

Programme Specification: Undergraduate

For students starting in Academic Year 2022/23

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)	N/A
Regulator	Institute for Apprenticeships and Technical Education (IfATE) and Office for Students (OfS)
Tuition Fees	<p>Fee for 2022/23: The employer pays all course fees and no fees are charged to apprentice students.</p> <p>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</p> <p>A full breakdown of costs is set out in the commitment statement.</p>

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.

Separate to the degree, and after it is completed, the apprenticeship scheme requires apprentices to undertake an End Point Assessment (EPA). The purpose of the EPA is to independently confirm that the apprentice meets the competency requirements of the apprenticeship standard. The degree prepares students for the EPA by providing each with the skills and experiences that will enable them to complete the EPA. More information on the EPA is provided in the section on assessment.

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.

Keele Graduate attributes

Engagement with this programme will enable you to develop your intellectual, personal and professional capabilities. At Keele, we call these our ten Graduate Attributes and they include independent thinking, synthesizing information, creative problem solving, communicating clearly, and appreciating the social, environmental and global implications of your studies and activities. Our educational programme and learning environment is designed to help you to become a well-rounded graduate who is capable of making a positive and valued contribution in a complex and rapidly changing world, whichever spheres of life you engage in after your studies are completed.

Further information about the Keele Graduate Attributes can be found here: <http://www.keele.ac.uk/journey/>

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 Personal Tutors (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		Electives	
		Min	Max	Min	Max
Level 4	120	0	0	0	0
Level 5	120	0	0	0	0
Level 6	90	30	30	0	0

Module Lists

Level 4

Compulsory modules	Module Code	Credits	Period
Introductory Geoscience	ESC-10084	15	Semester 1
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
Ecology and habitats	ESC-10088	30	Semester 1-2
Introductory Environmental Chemistry	ESC-10086	15	Semester 2

Level 5

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

Level 6

Compulsory modules	Module Code	Credits	Period
Ecotoxicology and Risk Assessment A	ESC-30084	30	Semester 1-2
Dissertation	ESC-30090	60	Semester 1-2

Optional modules	Module Code	Credits	Period
Natural Hazards	ESC-30086	15	Semester 1
Hydrological and Engineering Geology	ESC-30098	15	Semester 1
Clean and Sustainable Technology	ESC-30092	15	Semester 1-2
Soils	ESC-30088	15	Semester 2
Coastal Systems	ESC-30096	15	Semester 2

Learning Outcomes

The table below sets out what students learn in the programme and the modules in which that learning takes place. Details of how learning outcomes are assessed through these modules can be found in module specifications.

Subject Knowledge and Understanding	
Learning Outcome	Module in which this is delivered
application of geological, biological and chemical sciences to environmental science issues	Ecology and habitats - ESC-10088 Introductory Environmental Chemistry - ESC-10086 Introductory Geoscience - ESC-10084 Studying the Environment and Climate Change - ESC-10082 Environmental Impact Assessment - ESC-20116
fundamental principles of biology, chemistry, ecology and geology as relevant to the Environmental Sciences	Introductory Geoscience - ESC-10084 Ecology and habitats - ESC-10088 Introductory Environmental Chemistry - ESC-10086 Studying the Environment and Climate Change - ESC-10082
causes and consequences of, and ways to assess and mitigate, human impacts on the environment	Environmental Impact Assessment - ESC-20116 Ecotoxicology and Risk Assessment A - ESC-30084 Human Impacts on the Environment - ESC-20114
regulatory frameworks in relation to environmental issues	Environmental Impact Assessment - ESC-20116 Ecotoxicology and Risk Assessment A - ESC-30084
scientific principles underpinning major environmental challenges of today (climate change, pollution, extinction rates, water and soil quality degradation, resource depletion, transition to low C technologies, etc)	Soils - ESC-30088 Studying the Environment and Climate Change - ESC-10082 Introductory Environmental Chemistry - ESC-10086 Ecology and habitats - ESC-10088 Human Impacts on the Environment - ESC-20114 Clean and Sustainable Technology - ESC-30092 Extinction and Survival - ESC-20122

Subject Specific Skills	
Learning Outcome	Module in which this is delivered
use of a wide range of laboratory equipment and techniques	Environmental Analytical Methods - ESC-20112 Introductory Environmental Chemistry - ESC-10086 Ecotoxicology and Risk Assessment A - ESC-30084 Environmental Impact Assessment - ESC-20116 Introductory Geoscience - ESC-10084
applications of various field techniques and field equipment	Soils - ESC-30088 Academic and Field Skills + Business Environmental Practises - ESC-10080 Studying the Environment and Climate Change - ESC-10082 Environmental Impact Assessment - ESC-20116 Ecology and habitats - ESC-10088 Environmental Analytical Methods - ESC-20112
computer applications for mapping and measurement (e.g. GIS)	Academic and Field Skills + Business Environmental Practises - ESC-10080

Key or Transferable Skills (graduate attributes)	
Learning Outcome	Module in which this is delivered
research project design and planning	Dissertation - ESC-30090
data handling and statistical evaluation	Environmental Analytical Methods - ESC-20112 Academic and Field Skills + Business Environmental Practises - ESC-10080 Ecotoxicology and Risk Assessment A - ESC-30084
ability to write documents of various forms for different audiences (technical reports, journal articles, blogs, essays, reflective pieces, web articles)	Ecotoxicology and Risk Assessment A - ESC-30084 Soils - ESC-30088 Environmental Analytical Methods - ESC-20112 Dissertation - ESC-30090 Academic and Field Skills + Business Environmental Practises - ESC-10080 Natural Hazards - ESC-30086 Human Impacts on the Environment - ESC-20114 Introductory Environmental Chemistry - ESC-10086 Environmental Impact Assessment - ESC-20116 Studying the Environment and Climate Change - ESC-10082
presentation of information via visual applications (posters, pictorial displays, slides) and verbal communication	Academic and Field Skills + Business Environmental Practises - ESC-10080 Clean and Sustainable Technology - ESC-30092 Geoscience and Society - ESC-20120 Human Impacts on the Environment - ESC-20114 Coastal Systems - ESC-30096

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.

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, comprising the degree and the independent 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.
- **Dissertations** enable 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.

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.

After your degree, the End Point Assessment (EPA) is a requirement of completion for the apprenticeship and is an independent assessment to confirm that the apprentice meets the competency requirements of the apprenticeship standard. In brief, the EPA requires apprentices to 1) conduct a work-based project and prepare a report and accompanying presentation, and 2) provide a portfolio of work that showcases examples where the apprentice has demonstrated proficiency on listed themes, and complete an interview that discusses the portfolio.

The degree provides students with skills and experiences that will enable them to complete that EPA. For example, the dissertation module will equip apprenticeship students with the project planning, conducting and reporting skills required to successfully undertake the work-based project. Presentation skills are developed during the degree, hence students will be well positioned to give the presentation component of

the EPA. Also, assessment pieces throughout the degree can be used for materials in the portfolio. Meetings between the apprentice, academic personal tutor / mentor and employer representative at regular periods throughout the degree provide opportunities to discuss how the assessment pieces completed to that date align with the EPA portfolio requirements.

The End Point Assessment (EPA) is conducted by an independent End Point Assessment Organisation (EPAO). It is anticipated that the EPAO will be introduced to apprentices at an early stage in the degree to enable familiarisation and discussion of the EPA components.

More information on what the EPA involves is given at:

https://www.instituteforapprenticeships.org/media/3202/st0778_environmental-practitioner_l6_apfor-publication_130619_qm.pdf.

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. What are the typical admission requirements for the Programme?

Persons employed as environmental practitioner (or equivalent) apprentices can enrol on this degree.

Under UK Government rules, apprentices must be employed for a minimum of 30 hours per week and must have the right to live and work in the UK (applies only in England). An apprentice cannot be self-employed. The employer must enter into an Apprenticeship Agreement with the apprenticeship student. All candidates must be employed in a role related to the subject matter of the apprenticeship and be sponsored by their employer. Applications can only be made through the sponsoring employer. The University will consider all such applications and will have the final decision whether to accept the candidate for entry to the programme.

The recommended minimum entry requirements for Level 4 entry to the programme are:

- A levels of BBC; BTEC of DMM; International Baccalaureate of 29
- English and Maths at Level 2.

We normally require applicants to evidence the above qualifications before starting the apprenticeship.

Applications are welcomed from those with qualifications equivalent to the above. Relevant or prior experience will be taken into account when considering a candidate's suitability for the programme.

At application applicants are required to undertake a 'Skills Scan' where they are asked to self-assess against the knowledge, skills and behaviour of the apprenticeships standard. Applicants are also asked if they want to make an application for Recognition of Prior Learning (RPL) through the University procedure. There is a requirement for new knowledge and skills to be developed through apprenticeships, with a minimum duration of one year. Recognition of Prior Learning is considered on a case-by-case basis. The University's guidance can be found here: www.keele.ac.uk/qa/accreditationofpriorlearning

14. How are students supported on the programme?

At your workplace, you will be supported by your employer. Exact arrangements and terminology are the responsibility of the employer but, typically, you will have a named contact person who manages the relationship between the programme and the employer. The University and the employer are bound by contract to work together to support you as an apprentice. This will include tripartite review meetings between the University, the apprentice, and the employer.

If your employment circumstances change whilst you are on the programme, support can be accessed from the University's Careers and Employability Service.

15. Learning Resources

Students benefit from many learning resources on this degree. Students will make extensive use of laboratory equipment in our Central Sciences Laboratory (CSL) and in the laboratories of the William Smith Building, with excellent training opportunities on a range of different techniques and equipment. Field techniques, and the use of various pieces of field equipment, are learned through fieldwork activities on our campus 'living laboratory' and the surrounds. Training on computer skills, including highly transferable skills such as with data handling and management, statistical assessment, presentation, and GIS and mapping, is provided in our computer suite facilitates across the CSL and the William Smith building. The University also provides a well equipped library and digital access to a vast range of journals, books and other publications.

16. 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.

17. Quality management and enhancement

The quality and standards of learning in this programme are subject to a continuous process of monitoring, review and enhancement.

- The School Education Committee is responsible for reviewing and monitoring quality management and enhancement procedures and activities across the School.
- Individual modules and the programme as a whole are reviewed and enhanced every year in the annual programme review which takes place at the end of the academic year.
- The programmes are run in accordance with the University's Quality Assurance procedures and are subject to periodic reviews under the Internal Quality Audit (IQA) process.

Student evaluation of, and feedback on, the quality of learning on every module takes place every year using a variety of different methods:

- The results of student evaluations of all modules are reported to module leaders and reviewed by the Programme Committee as part of annual programme review.
- Findings related to the programme from the annual National Student Survey (NSS), and from regular surveys of the student experience conducted by the University, are subjected to careful analysis and a planned response at programme and School level.
- Feedback received from representatives of students in all three years of the programme is considered and acted on at regular meetings of the Student Staff Voice Committee.

The University appoints senior members of academic staff from other universities to act as external examiners on all programmes. They are responsible for:

- Approving examination questions
- Confirming all marks which contribute to a student's degree
- Reviewing and giving advice on the structure and content of the programme and assessment procedures

Information about current external examiner(s) can be found here:

<http://www.keele.ac.uk/qa/externalexaminers/currentexternalexaminers/>

18. The principles of programme design

The programme described in this document has been drawn up with reference to, and in accordance with the guidance set out in, the following documents:

a. UK Quality Code for Higher Education, Quality Assurance Agency for Higher Education:

<http://www.qaa.ac.uk/quality-code>

b. QAA Subject Benchmark Statement: <https://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/subject-benchmark-statement-earth-sciences-environmental-sciences-and-environmental-studies.pdf>

c. Keele University Regulations and Guidance for Students and Staff: <http://www.keele.ac.uk/regulations>

d. Environmental Practitioner (degree) apprenticeship standard:

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

19. Annex - Standard KSBs mapped to modules

The Skills, Knowledge and Behaviours (KSBs) set out in the apprenticeship degree standard ([link to standard](#)) are developed by the apprenticeship students through successful completion of the programme. The module list below maps out the KSBs covered by each module.

ESC-10080: K2,K3,K4,K5,K6,K7,K8,K9,K10,K12,S1,S4,S8,S9,S10,S12,B1,B3,B4,B5.

ESC-10084: K1,K3,K5,S1.

ESC-10082: K1,K3,K2,K5,K7,S1,S9,S10,B1,B3,B5,B6.

ESC-10086: K1,K2,S1,S5,S8.

ESC-10088: K1,K2,K3,K5,S1,S5,S9,B1.

ESC-20116: K1,K2,K3,K4,K5,K6,K9,K10,K11,S1,S2,S3,S5,S6,S8,S9,S10,B1,B6.

ESC-20114: K1,K3,K4,K10,K11,S3,S8.

ESC-20112: K1,K2,K5,K6,K9,K10,S1,S5,S6,S8,S9,S10,B1,B6.

ESC-20122: K1,K3,S8.

ESC-20120: K1,K2,K3,K5,S1,S5,S8,S10,B1,B6.

ESC-30084: K1,K2,K3,K6,K10,S1,S6,S8,S10,S11,B1,B4.

ESC-30090: K2,K5,K6,K8,K10,K12,S1,S4,S5,S7,S8,S10,S11,B2,B3,B4,B5,B7.

ESC-30088: K1,K2,K3,K5,K10,S1,S5,S8,S10,S11,B1,B6.

ESC-30092: K3,K10,S8,S10.

ESC-30096: K1,K3,K10,S8,S10.

ESC-30086: K1,K2,K3,K10,S1,S5,S6,S8,S10,B1,B6.

Version History

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Previous documents

Version No	Year	Owner	Date Approved	Summary of and rationale for changes
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