

ACADEMIC SERVICES

PROGRAMME SPECIFICATION

Part 1: Basic Data	
Awarding Institution	University of the West of England, Bristol
Teaching Institution	University of the West of England, Bristol
Delivery Location	University of the West of England, Bristol
Faculty responsible for programme	Faculty of Health and Applied Sciences
Department responsible for programme	Department of Biological, Biomedical and Analytical Sciences
Modular Scheme Title	Applied Sciences
Professional Statutory or Regulatory Body Links	Accredited by the Institution of Environmental Sciences
Highest Award Title	BSc (Hons) Environmental Science
Default Award Title	N/A
Fall-back Award Title	N/A
Interim Award Titles	BSc Environmental Science Diploma in Higher Education in Environmental Science, Certificate in Higher Education in Environmental Science
UWE Progression Route	N/A
Mode(s) of Delivery	FT / SW / PT/ Foundation
Codes	UCAS : ISIS2:
	JACS: HESA:
Relevant QAA Subject Benchmark Statements	Earth Sciences, Environmental Sciences and Environmental Studies (2014)
CAP Approval Date	19 November 2015 31 May 2017 (v2)
Valid from	September 2016 September 2017 (v2)
Valid until Date	September 2022
Version	Version 2

Part 2: Educational Aims of the Programme

The BSc (Hons) Environmental 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 the knowledge and skills necessary to work effectively in the field of environmental science, for example in environmental regulation, environmental consultancy or environmental biotechnology. It provides an opportunity for students to explore the theory and practice related to the subject of environmental science, and to develop both subject-specific and important generic graduate skills, particularly analytical and communication skills. It aims to develop, in students, an in-depth understanding of the natural world and the potential consequences to the natural environment of a wide range of human activities. Students will also develop a broad understanding of the social, political and economic context within which environmental decisions are made.

Part 2: Educational Aims of the Programme

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) Environmental Science;
- understand the principles that govern biological, physical and human systems in an environmental context.
- explore the impact of human activities on these systems, and appreciate the relationship between lifestyle choices (including their own) and the sustainable use of environmental resources at a local, regional and global scale.
- develop subject-specific and generic practical, analytical and communication skills which will equip them for the world of work.

The specific aims of the programme are to:

- Provide the educational and resource environment which will enable students to develop:
 - a strong scientific understanding of the principles and processes that underpin contemporary environmental issues
 - an understanding of environmental issues from a multi-disciplinary and interdisciplinary perspective.
 - the field, laboratory and investigative skills necessary to undertake independent investigations and analyses of environmental problems, and the presentational skills necessary to communicate their findings to audiences with a variety of backgrounds.
 - the skills of a literate and numerate student capable of independent learning.
- Create a friendly and supportive atmosphere that will enable individual students to use the learning experience at UWE to create a graduate foundation, on which they can develop their future careers and on-going social and educational development.
- Provide a curriculum that is enhanced by a balance of experience from both research and consultancy.

Programme requirements for the purposes of the Higher Education Achievement Record (HEAR)

BSc (Hons) Environmental 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 at Level 1 and beyond. At Levels 1 and above the BSc Environmental Science programme has been designed to provide graduates with the knowledge and skills necessary to work effectively in the field of environmental science. It includes physical, chemical, biological and human processes, and the monitoring and management of natural and human-induced environmental changes. Graduates have an in-depth understanding of key environmental problems, including the sustainable use of resources and climate change, and are able to critically evaluate the range of possible solutions. Students

also develop a broad understanding of the social, political, legal and economic context within which environmental decisions are made. The programme also provides opportunities for students to develop important generic graduate skills, particularly analytical and communication skills.

Part 3: Learning Outcomes of the Programme

Learning Outcomes:	USSKJ-30-0	USSCK-30-0	USSKCL-30-0	USSKCM-30-0	USSK5C-30-1	USSJFB-30-1	USSKAB-30-1	USSK5B-30-1	USSK5G-30-2	USSKN5-15-2	USSK5F-30-2	USSKN8-15-2	USSKN4-15-2	USSKNA-15-2	USSKN7-15-2	USSK5K-30-3	USSKBC-30-3	USSKBE-30-3
	Biography in Practice	Chemistry in Practice	Skills for Science	People and Science	Life on Earth	The Earth	Environment and Society	Field Skills	Field and Environmental Techniques	Earth Science	Ecology & Ecosystem Protection	Env. Impacts and Mitigation	Atmosphere and Climate	Hydrology to Oceanography	The Microbial World	Research Project	Dissertation Project	Resource Security & Sustainability
A) Knowledge and understanding of:																		
1. The breadth and relevance of the natural and social sciences which underpin the environmental sciences	X	X	X	X	X	X	X	X										
2. A multi-disciplinary and interdisciplinary approach in knowledge and understanding of earth systems			X		X	X	X	X	X		X	X				X	X	X
3. Processes which shape the natural world including the influence of human activities.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4. Relevant terminology, nomenclature and classification systems	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
5. Methods of acquiring, interpreting and analysing information and data	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	
6. Sustainable use of resources.					X	X	X				X	X						X
7. The contribution of the					X	X	X				X	X				X	X	X

interpret, present data																		
5. Solve numerical problems		X	X	X	X	X		X	X	X	X	X		X	X	X	X	X
6. Use the internet and other electronic sources critically	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
7. Identify individual and collective goals	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
8. Respect the views of others.	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	
9. Evaluate own performance			X	X		X		X	X							X	X	
10. Develop skills for life-long learning	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11. Personal, academic and career development.								X	X							X	X	
12. Develop an adaptable, flexible and effective approach to study and work.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Part 4: Student Learning and Student Support

The BSc (Hons) Environmental Science (with Foundation Year) programme is an interdisciplinary degree which combines a sound scientific understanding of environmental systems with the analysis of those socio-economic and political factors which determine the context within which environmental decisions are made. Hence its teaching is supported by tutors from not only a wide range of disciplines within the Faculty of Health & Applied Sciences, but also by staff from other Faculties, including the Faculty of Environment and Technology. The sustainable use of natural resources is a theme which is integrated across the programme, as is the importance of interdisciplinarity, which is also developed explicitly through dedicated modules.

All students follow a core first year (Year Zero) which is designed to provide a strong grounding in biology, chemistry, mathematics and physics, along with the core concepts of psychology. Students will be supported in understanding the place of a scientist in society, appreciating the importance of communication skills and the focus upon functional team working as the keystone of successful scientific endeavour. The Foundation Year will also support students to gain excellent analytical, communication and time management skills, which will substantially enhance their learning potential in Levels 1-3.

Core modules in the second year (Level 1) build on this foundation and provide a broad underpinning to the environmental sciences. In the third year, students focus on the application of environmental theory to problems in the real world, and help develop their independent learning skills, particularly those relating to the planning, implementation, analysis and communication of environmental research. In the final year, all students undertake an independent project, working alongside researchers at the leading edge of the environmental sciences, or developing their own ideas with the guidance of expert tutors. They also study compulsory modules that focus on the key environmental issues of the day, as well as exploring the relationships between science and enterprise. Optional modules in the fourth year allow students to focus their degree studies around a number of themes, including: the

Part 4: Student Learning and Student Support

quantification and diversity of the living environment; the analysis of the physical environment and sustainable exploitation of earth resources; the management of human: environment interactions in business and industry. Alternatively, students may choose to pick a broad range of modules to match their interests and career aspirations

Transition to HE and student support

BSc(Hons) Environmental Science (with Foundation Year) degree is managed as part of a suite of programmes within the Biological and Environmental Sciences & Science Communication Subject Group. All students are provided with a Programme Handbook which contains 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 regulations, aims of the programme, 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 Head of Department. 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 Leader on a regular basis. Students who elect to undertake a placement year, are allocated a placement tutor who maintains contact, plans a visit where possible, provides support and liaises 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 also provide assistance and guidance for students. The programme welcomes mature students, and students with disabilities or additional needs. Where possible, and following individual consultation, adjustments are made to practical and field work to allow all students 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, with additional material held in the Field Studies Resource Room. Students have 24-hour access to computers, and IT support services are available from 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, wikis) and communication between tutors and students. The Faculty has a well-equipped range of general and specialist laboratories, a dedicated field laboratory, a large glasshouse used for teaching and project work, a dedicated project laboratory, and a wide range of specialist scientific equipment, both lab-based and portable that is available for use by the students at appropriate stages in their study programme. The university's campus at Frenchay covers over 60 hectares, and provides a wide range of habitats that can be utilized by students for formal and informal learning, including ponds, grassland, woodland, and the built environment which includes some buildings that incorporate cutting-edge sustainable building design and micro-generation technologies. In addition, the geographical location of Bristol gives access to a wide variety of natural and man-made environments and provides students with opportunities for fieldwork that enhance their learning experience.

In addition to programme-specific facilities, the university offers a wide range of opportunities for learning and participation outside of the formal curriculum. These include: research talks by visiting experts and UWE research staff, and access to research seminars hosted by other organisations in Bristol, for example Bristol Zoo; a wide range of student societies, some which are particularly targeted at environmental issues; a wide range of volunteering opportunities including working with local environmental organisations and supporting pupils in local schools; and opportunities to get involved with entrepreneurial projects, publish their own work, or take part in environmental, conservation, or

Part 4: Student Learning and Student Support

development projects at home and abroad. Such extra-curricular activities can now be formally recognised through the UWE Bristol Futures Award.

Preparation for the world of work

An aim of this programme is to produce graduates that are ready for the world of work.

Environmental Science graduates have a long track record in gaining employment across a number of different professions including environment-based industries. This is due to the wide range of skills they develop in the study of the subject through hands-on learning activities such as fieldwork, laboratory work and team-based projects. Working in the natural environment provides opportunities and constraints on project work that are different, unexpected and more challenging than those found in classroom-based activities. The skills and qualities developed through studying Environmental Science are highly transferable into a variety of roles and different working environments, including the ability to think through issues, analyse situations and problems and come up with creative solutions, and to work with others in sometimes difficult and tight timeframes, and unfamiliar environments.

Students are introduced to the world of work through their taught modules, especially the 'Skills' modules at levels Zero, One and Two, and through their group and one-to-one tutor sessions at all levels. These sessions focus on the identification of career aspirations, analysis of skills gaps and acquisition planning, C.V. preparation and the job application process. Students are encouraged to take the Placement Year to build up their work experience skills and this occurs between Level 2 and the Final Year. Scientific and generic careers events are organised throughout the year for students at all levels and careers advice is available from academic staff and the university's Careers Service. Enterprise, social enterprise and consultancy are all key topics delivered in the optional Final Year module 'Scientific Frontiers and Enterprise'.

Field work is of fundamental importance to the development of employability skills 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 (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. All 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, 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. Environmental 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 practicals. 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 a 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, remote sensing and mapping (GIS), and communication 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 portfolios, online tests, wikis, etc.). Below is a map showing the use of TEL in subject knowledge, subject delivery and subject assessment.

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 BSc Environmental Science (with Foundation Year) programme teaching is a mix of scheduled, independent and placement learning.

Scheduled learning includes interactive lectures and lectorials, seminars, tutorials, project supervision, demonstration, laboratory, computer and field practical classes and workshops; fieldwork; external visits; 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, attendance at professional seminars, assignment preparation and completion, revision etc.

Placement learning: may include a professional practice placement year that may be undertaken at home or abroad.

Description of any Distinctive Features

The Environmental Science (with Foundation Year) programme has been developed in consultation with a range of stake holder and has the following key features:

- An interdisciplinary and multi-disciplinary approach to the study of environmental science;
- Field work and field experience at local, national and international locations;
- The opportunity to spend a year working with leading environmental organisations, at home and abroad;
- Built in key skills such as GIS, IT (ECDL), environmental analysis, modelling, species identification, communication, and optional skills in SCUBA and assessing tropical wildlife;
- Delivery by experts in their field, drawn from across the university;
- High emphasis on the development of practical skills, with excellent facilities to support student learning;
- A range of final year options which, along with the research project, allow students to tailor their degree to their specific areas of interest;
- Built-in enterprise skills and an understanding of the world of work.

In addition, the BSc (Hons) Environmental Science (with Foundation Year) degree is accredited by the Institution of Environmental Sciences (IES).

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 recognises differential approaches to learning. These include opportunities for placements, field work, and “real-world” assignments. 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) and this feedback has been 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.

The nature of feedback on student work is varied, and relates to the nature of the work undertaken. Methods of feedback include: detailed comments on scripts; oral feedback; generic or assignment-specific feedback forms; peer assessment; and model answers. As well as supplying feedback on summative assessment, the teaching team also employ feed-forward strategies, both on summative work (for example detailed commentaries provided on drafts for the final year project) and formative assessment, such as in-class tests (using clickers), on-line quizzes, modal answers for past exam questions, posters and presentations.

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,

These are detailed in the following assessment map:

Assessment Map for BSc Environmental Science (with Foundation Year)

		Unseen Written Exam	Open Book Written Exam	Practical Exam	Practical Skills Assessment	Oral assessment and/or presentation	Investigative Report/Case Study	Practical or Field Report	Research Report / Project	Skills/Reflective Portfolio	Written Assignment	Problem-solving Exercise
Compulsory Modules Level 0	USSKCJ-30-0 Biology in Practice	A (40)						B (30)			B (30)	
	USSKCK-30-0 Chemistry in Practice	A (40)						B (30)				B (30)
	USSKCL-30-0 Skills for Science	A (40)								B (60)		
	USSKCM-30-0 People and Science	A (30)			A (10)					Bx2 (60)		
Compulsory Modules Level 1	USSK5C-30-1 Life on Earth	A (40)						B (18)	B (42)			
	USSJFB-30-1 The Earth	A (30)			A (10)			B (24)	B (36)			
	USSKAB-30-1 Environment and Society	A (40)						B (20)			B (40)	
	USSK5B-30-1 Field Skills		A (40)						B (30)		B (30)	
Compulsory Modules Level 2	USSK5G-30-2 Environmental and Field Techniques					A (40)			B (20)		B (40)	
	USSK5F-30-2 Ecology & Ecosystem Protection	A (50)						B (30)			B (30)	
Optional Modules Level 2	USSKN5-15-2 Earth Science	A (50)							B (50)			
	USSKN8-15-2 Environmental Impacts and Mitigation	A (50)						B (50)				
	USSKN5-15-2 Atmosphere and Climate	A (50)							B (50)			
	USSKNA-15-2 Hydrology to Oceanography	A (50)							B (50)			
	USSKN7-15-2 The Microbial World	A (50)							B (50)			
Compulsory Modules Level 3	USSK5K-30-3 Research Project					A (20)			A (20)	A (60)		
	USSKBC-30-3 Dissertation Project					A (20)			A (10)	A (70)		
	USSKBE-30-3 Resource Security & Sustainability	A (60)						B 2x (20)				
Optional Modules Level 3	USSK58-15-3 Remote Sensing & GIS					A (60)		B (40)				
	USSK59-15-3 Tropical Expedition				A P/F			B (30)	B (70)			
	USSKCC-15-3 Energy Technologies	A (60)						B (40)				
	USSK55-15-3 Marine Ecosystems	A (60)							B (40)			
	USSKCF-15-3 Scientific Frontiers & Enterprise					A (40)					B (60)	
	USSKN6-15-3 Global Forest Systems	A (60)						B (40)				

USSKCD-15-3 Environmental Forensics	A (60)							B (40)				
USSKCE-15-3 Science Communication					A (60)			B (40)				
USSK57-15-3 Professional Practice in Applied Sciences <i>(study & assessments for this module are carried out whilst on placement)</i>					A P/F	A P/F		B P/F			B P/F	
USSKNB-15-3 Sustainable Food Production	A (60)							B (40)				
USSKN9-15-3 Environmental Microbiology	A (60)								B (40)			
USSKCD-15-3 Environmental Forensics	A (60)							B (40)				

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

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

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 0	USSKCJ-30-0 Biology in Practice	None	120 credits at Level 0 Successful completion of all level 0 modules required to permit progression to level 1.
	USSKCK-30-0 Chemistry in Practice		
	USSKCL-30-0 Skills for Science		
	USSKCM-30-0 People and Science		

	Compulsory Modules	Optional Modules	Interim Awards
Year 1	USSK5C-30-1 Life on Earth	None	Certificate of Higher Education: Environmental Science Credit Requirements: 240 credits At least 100 credits at level 1 or above. 120 credits at level 0
	USSJFB-30-1 The Earth		
	USSKAB-30-1 Environment and Society		
	USSK5B-30-1 Field Skills		

Year 2	Compulsory Modules	Optional Modules	Interim Awards
	USSK5G-30-2 Environmental and Field Techniques	USSKN5-15-2 Earth Science	Diploma of Higher Education: Environmental 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.
	USSK5F-30-2 Ecology and Ecosystem Protection	USSKN8-15-2 Environmental Impacts and Mitigation	
		USSKN4-15-2 Atmosphere and Climate	
		USSKNA-15-2 Hydrology to Oceanography	
		USSKN7-15-2 The Microbial World	

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.

Year 3	Compulsory Modules	Optional Modules	Interim Awards
	USSK5K-30-3 Research Project <i>OR</i> USSKBC-30-3 Dissertation Project	USSKCF-15-3 Scientific Frontiers and Enterprise	BSc Environmental Science 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.
	USSKBE-30-3 Resource Security and Sustainability	USSKCC-15-3 Energy Technologies	
		USSK55-15-3 Marine Ecosystems	
		USSK59-15-3 Tropical Expedition	
		USSKCD-15-3 Environmental Forensics	
		USSKN6-15-3 Global Forest Systems	
		USSK58-15-3 Remote Sensing and GIS	
		Highest Award BSc (Hons) Environmental Science 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.	

		USSKCE-15-3 Science Communication	1 or above. 120 credits at level 0.
		USSK57-15-3 Professional Practice in Applied Sciences	
		USSKNB-15-3 Sustainable Food Production	
		USSKN9-15-3 Environmental Microbiology	

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.

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

Framework for Higher Education Qualifications

The learning outcomes for the programme have been developed with reference to the qualification descriptors used in the QAA Framework for Higher Education Qualifications. In particular, the learning outcomes for modules at level one and level two have been considered to be consistent with the award of a Certificate of Higher Education and a Diploma in Higher Education respectively. Graduates of the award achieving an Honours classification will develop an understanding of a complex body of knowledge related to the environmental sciences. In addition, the graduate will develop analytical techniques, problem-solving skills and communication skills that can be applied to a range of employment opportunities.

The environmental programme is underpinned by the Faculty's and the University's 2020 strategy. The programme is based around a research-led, student-centred approach to the acquisition and creation of knowledge, with students taking responsibility for their learning,

Part 8: Reference Points and Benchmarks

whilst tutors take responsibility for facilitating that learning.

Subject benchmark statements

This programme maps to the benchmark statements for Earth Sciences, Environmental Sciences and Environmental Studies. The benchmarking statement identifies four key features which should characterise degree programmes in the Environmental/Earth Sciences:

'a holistic, multi-disciplinary and inter-disciplinary approach'. This is evident in this programme from the breadth of the subject matter, the range of subject specialisms of the tutors involved (in both the analytical and social sciences) and the existence of integrating, 'issues' or case-study based modules and student work.

'the integration of fieldwork, experimental and theoretical investigations'. At levels 1 and 2 of this programme, students spend typically around 50% of their time involved in practical work of all types (field or laboratory based work, library or internet investigations) and all year 3 projects involved a high degree of investigation, be they practical or more theoretical (desk-based) in nature.

'quantitative and qualitative approaches to acquiring and interpreting' data. These approaches are integrated both in the practical work of the student as highlighted above, and through the lecture and assessment components of the programme, which encourage the students to develop skills in the objective analysis of all type of information and data, in order to recognise, understand and challenge current theories and paradigms. Examples include: the analysis of legal case material; the conducting of public opinion surveys; conducting literature searches and summarising bodies of evidence and opinion.

'the exploration for, and exploitation of, physical and biological resources in the context of sustainability'. The diversity and extent of physical and biological resources are introduced at levels 0 and 1 through the compulsory modules, which also begin the exploration of issues relating to unwise or over-exploitation of these resources. These themes are further explored at level 2 in all modules, which consider the social, economic, legal and political aspects of resource exploitation, as well as its physical consequences (loss of biodiversity, land degradation, pollution). At level 3 more emphasis is placed on precisely defining the impacts of over-exploitation and on investigating appropriate techniques for remediation.

The benchmarking statement also specifies the subject knowledge it expects to be covered to some degree of depth in an Environmental Science degree programme:

'The Earth as a system' which is dealt with explicitly in compulsory modules at levels 0 and 1 and at level 2 but more implicitly throughout the suite of modules taken.

'Human systems and their interactions with global systems' which are explored in detail via the interdisciplinary and 'issues' based modules and a knowledge of which is underpinned by the compulsory modules at levels 0, 1 and 2. Human impacts on environmental systems forms an important theme in most level 3 modules, as well as underpinning most of the research topics investigated as part of the final year Research Project.

'Inter-disciplinary/multi-disciplinary context' which is implicit in the structure of the programme, as well as being dealt with explicitly in a range of modules at all three levels.

'Activities, patterns, processes, impacts and responses' including environmental impact assessment, management and sustainable development. These themes are integrated throughout the programme, with knowledge and understanding of activities, patterns and

Part 8: Reference Points and Benchmarks

processes typically being obtained at levels 0 and 1, whilst impacts and responses are investigated in greater breadth and depth at levels 2 and 3.

'*Temporal and spatial scales*' which are dealt with in all modules. It is a specific aim of the programme for students to gain an understanding of the interactions between local issues and actions, and regional and global consequences.

SEEC credit level descriptors (2016)

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.

What methods have been used in the development of this programme to evaluate and improve the quality and standards of learning? This could include consideration of stakeholder feedback from, for example current students, graduates and employers.

To ensure the programme is fit for purpose and to gain an in-depth knowledge of the needs of employers, key personal from a range of environmental organisations (local, national and international) have been consulted. These discussions highlighted the key skills required to produce an employable graduate ready to work in this field. Common themes emerging from these consultations were the need for proficiency in Geographical Information Systems (GIS), data analysis, scientific writing, use of data bases, field-based skills and communication skills.

In addition, the Environmental Science (with Foundation Year) programme has been subject to regular (annual) and periodic (every six years) reviews which have considered the content, learning outcomes, and assessment strategy of the programme, to ensure that it remains current and fit for purpose. These reviews have been informed by external advice from industry (periodic reviews), as well as feedback from our placement providers and alumni. The BSc Environmental Science is accredited by the Institution of Environmental Sciences, and periodic re-accreditation also ensures the 'fit-for-purpose' nature of the programme.

FOR OFFICE USE ONLY

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