

Course Information Document: Undergraduate

For Academic Year 2025/26

1. Course Summary

Names of programme and award title(s)	BSc (Hons) Environmental Science (Practitioner)
Award type	Single Honours
Mode of study	Part-time
Framework of Higher Education Qualification (FHEQ) level of final award	Level 6
Normal length of the programme	5 years
Maximum period of registration	The normal length as specified above plus 3 years
Location of study	Keele Campus Online
Accreditation (if applicable)	The Institution of Environmental Sciences
Regulator	Institute for Apprenticeships and Technical Education (IfATE) and Office for Students (OfS)
Tuition Fees	Fee for 2025/26: The employer pays all course fees and no fees are charged to apprentice students. Programme price is set at the maximum funding band for this apprenticeship standard set by the Institute for Apprenticeships and Technical Education (IfATE) which is a government non-departmental body sponsored by the Department for Education (DFE). We reserve the right to increase price in future. Fees will be paid by the employer on behalf of the apprentice using Levy or co-funding arrangements. For further information please visit: https://www.gov.uk/government/publications/apprenticeship-funding-from-may-2017 A full breakdown of costs is set out in the training plan.

How this information might change: Please read the important information at <http://www.keele.ac.uk/student-agreement/>. This explains how and why we may need to make changes to the information provided in this document and to help you understand how we will communicate with you if this happens.

2. Overview of the Programme

Degree Apprenticeships combine higher education study and work-based learning to enable apprentices to

achieve a higher-level award whilst in work. The provision of an academic award is integrated with experience, practice and learning in the workplace where the apprentice has paid employment status. Higher and Degree Apprenticeships are co-designed by training providers and employers to ensure that apprentices are equipped with the skills employers need and to develop their own careers. This BSc Environmental Science (Degree Apprenticeship) honours degree is designed to deliver on all aspects of the Environmental Practitioner (degree) apprenticeship standard.

The BSc Environmental Science (Degree Apprenticeship) honours degree provides you with a firm grounding in each of the key natural science disciplines (Biology, Ecology, Chemistry, Geology) that underpin this interdisciplinary and highly topical subject area. It aims to provide students with the scientific skills and expertise required to tackle many of the world's major environmental and societal problems such as climate change, food security, water resources, pollution and conservation. The course at Keele draws on the expertise of scientists within the disciplines of life sciences, chemical sciences and geosciences to emphasise the role and importance of scientific understanding and practical skills in the analysis and management of environmental problems. The first year gives students a sound basis and understanding of the core sciences underpinning the field of environmental science (biological sciences, chemical sciences, geosciences), then in later years students can choose to either specialize or to maintain a broad environmental science portfolio while maintaining a strong basis in the skills and techniques of the environmental scientist. This degree structure is designed to suit a part-time study apprenticeship model, providing excellent learning and skills development opportunities throughout to complement and enhance your on-the-job training. Environmental Science is a fascinating and broad subject that is increasingly important considering the environmental problems and issues society faces today, and it can lead to a diverse range of employment roles and career opportunities.

The final module of the degree contains the End Point Assessment (EPA), part of which is independently assessed by an external body. The purpose of the EPA is to independently confirm that the apprentice meets the competency requirements of the apprenticeship standard.

3. Aims of the programme

The broad aims of the programme are to enable you to:

- develop knowledge in the core natural science disciplines (Biology, Ecology, Chemistry, Geology) that underpin the field of environmental science, irrespective of students' scientific background prior to studying at Keele University
- gain a wide-range of field, laboratory and computer skills, including the ability to carry out independent research, relevant to the investigation and analysis of environmental issues
- be able to integrate scientific knowledge and practical skills to address environmental management issues and tackle environmental problems such as those linked to climate change, water pollution, soil degradation, air quality, habitat loss, species decline and sustainable development
- develop, to a high professional standard, skills in report writing, information technology usage, numeracy, presentation, team work, independent work, problem solving, data management and statistics in an environmental science context.

4. What you will learn

The intended learning outcomes of the programme (what students should know, understand and be able to do at the end of the programme), have been designed to incorporate the Knowledge, Skills and Behaviours (KSBs) required by the apprenticeship standard (<https://www.instituteforapprenticeships.org/apprenticeship-standards/environmental-practitioner-degree-v1-0>). The intended learning outcomes are described under three headings below:

- Subject knowledge and understanding
- Subject specific skills
- Key or transferable skills (including wider employability skills)

Subject knowledge and understanding

Through this highly inter-disciplinary degree students will develop knowledge and understanding of:

- fundamental principles of biology, chemistry, ecology and geology that underpin environmental science and how those principles are applied in the investigation, analysis and management of environmental problems and issues.
- theories and concepts in conservation related to habitats, species and water and land management.
- the impact of human activities, from local to global scale, on the environment.
- environmental impacts assessment and impact mitigation.
- pollution investigation approaches.
- the process and application of a range of analytical techniques relevant to the analysis of the composition of different environmental media (including soil, water, air, and vegetation) and assessment of

- environmental quality.
- applications of computer based techniques to environmental science issues, such as geographic information systems (GIS) and environmental modelling.
- the environmental responsibilities of organisations and governments.

Subject specific skills

Successful students will be able to:

- use laboratory equipment safely and accurately to carry out chemical analysis of different environmental media (water, soil, sediment, vegetation) and interpret and report findings from the data generated.
- use field equipment and techniques in safe and robust investigations of environmental quality and status.
- plan and conduct environmental science investigations, including environmental impact assessments, pollution evaluations, soil and water quality assessments, and research projects.
- recognise and identify aquatic invertebrates and interpret their presence/absence as indicators of water quality.
- perform calculations related to determining concentrations of substances in environmental media.
- apply relevant quantitative techniques to the analysis of environmental problems.
- analyse data using a range of statistical techniques.
- evaluate possible options for alternative solutions to environmental problems.
- use computer based techniques for measurement, modelling and mapping applications such as GIS.
- write reports in a range of styles and formats used in environmental science and wider fields.
- communicate environmental science information to a wider audience through a range of other formats e.g. blogs, web articles, video clips, posters, and oral presentations.

Key or transferable skills (including employability skills)

Successful students will be able to:

- demonstrate numeracy, IT, visual, oral and written communication skills.
- collect and integrate several lines of evidence to formulate and test hypotheses and make critical judgements.
- use information handling and retrieval systems and procedures to compile, critically assess and utilise information from literature and other sources.
- reference work in an appropriate manner.
- apply problem solving skills to address familiar and unfamiliar problems.
- work with numerical data using appropriate qualitative and quantitative techniques, as well as computer software packages.
- develop an adaptable and flexible approach to study and work.
- identify and work towards targets for personal, academic and career development.
- develop time management, prioritisation and scheduling skills.
- communicate effectively to a variety of audiences in written, verbal and graphical forms.
- use the internet as a means of communication and a source of information.
- conduct field and laboratory studies.
- work effectively both as an individual and as part of a group or team, recognising and respecting the viewpoints of others.

The Keele Graduate Attributes

The Keele Graduate Attributes are the qualities (skills, values and mindsets) which you will have the opportunity to develop during your time at Keele through both the formal curriculum and also through co- and extra-curricular activities (e.g., work experience, and engagement with the wider University community such as acting as ambassadors, volunteering, peer mentoring, student representation, membership and leadership of clubs and societies). Our Graduate Attributes consist of four themes: **academic expertise, professional skills, personal effectiveness, and social and ethical responsibility**. You will have opportunities to engage actively with the range of attributes throughout your time at Keele: through your academic studies, through self-assessing your own strengths, weaknesses, and development needs, and by setting personal development goals. You will have opportunities to discuss your progress in developing graduate attributes with, for example, Academic Mentors, to prepare for your future career and lives beyond Keele.

5. How is the programme taught?

This apprenticeship degree combines in-person (i.e. live and on-site) block sessions for field, laboratory and computer training activities as well as distance learning elements that comprise periodic live on-line workshops (i.e. via MS Teams) and asynchronous independent learning using pre-recorded content and set reading. Apprenticeship students will be set a schedule for the asynchronous learning components of each module, as well as a schedule for the on-site block sessions and live on-line workshops.

The specific learning and teaching methods used on the programme vary by module and are designed with consideration of different learning styles. Apprenticeship degree students can expect the learning and teaching methods to include the following:

- Lectures (in-person, on-line and pre-recorded sessions)
- Tutorials, seminars and workshops
- Problem-solving classes
- Practical and laboratory classes
- Field courses
- One-on-one sessions
- Directed reading
- Group presentations and linked discussion
- Use of e-learning/the Keele Learning Environment (KLE)

Assessments are designed to enhance the learning experience and provide opportunities to demonstrate skills and knowledge gained, hence a high proportion of the assessments are employment focused, job authentic tasks that contribute to the learning process.

Apart from these formal activities, students are also provided with regular opportunities to talk through particular areas of difficulty, and any special learning needs they may have, with their Academic Mentors (or equivalent) or module lecturers on a one-to-one basis.

These learning and teaching methods enable students to achieve the learning outcomes of the programme in a variety of ways.

6. Teaching Staff

Environmental science, being a very interdisciplinary subject, draws on a broad range of teaching staff with complimentary expertise spanning ecology, environmental chemistry, geology, geography, hydrology, soil science, sustainability and other areas. Our staff are recognised experts in their fields and have a strong commitment to teaching and the student learning experience, as evidenced by the high proportion with additional teaching qualifications and who are Fellows, Senior Fellows and Principals Fellows of the UK Higher Education Academy (HEA).

The University will attempt to minimise changes to our core teaching teams, however, delivery of the programme depends on having a sufficient number of staff with the relevant expertise to ensure that the programme is taught to the appropriate academic standard.

Staff turnover, for example where key members of staff leave, fall ill or go on research leave, may result in changes to the programme's content. The University will endeavour to ensure that any impact on students is limited if such changes occur.

7. What is the structure of the Programme?

The BSc (Hons) Environmental Science (Practitioner) degree apprenticeship programme is equivalent in scale and learning content to a regular three year BSc honours degree in Environmental Science but has been spread over a longer period to incorporate the additional on-the-job training apprentices receive from their employer. The learning content delivery structure also differs, with the degree apprenticeship programme having been designed around typically one block period of on-site learning activities per semester followed by distance learning components that include independent asynchronous study (e.g. pre-record lecture materials and set reading) and live remote workshops (e.g. via Teams).

Each academic year runs from September to June and is divided into two semesters. The degree is organised into modules, with each being a self-contained unit of study. Most modules are set within a particular semester, but some run across both semesters of the year. An outline of the structure of the programme is provided in the tables below.

There are two types of module delivered as part of your programme. They are:

- Compulsory modules - a module that you are required to study on this course;
- Optional modules - these allow you some limited choice of what to study from a list of modules

A summary of the credit requirements per year is set out below.

For further information on the content of modules currently offered, including the list of elective modules, please visit: <https://www.keele.ac.uk/recordsandexams/modulecatalogue/>

Year	Compulsory	Optional	
		Min	Max
Level 4	120	0	0
Level 5	120	0	0
Level 6	60	30	30

Module Lists

Level 4

Compulsory modules	Module Code	Credits	Period
Academic and Field Skills + Business Environmental Practises	ESC-10080	30	Semester 1-2
Studying the Environment and Climate Change	ESC-10082	30	Semester 1-2
Introductory Geoscience	ESC-10084	15	Semester 1-2
Introductory Environmental Chemistry	ESC-10086	15	Semester 1-2
Ecology and habitats	ESC-10088	30	Semester 1-2

Level 5

Compulsory modules	Module Code	Credits	Period
Human Impacts on the Environment	ESC-20114	30	Semester 1-2
Environmental Impact Assessment	ESC-20116	30	Semester 1-2
Geoscience and Society	ESC-20120	15	Semester 1-2
Extinction and Survival	ESC-20122	15	Semester 1-2
Environmental Analytical Methods	ESC-20112	30	Semester 2

Level 6

Compulsory modules	Module Code	Credits	Period
Endpoint Assessment	ESC-30112	30	Semester 1-2
Project proposal and planning	ESC-30114	30	Semester 1-2

Optional modules	Module Code	Credits	Period
Soil and Water Ecotoxicology and Risk Assessment	ESC-30120	30	Semester 1-2
GIS and Remote Sensing	ESC-30136	30	Semester 1-2
Hydrological and Engineering Geology A	ESC-30134	30	Semester 2
Natural Hazards A	ESC-30160	30	Semester 2-3

ESC-30112 Endpoint assessment commences after progression through the gateway.

8. Final and intermediate awards

The final award of the degree is: **BSc (Hons) Environmental Science (Practitioner)**

To achieve this final award, you will need to pass at least 120 credits at each of levels 4, 5 and 6.

The End Point Assessment must be passed in order to gain the final award title. Where intermediate awards are made, this would result in non-completion of the apprenticeship.

If you only partially complete the degree, intermediate awards are assigned based on the number of credits obtained as follows:

Diploma in Higher Education - requires at least 120 credits at level 4 or higher and at least 120 credits at level 5 or higher.

Certificate in Higher Education - requires at least 120 credits at level 4 or higher.

In undertaking apprenticeship training, the employer and apprentice are committing to undertaking the whole apprenticeship, including all aspects of the degree and independently assessed components of the End Point Assessment.

9. How is the Programme Assessed?

The wide variety of assessment methods used on this programme at Keele reflects the broad range of knowledge and skills that are developed as you progress through the degree programme. Teaching staff pay particular attention to specifying clear assessment criteria and providing timely, regular and constructive feedback that helps to clarify things you did not understand and helps you to improve your performance. The following list is representative of the variety of assessment methods used on your programme:

- **Technical reports** require you to describe the process and progress of a scientific investigation, including engagement with and analysis of scientific data, and present this in a clear and concise format. Some technical reports may require you to make recommendations.
- **Essays** allow you to demonstrate your ability to articulate ideas clearly using argument and reasoning skills and with close reference to the contexts and critical concepts covered in the modules. Essays also develop and demonstrate research and presentation skills (including appropriate scholarly referencing).
- **Laboratory reports** - structured proformas and full lab reports are formal summaries of work carried out in the laboratory and test your understanding of the practical aspects of the programme and develop the skills necessary to enable students to present and analyse their results.
- **Literature Reviews** are summaries and evaluations of other scholars' work and completing these test your ability to identify and summarise the key points known about a subject. They also involves identifying current gaps in collective knowledge.
- **Field Notebooks** allow you to document and record your field-based observations, including the use of field sketching, to enable you to better understand the unfamiliar field environment in which you are working.
- **Field Course Portfolios** document a range of activities and exercises undertaken in the field, either individually or in small groups.
- **Class tests and examinations** in various written formats test students' knowledge and understanding of the subject. They may consist of essay, short answer and/or multiple choice questions.
- **Oral presentations** assess students' subject knowledge and understanding and test their ability to work effectively individually or as members of a team in communicating what they know orally and visually. They are also an opportunity to reflect on these processes as part of their own personal development.
- **Poster presentations** enable students to develop their communication skills and summarise the findings of their research in a clear, concise, visual and professional format. Posters may be presented in the form

of a 'conference-style' presentation session whereby students give an oral summary of their work. Posters may be completed in small groups or as individuals.

- **Blogs, vlogs and web articles** test your ability to convey technical or other information to a lay audience in an accessible and interesting format.
- **Work-based project dissertation** enables you to explore in depth an area of particular interest through a substantial piece of focused research which is written up in a dissertation thesis. It tests your ability to formulate and answer research questions of direct relevance to your employer and job role.

Marks are awarded for summative assessments designed to assess your achievement of learning outcomes. There will also be opportunities for formative assessment to enable you to monitor your own progress and to assist staff in identifying and addressing any specific learning needs. Feedback, including guidance on how you can improve the quality of your work, is also provided on all summative assessments typically within three working weeks of submission.

End-Point Assessment

As well as containing in-programme training and assessment, the apprenticeship has an end-point assessment (EPA). All apprentices must undertake this independent assessment, which is a synoptic assessment of the knowledge, skills and behaviours that have been learnt throughout the apprenticeship. The purpose of the assessment is to make sure the apprentice meets the standard set by employers and are fully competent in the occupation. It is taken by apprentices at the very end of the on-programme phase of training when their employer (and in some cases their training provider) is satisfied that they have met the "gateway" criteria. The University will confirm at an Award Board which students have met the gateway criteria.

In addition to being assessed by University staff, the work-based project, as part of the End Point Assessment (EPA) is also independently assessed by an external party. That includes assessment of the report and of a presentation the apprentice gives on the report. A portfolio of evidence (comprising documents that show how the apprentice has demonstrated certain competencies during the course of the apprenticeship) is also assessed by the independent assessor as part of the EPA.

More information on the Environmental Practitioner Degree standard, and on the EPA, is given at:

<https://www.instituteforapprenticeships.org/apprenticeship-standards/environmental-practitioner-degree-v1-1>

10. Contact Time and Expected Workload

This contact time measure is intended to provide you with an indication of the type of activity you are likely to undertake during this programme. The data is compiled based on module choices and learning patterns of students on similar programmes in previous years. Every effort is made to ensure this data is a realistic representation of what you are likely to experience, but changes to programmes, teaching methods and assessment methods mean this data is representative and not specific.

Undergraduate courses at Keele contain an element of module choice; therefore, individual students will experience a different mix of contact time and assessment types dependent upon their own individual choice of modules. The figures below are an example of activities that a student may expect on your chosen course by year stage of study. Contact time includes scheduled activities such as: lecture, seminar, tutorial, project supervision, demonstration, practical classes and labs, supervised time in labs/workshop, fieldwork and external visits. The figures are based on 1,200 hours of student effort each year for full-time students.

Activity

	Scheduled learning and teaching activities	Guided independent Study	Placements
Year 1 (Level 4)	24%	76%	0%
Year 2 (Level 5)	14%	86%	0%
Year 3 (Level 6)	10%	90%	0%

As part of their apprenticeship agreement, employers must provide apprentices with 20% of their time "off the job" to support their apprenticeship.

11. Accreditation

The intention is for this new degree to be accredited by the Institution of Environmental Sciences (IES), which is the accrediting body for our existing Environmental Science degree. The IES has been consulted and we have engaged in the accreditation application process. Accreditation is anticipated to be in place by the first cohort intake at September 2022. Whilst this new programme does not yet have accreditation it does fully comply with Environmental Practitioner (Degree) apprenticeship standard ST0778 set down by the UK Institute for Apprenticeships.

12. University Regulations

The University Regulations form the framework for learning, teaching and assessment and other aspects of the student experience. Further information about the University Regulations can be found at:

<http://www.keele.ac.uk/student-agreement/>

If this programme has any exemptions, variations or additions to the University Regulations these will be detailed in an Annex at the end of this document titled 'Programme-specific regulations'.

13. Additional Costs

Under the apprenticeship scheme the students (apprentices) do not pay tuition fees. However, students may incur costs e.g. library fines, print costs and costs associated with graduation. Also, all students will do fieldwork as part of their degree programme. Students are expected to have appropriate clothing and footwear for field activities in a variety of weather conditions. Independent project work carried out by students for their final year Dissertation may, depending on student choice, be associated with additional costs.

Version History

This document

Date Approved: 21 March 2025

Previous documents

Version No	Year	Owner	Date Approved	Summary of and rationale for changes
1	2024/25	IAN OLIVER	04 June 2024	
1	2023/24	IAN OLIVER	04 August 2023	
2	2022/23	IAN OLIVER		
1	2022/23	IAN OLIVER	21 March 2022	