in which they will encounter the core concepts of mathematics, physics, biology, chemistry, and IT. Modules in the second, third and fourth years build on this foundation and allow students to develop an in-depth understanding of the scientific study of wildlife, the diversity of living organisms and their habitats, and the practical steps that can be taken for effective conservation. The programme includes work experience, offers a placement year, and provides opportunities for students to develop generic skills necessary for employment, such as practical and analytical skills, project management, use of technology and communication media. The programme is part-delivered at Bristol Zoo Gardens which allows the taught material to be delivered in context and further links to the world of work.

#### Transition to HE and student support

BSc Hons Wildlife Ecology and Conservation Science (with Foundation Year) is managed as part of a suite of programmes within the Biological and Environmental Sciences & Science Communication Subject Group. Year handbooks are provided at each level providing information on the Faculty, the University, its regulations and procedures. Detailed information is distributed in guides for each module. At the start of the programme, students undertake a comprehensive induction programme and are introduced to university regulation, aims of the programme,



#### **Part 4: Student Learning and Student Support**

laboratory working, support systems (e.g. Drop-ins, PAL) and their personal tutor. Students also have Inductions at the beginning of their second, third and final years of study, which are targeted towards the specific needs of their year. Students are also supported during their time at UWE by student advisors and module leaders. Guidance on year issues is overseen by the Programme Leader, who is supported by the Teaching Team and Associate Heads of Department. A dedicated HE Co-ordinator at Bristol Zoo will oversee delivery of teaching on site at Bristol Zoo. Issues relating to groups of students are dealt with through the Student Rep / Staff Forum (SRSF) that includes student representatives, who also meet with the Programme Manager on a regular basis. Students who elect to undertake a placement year, are allocated a placement tutor who will maintain contact, plan a visit where possible and provide support and liaise with work supervisors. For all students, access to academic staff and the student advisors is via e-mail or by personal access, with most staff offering an office-hours policy facilitating the booking of appointments. The central University counselling and support services provide assistance and guidance for students with special needs. The programme welcomes mature students and students with disabilities. When possible, and following individual consultation, adjustments are made to practical and field work to allow all student to achieve the learning outcomes of the programme.

#### **Teaching and Learning facilities**

The Bolland library provides an extensive range of literature that supports the programme. Additional material is held in the Field Studies Resource Room and in the library at Bristol Zoo. Students have 24-hour access to computers, and IT support services are available within the University's Computing Helpdesk. The University's Virtual Learning Environment, hosted by Blackboard has been developed to enhance the student's learning experience and provide comprehensive support on a module-by-module basis. Support includes, access to teaching materials, links to relevant online resources and background reading, facilities for interaction and coordination during group work (e.g. blogs, wiki's) and communication between tutors and students. The Faculty has a well-equipped range of general and specialist laboratories, a dedicated field laboratory, large glasshouse used for teaching and project work, dedicated project laboratory a wide range of specialist scientific equipment that is available for use by the students at appropriate stages in their study programme.

Teaching facilities for students when studying at Bristol zoo include a new HE Education Centre including lecture theatres, a laboratory, a computer room, a library, and a student common room, as well as access to the zoo's extensive collection of animals at the Clifton Zoo site and 'Wild Place' site North Bristol.

#### **Preparation for the world of work**

An aim of this programme is to produce graduates that are fit for work. To achieve this objective student are introduced to the world of work at Level One. This occurs within the modules 'Field Skills' and 'Wildlife and Society'. Here student are introduced to research being carried out by staff at the university, meet a range of local conservation employers, investigate employment opportunities in tutor groups and undertake organised work experience during visits to local employers such as Bristol Zoo. At Level 2 students undertake organised mini-placements (within 'Conservation in Practice') with local providers to gain work experience. Students are encouraged to take the Placement Year to build up their work experience skills and this occurs between Level 2 and Final Year. Scientific and generic careers events are organised throughout the year for student at all levels and career advice and C.V. preparation is a key aspect of tutor group session. Enterprise, social enterprise and consultancy are all key topics delivered in the compulsory Final Year module 'Contemporary Conservation Science' and are part delivered by the Careers Service.

Field work is of fundamental importance to the development of employability skills and understanding in wildlife conservation, and occurs across a range of modules at all levels, including half-day, whole day, and residential visits. In particular, residential field trips take place at Level 1

## Part 4: Student Learning and Student Support

(compulsory), Level 2 (compulsory) and Final Year (optional modules). The costs associated with compulsory field trips are generally met by the Faculty; however, optional trips may incur an additional cost. At Final Year students undertake an independent research project. This is supported by compulsory modules at Levels 1 and 2 during which students develop the skills to project plan, self-manage, collect data, analyse and interpret data and write scientific reports.

In addition to the practical work experience opportunities throughout this programme, technology is used to enhance teaching, learning and employability. Wildlife scientists are often required to communicate and disseminate their findings through a variety of modern media, to a range of audiences. A number of the technologies incorporated within this programme link directly to feedback from employers on relevant graduate skills (e.g. GIS, data bases, webpages, blogs, new media).

### Teaching and Learning, Technology Enhanced Learning (TEL)

In order to support students during their transition to HE and to help students become independent learners, taught sessions at Level Zero (the Foundation Year) and One are a mixture of interactive lectures, tutorials, workshops, laboratory, field and computer practical's. During this year students are taught the skills necessary to engage with appropriate technologies to allow a gradual move towards facilitated learning at Level 2 and Final Year. The taught sessions at UWE utilise TEL to support pedagogy of Inductive Learning where the students engage in facilitated activities such as debates, problem based learning, group working, research etc. Integral to this programme is the use of subject based as well as generic use of technologies. For instance, data analysis and modelling, mapping (GIS), wildlife film-making, communication for conservation, are subject areas reliant on a range of contemporary technologies. In addition modern technologies are incorporated as vehicles of learning (e.g. blogs, web pages, data bases) and as vehicles for learning through assessment (e.g. online portfolio's, online tests, wiki's, press releases etc.)

Below is a map showing the use of TEL in subject knowledge, subject delivery and subject assessment.

TEL mapping showing **Subject based technologies**, **TEL incorporated as vehicles of learning** and **TEL incorporated as vehicles for learning through assessment**

		TEL as subject knowledge	TEL as a Vehicle for subject delivery	TEL as vehicle for subject assessment and learning
<b>Compulsory Modules Level 0</b>	<b>USSKCJ-30-0</b> Biology in Practice	Data analysis	Bb, Online resources	Data analysis & data presentation, formative & summative quizzes
	<b>USSKCK-30-0</b> Chemistry in Practice	Data analysis	Bb, Online resources	Data analysis & data presentation, formative & summative quizzes
	<b>USSKCL-30-0</b> Skills for Science	Data analysis, Skills development	Bb, Online resources	Data analysis & data presentation, formative & summative quizzes
	<b>USSKCM-30-0</b> People and Science	Data analysis	Bb, Online resources	Data analysis & data presentation, formative & summative quizzes
<b>Compulsory Modules</b>	<b>USSK5C-30-1</b> Life on Earth	Data analysis	Bb, Online resources, i.d. keys	Data analysis & data presentation



Part 4: Student Learning and Student Support				
Level 1	USSJFB-30-1 The Earth	Data analysis	Bb, Online resources	Data analysis & data presentation OLA Oral feedback
	USSK5D-30-1 Wildlife & Society	Data analysis, Research	Bb, Online discussions	Data analysis & data presentation? blog/wiki
	USSK5B-30-1 Field Skills	Data analysis, research, GPS	Bb, Online resources, ECDL skills i.d. keys	Online portfolio with ECDL cert. Data analysis & data presentation
Compulsory Modules Level 2	USSK5G-30-2 Environmental & Field Techniques	Remote sensing, GIS, data analysis, GPS Questionnaires, new media,	Bb, Online resources, collaborative working, ECDL, Web pages,	Online portfolio with ECDL cert. Data analysis & data presentation Online questionnaire, web page. Presentation
	USSK5E-30-2 Conservation in Practice	Remote sensing, GIS, data analysis	Bb, Online resources	Data analysis & data presentation, blog/wiki
	USSK5F-30-2 Ecology & Ecosystem Protection	Data analysis	Bb, Online resources	Data analysis & data presentation Online portfolio
	USSK5H-30-2 Wildlife Ecology	Data analysis, i.d. keys	Bb, online resources, audio recordings, decision tools (U choose)	Data analysis & data presentation OLA Oral feedback
Compulsory Modules Level 3	USSK5K-30-3 Research Project	Data analysis	Bb, Online resources	Blog- diary, Gantt chart Data analysis Presentation
	USSKBC-30-3 Dissertation Project	data analysis, questionnaires, new media,	Bb, Online resources	Blog- diary, Gantt chart Data analysis Presentation
	USSK5J-30-3 Contemporary Conservation Science	Data analysis, modelling, data & DNA bases, communication	Bb Online discussions & resources	Data analysis Modelling, data bases- networks, blog/wiki tweets, other new media, press release Data analysis & data presentation
Optional Modules Level 3	USSK56-15-3 Primate Ecology & Conservation	Data analysis	Bb, Online resources	Data analysis & data presentation
	USSKN6-15-3 Global Forest Systems	Data analysis modelling	Bb, Online resources	Data analysis & data presentation OLA Oral feedback
	USSKNB-15-3 Sustainable Food Production	Data analysis modelling	Bb, Online resources	Data analysis & data presentation OLA Oral feedback
	USSK55-15-3 Marine Ecosystems	Data analysis	Bb, Online resources	Data analysis & data presentation
	USSK58-15-3 Remote Sensing & GIS	Remote sensing, GIS, data analysis	Bb, Online resources	Remote sensing, GIS, data analysis Presentation
	USSK59-15-3 Tropical Expedition	Field technology Filming	Bb, Online resources	Data analysis & data presentation
	USSK5A-15-3 Wildlife, Film & Media	Filming, editing	Bb, Online resources	Presentation, Film, Storyboard
	USSK57-15-3 Professional Practice in Applied Sciences	Data analysis	Bb, Online resources	Presentation, Online portfolio, Learning agreement
	USSKNT-15-3 Wildlife Forensics and Conservation	Data analysis, Research	Bb, Online resources	Data analysis & data presentation

#### Part 4: Student Learning and Student Support

At UWE, Bristol there is a policy for a minimum average requirement of 12 hours/week contact time over the course of the full undergraduate programme. This contact time encompasses a range of face:face activities as described below. In addition a range of other learning activities will be embedded within the programme which, together with the contact time, will enable learning outcomes to be achieved and demonstrated.

On the Wildlife Ecology and Conservation Science (with Foundation Year) programme, teaching is a mix of scheduled learning, independent learning and placement learning.

**Scheduled learning** includes interactive lectures, lectorials, tutorials, seminars, project supervision, demonstration, laboratory, computer and field practical classes and workshops; fieldwork; external visits; film-making and work based learning. Scheduled sessions may vary slightly depending on the module choices made.

**Independent learning** includes hours engaged with essential reading, case study preparation, scientific research activity, attending professional seminars, assignment preparation and completion, revision etc.

**Placement learning:** includes mini-placements of work experience and may also include a professional practice placement year.

#### Description of any Distinctive Features

The Wildlife Ecology and Conservation Science (with Foundation Year) programme has been developed in consultation with a range of stake holders and has the following key features:

- Part-taught and delivered at Bristol Zoo Gardens
- Designed to support four career pathways in addition to being a science graduate (Consultancy - Enterprise; Contemporary techniques; Media & film; International wildlife conservation)
- Familiarisation with both local and global partners/employers
- Built in 'organised' voluntary work with local partners
- Built in field work and field experience
- Attractive bespoke modules on Wildlife & Media; the Primates
- Local to global scientific study of wildlife to attract international students.
- Built in key skills such as GIS, IT, modelling, identification, communication, contemporary conservation science and technology and optional skills in SCUBA and assessing tropical wildlife.

## Part 5: Assessment

Approved to [University Regulations and Procedures](#)

### Assessment Strategy

A range of assessment methods are employed to monitor student attainment of the full range of Learning Outcomes. Assessment incorporates the Department's assessment strategy and The QAA Code of Practice on Assessment of Students. The principles, procedures and processes of assessment for each module are described in the module booklet, which is provided to each student and available online at the start of the module. Further, these assessments are summarised in the Assessment Calendar provided via the UWE Portal, which also facilitates the appropriate scheduling of assessment loading. The Final Year optional modules (15 credit) have semester based delivery. This allows assessments to be spread across both semesters for even loading.

Effective learning is achieved by employing a range of assessment approaches across the suite of modules that recognise differential approaches to learning. These include opportunities for work-based learning, placements and field work, and "real-world" assignments, delivered by university staff, through our collaborations with Bristol Zoo, and in partnership with a range of other conservation organisations. The development of a flexible, inclusive and accessible curriculum ensures a high quality learning experience for all students. The programme incorporates a range of innovative and novel assessments, many utilizing new technologies.

As shown above, Technology Enhanced Learning (TEL) is integral to the subject matter within this programme (see TEL map). Many taught topics are technology rich and TEL is also used to supplement learning and to help student learn through assessment. The mapping demonstrates a range of modern technologies across the programme, but also shows repetition, of technologies, thus re-enforcement of skills. This is particularly important between levels as it provides opportunities for students to become proficient with these media in key areas. The need for proficiency and an emphasis on technology aided skills was identified by employers (e.g. GIS, new media, blogs, web pages, data bases, press releases) and this feedback was used to inform the assessment strategy.

The Assessment Strategy has been designed to support and enhance the development of both subject-based and generic key skills and allow students to realise their true potential. The focus is on assessments that link directly to employability as well as assessments for learning. Assessments are designed to achieve the learning outcomes for each module and this is described on the module specification. The range and progression of assessment methods are shown below.

### Assessment Map

The programme encompasses a range of **assessment methods** including; practical exams, written exams, open book exams, posters, presentations, practical reports, field logs, portfolios, taxonomic collection, management plan, and a media pitch. These are detailed in the following assessment map:

**Assessment Map for Wildlife Ecology and Conservation Science (with Foundation Year)**

## Part 5: Assessment

Note, A = Component A; B = Component B; P/F = Pass or Fail and the number in brackets represent the module weighting

		Unseen Written Exam	Open Book Written Exam	Practical Exam	Practical Skills Assessment / Taxonomic Collection	Oral assessment and/or presentation	Investigative Report / case study	Practical or Field Report	Research Project Report	Skills Portfolio / Reflective portfolio	Written Assignment	Problem-solving Exercise
<b>Compulsory Modules Level 0</b>	<b>USSKCJ-30-0</b> Biology in Practice	A (40)						B (30)			B (30)	
	<b>USSKCK-30-0</b> Chemistry in Practice	A (40)						B (30)				B (30)
	<b>USSKCL-30-0</b> Skills for Science	A (40)								B (60)		
	<b>USSKCM-30-0</b> People and Science	A (30)			A (10)					B x2 (60)		
<b>Compulsory Modules Level 1</b>	<b>USSK5C-30-1</b> Life on Earth	A (40)					B (18)	B (42)				
	<b>USSJFB-30-1</b> The Earth	A (30)		A (10)			B (24)	B (36)				
	<b>USSK5D-30-1</b> Wildlife & Society	A (40)				B (20)	B (40)					
	<b>USSK5B-30-1</b> Field Skills		A (40)					B (30)		B (30)		
<b>Compulsory Modules Level 2</b>	<b>USSK5G-30-2</b> Environmental & Field Techniques					A (40)		B (20)		B (40)		
	<b>USSK5E-30-2</b> Conservation in Practice				A (40)		B (30)	B (30)				
	<b>USSK5F-30-2</b> Ecology & Ecosystem Protection	A (50)					B (30)			B (20)		
	<b>USSK5H-30-2</b> Wildlife Ecology	A (50)				B (25)		B (25)				
<b>Compulsory Modules Level 3</b>	<b>USSK5K-30-3</b> Research Project OR					A (20)		A (20)	A (60)			
	<b>USSKBC-30-3</b> Dissertation Project					A (20)		A (10)	A (70)			
	<b>USSK5J-30-3</b> Contemporary Conservation Science					B (20)	B (30)			A (50)		
<b>Optional Modules Level 3</b>	<b>USSK56-15-3</b> Primate Ecology & Conservation	A (60)						B (40)				
	<b>USSKN6-15-3</b> Global Forest Systems	A (60)					B (40)					
	<b>USSKNB-15-3</b> Sustainable Food Production	A (60)					B (40)					
	<b>USSK55-15-3</b> Marine Ecosystems	A (60)						B (40)				
	<b>USSK58-15-3</b> Remote Sensing & GIS				A (60)		B (40)					
	<b>USSK59-15-3</b> Tropical Expedition			A P/F			B (30)	B (70)				
	<b>USSK5A-15-3</b> Wildlife, Film & Media					A (40)				A (60)		

## Part 5: Assessment

	<b>USSK57-15-3</b> Professional Practice in Applied Sciences <i>(study &amp; assessments for this module are carried out whilst on placement)</i>				A P/F	A P/F	A P/F			A P/F		
	<b>USSKNT-15-3</b> Wildlife Forensics and Conservation	A (50)					B (50)					

\*Assessment should be shown in terms of either **Written Exams**, **Practical exams**, or **Coursework** as indicated by the colour coding above.

## Part 6: Programme Structure

This structure diagram demonstrates the student journey from Entry through to Graduation for a typical **full time student**.

### ENTRY

	Compulsory Modules	Optional Modules	Interim Awards
Year Zero	<b>USSKCJ-30-0</b> Biology in Practice	None	120 credits at Level 0  Successful completion of all level 0 modules required to permit progression to level 1.
	<b>USSKCK-30-0</b> Chemistry in Practice		
	<b>USSKCL-30-0</b> Skills for Science		
	<b>USSKCM-30-0</b> People and Science		

	Compulsory Modules	Optional Modules	Interim Awards
Year 1	<b>USSK5C-30-1</b> Life on Earth	None	Certificate of Higher Education: Wildlife Ecology and Conservation Science  Credit Requirements: 240 credits At least 100 credits at level 1 or above. 120 credits at level 0
	<b>USSJFB-30-1</b> The Earth		
	<b>USSK5D-30-1</b> Wildlife and Society		
	<b>USSK5B-30-1</b> Field Skills		

	Compulsory Modules	Optional Modules	Interim Awards
Year 2	<b>USSK5E-30-2</b> Conservation in Practice	None	Diploma of Higher Education: Wildlife Ecology and Conservation Science  Credit requirements: 360 credits At least 100 credits at level 2 or above. At least 120 credits at level 1 or above. 120 credits at level 0.
	<b>USSK5G-30-2</b> Environmental and Field Techniques		
	<b>USSK5F-30-2</b> Ecology and Ecosystem Protection		
	<b>USSK5H-30-2</b> Wildlife Ecology		

### Year Out:

Students may elect to spend a year out working for an organisation, in an appropriate placement to gain relevant work experience. Credit is achieved through the USSK57-15-3 Professional Practice in Applied Sciences module.



	Compulsory Modules	Optional Modules	Interim Awards
Year 3	<b>USSK5K-30-3</b> Research Project <i>OR</i> <b>USSKBC-30-3</b> Dissertation Project	<b>USSK56-15-3</b> Primate Ecology & Conservation	BSc Wildlife Ecology and Conservation Science
	<b>USSK5J-30-3</b> Contemporary Conservation Science	<b>USSKN6-15-3</b> Global Forest Systems	Credit requirements: 420 credits At least 60 credits at level 3 or above. At least 100 credits at level 2 or above. At least 140 credits at level 1 or above. 120 credits at level 0.
		<b>USSK55-15-3</b> Marine Ecosystems	
		<b>USSK58-15-3</b> Remote Sensing & GIS	
		<b>USSK59-15-3</b> Tropical Expedition	<b>Highest Award</b> BSc (Hons) Wildlife Ecology and Conservation Science
		<b>USSK5A-15-3</b> Wildlife, Film & Media	Credit requirements: 480 credits At least 100 credits at level 3 or above. At least 100 credits at level 2 or above. At least 140 credits at level 1 or above. 120 credits at level 0.
		<b>USSK57-15-3</b> Professional Practice in Applied Sciences	
		<b>USSKNB-15-3</b> Sustainable Food Production	
		<b>USSKNT-15-3</b> Wildlife Forensics and Conservation	

## GRADUATION

### Part 7: Entry Requirements

The Foundation Year is designed to accept a wide range of people with different educational backgrounds. Each applicant will be considered on an individual basis.

Minimum entry requirements are as follows:

GCSE Grade C or above in English Language, Mathematics and Double Science, or equivalent.

Science AS or A2. Points from A-Level General Studies and AS-Level subjects (not taken onto full A-Level) can be included towards overall tariff. You must have a minimum of one A-Level.

The UCAS points tariff will be reviewed on a regular basis and published for new applicants. Tariff points as appropriate for the year of entry - up to date requirements are available through the courses database.

## Part 7: Entry Requirements

Non-standard applicants without appropriate A-levels, or an equivalent qualification, will be considered on a case-by-case basis.

## Part 8: Reference Points and Benchmarks

### The Framework for Higher Education Qualifications

The learning outcomes have been developed with reference to the qualification descriptors used in the QAA Framework for Higher Education Qualifications. In particular, the learning outcomes for the modules at Final Year are considered consistent with the QAA's descriptor for a higher education qualification at level 6: Bachelor's degree with honours. Graduates of the programme achieving an Honours classification will have developed a systematic understanding of key aspects of wildlife ecology and conservation science, some of it at the current boundaries of the academic discipline. In addition, graduates will have developed analytical techniques, problem-solving skills and communication skills that can be applied to a range of employment opportunities.

### Subject Benchmark Statements

The programme maps well to the Biosciences benchmark statement and, in particular, to its subject specific and generic learning outcomes, as described in detail earlier in the Programme Specification. In addition, the following key concepts and priorities highlighted in the Biosciences benchmark statement were used to inform programme design:

*All students should have at least some appreciation of...studies at a variety of levels from molecules to populations.* This programme focuses primarily on the study of organisms, populations, communities and ecosystems, although fundamental biological concepts that underpin an understanding of wildlife ecology and conservation, such as physiological processes and knowledge of genetics and evolution, are covered (for example at Level 0 in Biology in Practice/The Living World, at Level 1 in *Life on Earth* and at Level 2 in *Wildlife Ecology*).

*Students should develop competence in comparing the merits of alternative hypotheses and receive guidance in terms of how to construct experiments or make observations to challenge them.* In all modules, students will be encouraged to explore a range of hypotheses both through their own experimentation, and through the consideration of case studies which both support and refute current paradigms. These skills are developed in the second year when students undertake a group research project in *Environmental and Field Techniques*. Competence is further developed and assessed to an advanced degree in the Final Year independent *Research Project*, in which students are expected to devise and undertake original research and to critically compare their findings with existing knowledge and understanding in their chosen subject area.

*The biosciences are essentially practical and experimental subjects.* This programme places much emphasis on practical work in the broadest sense, including field and laboratory work, computer-based exercises, group and individual project work, literature-based investigations and utilizing communication technologies. In particular, many students will choose to undertake an independent research project that involves a substantial amount of practical or experimental work, although entirely desk-based studies are relevant in some areas of investigation. In addition, many of the modules contain a substantial amount of practical work, not least through the residential field trips in *Field Skills, Environmental and Field Techniques, Marine Ecosystems*, and the *Tropical Expedition*, as well as half and full-day visits undertaken in other modules.

The benchmarking Statement also provides a description of subject standards for degrees in Ecology and Environmental Biology which is a good match to both the subject areas covered and the standards achieved by students on the programme.

## Part 8: Reference Points and Benchmarks

### SEEC credit level descriptors (2010)

SEEC credit level descriptors have been used to establish the level of the programme and its modules, and to inform the learning outcomes and assessment criteria at level 4 (Cert. HE), level 5 (Dip. HE), and level 6 (BSc).

These credit levels descriptors inform the following areas:

- The development of subject specific knowledge and understanding, generic cognitive and intellectual skills, key/transferrable skills, and subject specific practical skills;
- Teaching, learning and assessment strategies that deliver, ensure and assess the attainment of these levels;
- The programme level learning outcomes that are reinforced by the modular learning outcomes, teaching, learning and assessment strategies described in individual module specifications.

### **Consideration of feedback from stakeholders: schools & colleges, current students, graduates and employers.**

An online questionnaire was used to survey the opinions of current students; recent graduates; alumni; and employers / members of biodiversity networks. Local schools were also contacted via the SCPS to gain further feedback from 16-18 year olds and from teachers. In addition, feedback was gained from current students on the potential distinctive features of the new programme. The data suggest that students/sixth formers prefer titles that explain what the course is about; prefer to see the term science in the title as it confers gravitas; prefer a title that sounds like it is 'doing something'; like the link to Bristol Zoo; like the link to media/film; like the link to conservation technology; like the idea of compulsory 'voluntary' work. This valuable feedback was taken into account when deciding upon the programme title (*Wildlife Ecology and Conservation Science*) and the content. The programme now includes modules that will be delivered at Bristol Zoo Gardens and has modules specifically on wildlife e.g. *Wildlife Ecology*; *Primate Ecology and Conservation*. The Final Year module *Contemporary Conservation Science* includes modern innovative approaches to conservation such as conservation genetics. An optional Final Year module *Wildlife, Film and Media* has been created in response to the positive feedback to this proposal.

To ensure that the programme would be fit for purpose and to gain an in-depth knowledge of the needs of employers in this field, key personnel from the Wildfowl and Wetlands Trust (Slimbridge); Somerset Wildlife Trust; Worldwide fund for Nature (WWF-UK); Bristol Zoo Gardens and Bristol City Council were interviewed. This generated invaluable feedback on the attractiveness and usefulness of the programme and highlighted all the skills that were needed to produce a skilled and employable graduate ready to work in this field. All organisations considered that the consultation was an excellent approach to programme development and were extremely helpful in providing ideas for content and offers of work experience opportunities. Common themes emerged from these meetings and so in response to a request for proficiency in Geographical Information systems (GIS), data analysis, scientific writing, use of data bases, field based skills and communication skills there are numerous skills modules at all levels that address these requests e.g. *Field Skills*; *Environmental and Field Techniques*; *Conservation in Practice*; *Contemporary Conservation Science*; *Research Project*. All organisations were impressed by the idea of 'built-in' voluntary work and offered work experience opportunities.

A final consultation was held with current students once the programme structure and module content had been developed sufficiently to be articulated in some detail. Student feedback on the proposal was very positive however, they did make suggestions for module name changes

### Part 8: Reference Points and Benchmarks

and highlighted a perceived negative response to too many module titles using the term 'skills'. This was taken on board and so, for example, the Level 2 module is now called *Environmental and Field Techniques* which was given a positive response from students.

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