Programme Specification

Environmental Science {Foundation} [Frenchay]

Version: 2025-26, v2.0, Validated

Contents

Section 1: Key Programme Details

Part A: Programme Information

Programme title: Environmental Science {Foundation} [Frenchay]

Highest award: BSc (Hons) Environmental Science

Interim award: BSc Environmental Science

Interim award: DipHE Environmental Science

Interim award: CertHE Environmental Science

Awarding institution: UWE Bristol

Teaching institutions: UWE Bristol

Study abroad: No

Year abroad: No

Sandwich year: Yes

Credit recognition: No

School responsible for the programme: CHSS School of Applied Sciences, College of Health, Science & Society

Professional, statutory or regulatory bodies:

Institution of Environmental Sciences (IES)

Modes of delivery: Full-time, Sandwich

Entry requirements: For the current entry requirements see the UWE public website.

For implementation from: 01 September 2025

Programme code: F90F00

Section 2: Programme Overview, Aims and Learning Outcomes

Part A: Programme Overview, Aims and Learning Outcomes

Overview: The BSc (Hons) Environmental Science with Foundation year course at UWE Bristol gives you the opportunity to study the Earth's environment, from microbes through to landscapes and ecosystems. Following the foundation year, which provides you with a baseline in scientific principles, the programme has been designed to cover a broad science spectrum in level 4 to allow you to identify the areas within the environmental sciences that truly interest you. Levels 5 and 6 have module options to allow you to focus on the aspects of Environmental Science that you would like to specialise in.

The degree is designed to provide you 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 you with opportunities to explore the theory and practice related to the subject of environmental science, and then to develop both subject-specific and important generic graduate skills, particularly analytical and communication skills. The degree will give you an in-depth understanding of the natural world and the potential consequences to the natural environment of a wide range of human activities and you will develop a broad understanding of the social, political and economic contexts within which environmental decisions are made.

In keeping with the applied sciences, the course is heavily practically focused, with approximately 50% of your teaching delivered as practical or fieldwork classes across levels 4 and 5. In addition to subject specific modules, you will study 'Field Skills' at level 4, to equip you with the fundamental scientific skills to succeed as an environmental scientist. During level 5, these are developed in 'Environmental and Field Techniques' where you will develop your skills as an independent scientist and demonstrate your ability to undertake authentic scientific research from project planning through to presentation of your findings. These modules are designed to flow into your independent research project undertaken during level 6; an authentic capstone experience where you will demonstrate your skills as a mature, independent scientist.

BSc (Hons) Environmental Sciences is offered as an optional sandwich award, giving you the opportunity to take a placement year in industry if you choose to. Environmental Science students who choose this route spend up to 40 weeks undertaking a placement within a local, national or international industrial, academic or charitable organisation in a research and development environment. Whilst on placement, in addition to gaining key scientific and employability skills, you will complete a module, which contributes to your level 6 credit requirement.

Features of the programme: The Environmental Science programme has been developed in consultation with a range of stake holders 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 Geographical Information Systems (GIS), data and statistical analysis, environmental modelling, species identification, science communication, and optional skills in SCUBA and ecological surveys;
-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 level 5 and 6 optional modules which, along with the research project, allow students to tailor their degree to their specific areas of interest and chosen career paths or further study;
-Built-in enterprise skills and an understanding of the world of work. In addition, the BSc (Hons) Environmental Science degree is accredited by the Institution of Environmental Sciences (IES).

Educational Aims: The programme aims to support you to:

-Develop a strong scientific and practical foundation by gaining a comprehensive

understanding of key environmental science principles and building hands-on experience in field, laboratory, and digital skills.

-Foster critical thinking and problem-solving skills to create solutions to environmental challenges, apply evidence-based solutions, and integrate sustainability and climate resilience into decision-making.

-Enhance research and analytical skills from experimental design, conducting surveys and data analysis to critically evaluating scientific findings while maintaining ethical and professional standards.

-Advance communication and collaboration skills to effectively communicate scientific findings through various media to a range of audiences and collaborate in interdisciplinary teams.

-Promote innovation and technological competence by engaging with cutting-edge technologies and innovative approaches in environmental monitoring, modelling, and management.

-Support employability and lifelong learning through building transferable skills, gaining professional experience, and taking advantage of industry placement opportunities to prepare for a successful career in the environmental sector.

Programme Learning Outcomes:

On successful completion of this programme graduates will achieve the following learning outcomes.

Programme Learning Outcomes

PO1. Understand the essential concepts, principles, theories, and latest developments across the range of scientific fields that feed into environmental science and develop the ability to update your knowledge of environmental science through independent learning. Application of this knowledge through hands-on practical experience with the ability to translate environmental theory to applied solutions.

PO2. Demonstrate competence in a broad range of appropriate field, laboratory and digital skills relevant to environmental science including data collection, analysis and interpretation. Application of practical skillsets and results interpretation to test scientific research questions and hypotheses.

PO3. Evaluate key findings and use a range of oral, written and digital approaches to communicate results in context.

PO4. Apply evidence-based knowledge of subject-specific theories, paradigms and principles to develop testable, hypothesis-driven questions that enable understanding of both existing, and emerging, local to global challenges.

PO5. Conduct environmental research through obtaining, interpretating and critically analysing published scientific information. Critically evaluate high quality research and synthesise information in order to future research directions.

PO6. Reflect on ethical issues raised by environmental research to develop and demonstrate good practice and professional integrity across fieldwork and laboratory practice.

PO7. Identify key issues and challenges of environmental science and, both individually and as a team, use innovative technologies and interdisciplinary approaches to develop solutions.

PO8. Demonstrate the transferrable skills required for lifelong learning, personal development and a successful career in the environmental sector.

Assessment strategy: Effective learning is achieved by employing a range of assessment approaches, embedded within the compulsory modules and reinforced within the optional modules that recognise differential approaches to learning. These include opportunities for innovation, academic discussions, work placements and field work. The development of a flexible, inclusive and accessible curriculum ensures a high quality learning experience for all students. The programme incorporates a range of assessment styles from continuous low stakes assessments, appropriate for the study of Environmental and Field Techniques during Level 5 through to log-books written in the field as part of the Expedition to a Biodiversity Hotspot.

Practical portfolios and write-ups are used to assess progress of PO1 and PO2; the collection of data, recording of findings and completion of laboratory work and associated reports are fundamental scientific skills. Included in this, safe-practice

and good conduct are a fundamental part of developing an understanding of professional integrity and research ethics (PO6).
Compulsory modules provide a structured approach to developing you as an independent scientist capable of planning, organising and executing independent research as well as interpreting and communicating your findings effectively (PO3). You will be encouraged to communicate science, through a variety of media including written work, visual communication through poster design and oral communication through presentation and discussions. This is scaffolded at the programme level within the compulsory modules and supported by the optional choices.
Where written examinations are used, the emphasis is placed on you updating your knowledge (PO1) and accessing, reviewing and interpreting information (PO5) rather than recall and to demonstrate your ability to evaluate information and communicate this in an organized way (PO4). The capstone experience to Level 6 is the independent research project. Whether experimental or dissertation based, the assessments have been designed to allow you to demonstrate your developing ability to plan and undertake work as an independent scientist (PO7), to use your skills to produce data (PO2; whether primary or metadata) and to analyse, interpret and communicate this using media (research paper and poster communication), which are authentic and relevant to a practising scientist.
Throughout the programme you will develop a range of transferrable skills (PO8) supporting your employability post-graduation to enable you to follow your chosen career path or further study. These skills will be captured during assessment feedback and as part of the skills portfolios in Field Skills (Level 4) and Environment and Field Techniques (Level 5).

Student support: Students are supported through their programme by their personal tutor; the tutor supports scaffolded assessment in Level 4 and graduate attributes during Level 5. This is reinforced by the addition of a project supervisor during Level 6.

Part B: Programme Structure

Year 1

Full time and Sandwich students must take 120 credits from the modules in Year 1.

Year 1 Compulsory Modules (Full time and Sandwich)

Ful time and Sandwich students must take 120 credits from the modules in Compulsory Modules (Full time and Sandwich).

Module Code	Module Title	Credit
USSKCJ-30-0	Biology in Practice 2025-26	30
USSKCK-30-0	Chemistry in Practice 2025-26	30
USSKCM-30-0	Investigating and Communicating Science 2025-26	30
USSKCL-30-0	Skills for Science 2025-26	30

Year 2

Full time and Sandwich students must take 120 credits from the modules in Year 2.

Year 2 Compulsory Modules (Full time and Sandwich)

Full time and Sandwich students must take 120 credits from the modules in Compulsory Modules (Full time and Sandwich).

Module Code	Module Title	Credit
USSKAB-30-1	Environment and Society 2026-27	30
USSK5B-30-1	Field Skills 2026-27	30
USSK5C-30-1	Life on Earth 2026-27	30
USSJFB-30-1	The Earth 2026-27	30

Year 3

Full time and Sandwich students must take 120 credits from the modules in Year 3.

Year 3 Compulsory Modules (Full time and Sandwich)
Full time and Sandwich students must take 60 credits from the modules in Compulsory Modules (Full time and Sandwich).

Module Code	Module Title	Credit
USSKK6-15-2	Environmental Resilience 2027-28	15
USSKK5-15-2	Ecology 2027-28	15
USSK5G-30-2	Environmental and Field Techniques 2027-28	30

Year 3 Optional Modules (Full time and Sandwich)
Full time and Sandwich students must take 60 credits from the modules in Optional Modules. (Full time and Sandwich)

Module Code	Module Title	Credit
USSKN4-15-2	Atmosphere and Climate 2027-28	15
USSKN5-15-2	Earth Science 2027-28	15
USSKNA-15-2	Hydrology to Oceanography 2027-28	15
USSJQD-15-2	Plant Growth and Survival 2027-28	15
USSKN7-15-2	The Microbial World 2027-28	15

Year 4
Full time students must take 120 credits from the modules in Year 4.
Sandwich students must take 15 credits from the modules in Year 4.

Year 4 Compulsory Modules (Full time)
Full time students must take 60 credits from the modules in Compulsory Modules (Full time).

Module Code	Module Title	Credit
USSJQM-15-3	Energy, Carbon and Climate 2028-29	15
USSKBC-30-3	Research Dissertation Project 2028-29	30

USSJQL-15-3	Sustainable Futures 2028-29	15

Year 4 Compulsory Modules (Sandwich)
Sandwich students elect to spend a year out working for an organisation, in an appropriate placement to gain relevant work experience. They must take 15 credits from the modules in Compulsory Modules (Sandwich).

Module Code	Module Title	Credit
USSK57-15-3	Professional Practice in Applied Sciences 2028-29	15

Year 4 Optional Modules (Full time)
Full time students must select 60 credits from the modules in Optional Modules (Full time).

Module Code	Module Title	Credit
USSK57-15-3	Professional Practice in Applied Sciences 2028-29	15
USSJKU-15-3	Environmental and Ecological Consultancy 2028-29	15
USSKCD-15-3	Environmental Forensics 2028-29	15
USSKN9-15-3	Environmental Microbiology 2028-29	15
USSKN6-15-3	Global Forest Systems 2028-29	15
USSK55-15-3	Marine Ecosystems 2028-29	15
USSK58-15-3	Remote Sensing and Geographical Information Systems (GIS) 2028-29	15
USSKCE-15-3	Science Communication 2028-29	15
USSKNB-15-3	Sustainable Food Production 2028-29	15
USSK59-15-3	Expedition to a Biodiversity Hotspot 2028-29	15

Year 5
Sandwich students must take 105 credits from the modules in Year 5.

Year 5 Compulsory Modules (Sandwich)
Sandwich students must take 60 credits from the modules in Compulsory Modules (Sandwich).

Module Code	Module Title	Credit
USSJQM-15-3	Energy, Carbon and Climate 2029-30	15
USSKBC-30-3	Research Dissertation Project 2029-30	30
USSJQL-15-3	Sustainable Futures 2029-30	15

Year 5 Optional Modules (Sandwich)
Sandwich students must take 45 credits from the modules in Optional Modules (Sandwich).

Module Code	Module Title	Credit
USSK57-15-3	Professional Practice in Applied Sciences 2029-30	15
USSJKU-15-3	Environmental and Ecological Consultancy 2029-30	15
USSKCD-15-3	Environmental Forensics 2029-30	15
USSKN9-15-3	Environmental Microbiology 2029-30	15
USSKN6-15-3	Global Forest Systems 2029-30	15
USSK55-15-3	Marine Ecosystems 2029-30	15
USSK58-15-3	Remote Sensing and Geographical Information Systems (GIS) 2029-30	15
USSKCE-15-3	Science Communication 2029-30	15
USSKNB-15-3	Sustainable Food Production 2029-30	15

USSK59-15-3	Expedition to a Biodiversity Hotspot 2029-30	15

Part C: Higher Education Achievement Record (HEAR) Synopsis

This 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 key issues of sustainable development 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 provides opportunities for students to develop important generic graduate skills, particularly analytical and communication skills.

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 4 and beyond.

Part D: External Reference Points and Benchmarks

The programme has been designed within the framework of the QAA Subject Benchmark Statements: Earth Sciences, Environmental Sciences and Environmental Studies - ES3 (2022). This has not constrained the development of the programme, but has provided relevant context to re-examine the compulsory and optional modules. The Environmental Science BSc is accredited by the Institute of Environmental Sciences.

Part E: Regulations

Approved to University Regulations and Procedures.

It is the Award Board’s responsibility to determine whether the student’s attainment at FHEQ Level 3 is sufficient to progress to Level 4.