

Programme Specification: Undergraduate

Academic Year 2021/22

1. Course Summary

Names of programme and award title(s)	BSc (Hons) Environmental Science BSc (Hons) Environmental Science with International Year (see Annex for details) BSc (Hons) Environmental Science with Work Placement Year (see Annex for details)
Award type	Combined Honours
Mode of study	Full-time
Framework of Higher Education Qualification (FHEQ) level of final award	Level 6
Normal length of the programme	3 years; 4 years with either the International Year or Placement Year between years 2 and 3
Maximum period of registration	The normal length as specified above plus 3 years
Location of study	Keele Campus
Accreditation (if applicable)	This subject/programme is accredited by the Institution of Environmental Sciences (IES) and by the Institute of Environmental Management and Assessment (IEMA). For further details see the section on Accreditation.
Regulator	Office for Students (OfS)
Tuition Fees	<p>UK students:</p> <p>Fee for 2021/22 is £9,250*</p> <p>International/EU students:</p> <p>Fee for 2021/22 is £16,000** (if combined with a non-laboratory-based Principal Subject) or £17,000** (if combined with a laboratory-based Principal Subject)</p> <p>The fee for the international year abroad is calculated at 15% of the standard year fee</p> <p>The fee for the work placement year is calculated at 20% of the standard year fee</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.

* These fees are regulated by Government. We reserve the right to increase fees in subsequent years of study in response to changes in government policy and/or changes to the law. If permitted by such change in policy or law, we may increase your fees by an inflationary amount or such other measure as required by government policy or the law. Please refer to the accompanying Student Terms & Conditions. Further information on fees can be found at <http://www.keele.ac.uk/studentfunding/tuitionfees/>

** We reserve the right to increase fees in subsequent years of study by an inflationary amount. Please refer to the accompanying Student Terms & Conditions for full details. Further information on fees can be found at <http://www.keele.ac.uk/studentfunding/tuitionfees/>

2. What is a Combined Honours programme?

NB: All students who study a science Principal subject are candidates for the degree of Bachelor of Science (with Honours) (BSc Hons) irrespective of their second Principal subject.

Combined Honours degrees are degrees that are taken in two different subjects, resulting in an X and Y degree title. If you are taking a Combined Honours programme, these will be the two subjects you applied for. These are referred to as your Principal Subjects.

In a Combined Honours degree you must take at least 135 credits in each Principal Subject (270 credits in total), accrued over all three levels of study, with at least 45 credits at each level of study (Levels 4, 5 and 6) in each of two Principal Subjects (90 credits per year). The remaining available credits can be filled with modules from these subjects or other subjects entirely.

As a Combined Honours student you can choose to study just one subject in your final year of study, taking a minimum of 90 credits in this subject. This will result in an X with Y degree title.

3. Overview of the Programme

The Combined Honours Environmental Science degree programme at Keele enables students to combine their interests in environmental science with a second subject such as Biology, Physical Geography or Chemistry, or indeed one of the many other subject combinations available at Keele. The course is interdisciplinary and focuses on the application of environmental science techniques and knowledge to address environmental issues such as climate change, water pollution, and biodiversity loss and food security. The programme places strong emphasis on developing practical, laboratory and field-based skills which enables students to develop a wide range of both subject-specific and transferable skills to take into future employment. The first year highlights the basic principles of the chemical and ecological sciences underpinning the field of environmental science. The second year places an emphasis on developing practical and research skills, and developing deeper scientific understanding behind a range of environmental issues. The broad selection of modules in the final year allows the student to 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 cater for those students with general interests in the environment and environmental issues, and for those with a clear environmental science career aspiration through a clear emphasis throughout the course on applied environmental issues. Environmental Science is an incredibly exciting and relevant subject for today's society with ever-increasing employment prospects and career opportunities.

4. Aims of the programme

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

- develop a sound scientific understanding of the chemical and ecological sciences that underpin the field of environmental science, irrespective of students' scientific background prior to studying at Keele University, and to be able to apply these to environmental problems;
- be able to integrate scientific knowledge, and an awareness of social, economic and ethical issues, to address the management of the environment and tackle environmental problems such as climate change, water pollution, water resource scarcity, atmospheric pollution;
- gain a wide-range of field and laboratory skills, including the ability to carry out independent research, relevant to the investigation of environmental issues;
- develop to a high professional standard, generic employability skills in report writing, information technology, numeracy, oral presentation, team work and independent work, problem solving and searching and evaluating literature and related-resources.

In addition, students taking the four year 'with work placement year' programme will:

- gain substantial experience of work in the environment and sustainability sector, including familiarisation with the professional working environment. These aims are achieved through a range of module-specific intended learning outcomes that describe the key knowledge and skills successful students will acquire during the course of the degree programme.

5. 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), can be described under the following headings:

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

Subject knowledge and understanding

The nature of the course and the wide choice of options available in the third year (Level 6) emphasises the multi-disciplinary context of the course. From the core grounding in the natural sciences, the wide range of options available enables the individual student to explore the contribution of the natural and social sciences to an understanding of current environmental issues. Core modules also stress the interdisciplinary interaction of different facets of sciences in the environment. The acquisition of knowledge and understanding underpins the entire programme.

Successful students will be able to demonstrate knowledge and understanding of:

- the application of the ecological, biological and chemical sciences to environmental science
- fundamental principles of chemistry relevant to the Environmental Sciences
- the application of fundamental chemical principles to a range of applications in environmental chemistry
- the ways in which populations and communities function and interact
- basic theories and concepts in ecology and conservation
- the ecology and environmental issues of a specified ecosystem
- the impact of human activity, particularly resource exploitation on the Earth's surface and near surface environments (using well-established principles and examples from the forefront of the discipline)
- pressures and threats on terrestrial and aquatic ecosystems as well as the Earth's climate that are related to human activity
- possible options for alternative solutions to environmental problems and their implications for nature and society
- environmental management issues in a range of different environments
- the process and application of a range of analytical techniques relevant to the analysis of the composition of different environmental media (including soil, water, vegetation)
- a key multidisciplinary issue/problem reflecting the student's interests at the forefront of Environmental Science

Subject specific skills

The acquisition of subject specific skills is an important part of the Environmental Science programme. Individual module specifications should be consulted for information on subject-specific skills covered within individual modules.

Successful students will be able to:

- carry out and record practical chemistry experiments relevant to the environmental sciences, including the analysis and interpretation of data generated
- demonstrate competency in a range of skills necessary for successful study of environmental science in higher education (e.g. numeracy, IT, visual, oral and written communication)
- demonstrate familiarity with a range of ecological and geochemical laboratory and field techniques
- collect, synthesize, evaluate and present environmental (geochemical, ecological, geological) data
- perform calculations involving simple population dynamics models
- work safely in a scientific laboratory, with awareness of standard methods and procedures and with due regard for risk assessment and relevant health and safety regulations
- apply relevant quantitative techniques to the analysis of environmental problems
- manipulate, analyse and interpret data sets relating to an area of environmental science
- design an achievable piece of research applicable to the field of environmental science, showing an ability to synthesize and interrogate the research literature and evaluate and select appropriate techniques
- integrate biological, geological and chemical aspects of field (and laboratory) study by preparing a report/presentation on investigations of several habitats
- evaluate solutions to problems of managing a disturbed/degraded area
- evaluate possible options for alternative solutions to environmental problems
- demonstrate familiarity with a range of field and laboratory techniques appropriate to Environmental Science investigation
- demonstrate technical appreciation of the process and application of a range of analytical techniques relevant to the analysis of the composition of different environmental media
- undertake effective fieldwork with due regard for safety, risk assessment, rights of access, relevant health and safety regulations and sensitivity to the impact of investigations on the environment
- apply their own knowledge, skills and experience to an aspect of current Environmental Science research (through the use of established, analytical scientific methods, literature review, data collection and interpretation etc.) and to have developed the skills necessary to exercise own independent analysis, initiative and self-learning

Key or transferable skills (including employability skills)

Successful students will be able to:

- recognise and use subject-specific theories, concepts and principles to make reasoned decisions and solve problems
- analyse, synthesise and summarise data and information critically, including prior research
- collect and integrate several lines of evidence to formulate and test hypotheses, and make critical judgements
- apply knowledge and understanding to address familiar and unfamiliar problems
- assess the merits of contrasting theories, explanations and policies
- recognise the moral and ethical issues of investigations and appreciate the need for professional codes of conduct
- develop an adaptable and flexible approach to study and work
- identify and work towards targets for personal, academic and career development
- take responsibility for their own learning and develop a habit of reflection upon that learning
- develop and sustain effective approaches to learning and study, including time management, flexibility, creativity and intellectual integrity
- communicate effectively to a variety of audiences in written, verbal and graphical forms
- work with numerical data using appropriate qualitative and quantitative techniques, as well as computer software packages
- work effectively with a variety of types of information technology to analyse and present information and data, as well as solve numerical problems
- use the internet as a means of communication and a source of information
- demonstrate competence in spatial awareness and observation

- conduct field and laboratory studies
- reference work in an appropriate manner
- work with information handling and retrieval systems using data from a wide range of sources
- work effectively both as an individual and as part of a group or team, recognising and respecting the viewpoints of others;
- sustain motivation to work towards a goal over an extended period of time
- recognise responsibilities as a local, national and international citizen

In addition to the above, students on the four year 'with work placement year' programme will be able to:

- evaluate their own employability skills (via a SWOT Analysis) and develop their own intended learning outcomes (ILOs);
- develop, through practice in the work place, the work-related skills identified through their SWOT analysis and ILOs;
- apply academic theory learnt as part of the taught degree to real situations in the work place;
- critically evaluate their learning from the work placement;
- explain how the professional environmental sector operates and what skills are needed to develop their career.

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/>

6. How is the programme taught?

Learning and teaching methods used on the programme vary according to the subject matter and level of the module. They include the following:

- Lectures
- Tutorials and workshops
- Practical classes
- Field courses
- Individual progress interviews, including profiling/personal development planning (PDP)
- Work experience in a professional environment
- Directed reading
- Group presentations and linked discussion
- Use of e-learning/the Keele Learning Environment (KLE)

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 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.

7. Teaching Staff

As Environmental Science is such an interdisciplinary subject, staff that deliver our degree programmes come from the Schools of Geography, Geology and the Environment, Chemical and Physical Sciences, and Life Sciences, with option modules from other Schools.

There is a strong emphasis on enhancing the student learning experience within the School of Geography, Geology and the Environment, as evidenced by the number of environmental staff who hold teaching qualifications, such as the MA in Learning and Teaching in Higher Education, who are fellows, Senior Fellows and Principals Fellows of the Higher Education Academy (HEA) and who have won awards for their excellence in teaching (e.g. Keele Teaching Excellence Awards, National Teaching Fellowships). Recent curriculum developments within our environmental programmes have been supported by external funds from the Higher Education Academy (HEA) Geography, Earth and Environmental Sciences (GEES) subject centre and the HEA Education for Sustainable Development project. Several staff are actively involved with pedagogic research that seeks to identify ways in which the student learning experience within the environmental sciences can be enhanced.

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.

More information about staff teaching on Media is available at: <https://www.keele.ac.uk/mcc/people/>

8. What is the structure of the Programme?

The academic year runs from September to June and is divided into two semesters. The number of weeks of teaching will vary from programme to programme, but you can generally expect to attend scheduled teaching sessions between the end of September and mid-December, and from mid-January to the end of April. Our degree courses are organised into modules. Each module is usually a self-contained unit of study and each is usually assessed separately with the award of credits on the basis of 1 credit = 10 hours of student effort. An outline of the structure of the programme is provided in the tables below.

There are three 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;
- Elective modules - a free choice of modules that count towards the overall credit requirement but not the number of subject-related credits.

A summary of the credit requirements per year is as follows, with a minimum of 90 subject credits (compulsory plus optional) required for each year across both of your Principal Subjects. This document has information about *Environmental Science* modules only; please also see the document for your other subject.

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	60	0	0	0	0
Level 5	60	0	0	0	0
Level 6	15	30	45	0	15

In year 3 there is the option to choose to specialise in one of your subjects, taking a minimum of 90 subject-specific modules, made up of 60 credits of compulsory modules and a minimum of 30 credits (maximum 60 credits) of optional modules. You may take 0-30 credits of elective modules.

Module Lists

Level 4

Compulsory modules	Module Code	Credits	Period
Introductory Environmental Chemistry	CHE-10044	15	Semester 1
Studying the Environment	ESC-10061	15	Semester 1-2
Academic, Professional and Fieldwork Skills	ESC-10068	15	Semester 1-2
Climate Change: The Scientific and Societal Context	ESC-10066	15	Semester 2

Level 4 Module Rules

1. CHE-10044 Introductory Environmental Chemistry (semester 1) is not taken by students combining Environmental Science with either Chemistry. These students will take ESC-10045 Introductory Geology for the Environmental Sciences instead (semester 1).
2. Students combining Environmental Science with Geography share both ESC-10068 and ESC-10066 in the two subjects and so will also take ESC-10045 Introductory Geology for the Environmental Sciences (semester 1) and an extra 15 credit module from Geography (determined by that programme).

Field Courses	
Studying the Environment (local area)	Introductory field day to explore the different aspects of environmental science at a local field site (1 day).
Studying the Environment (Centre for Alternative Technology)	A residential weekend to the Centre for Alternative Technology, exploring renewable energy, sustainable living and building, and the geology and physical landscape of the local area.
Studying the Environment (North Wales)*	Residential field course in North Wales, looking at the ecology, hydrochemistry and biogeochemistry of aquatic and terrestrial environments and the environmental impacts of historical mining activities, includes a day of laboratory work at Keele (5 days).

***Note about field courses:** these may change depending on factors such as staff availability, staff changes, staff expertise, costs, student numbers, other factors outside of our control (earthquakes, volcanic eruptions etc.). Locations of 'local area' field days change on a year by year basis.

Level 5

Compulsory modules	Module Code	Credits	Period
Human Impact on the Environment, scientific perspectives	ESC-20017	15	Semester 1
Environmental and Sustainability Impact Assessment	ESC-20080	15	Semester 1
Environmental Analytical Methods	ESC-20032	15	Semester 2
Research and fieldwork planning	ESC-20081	15	Semester 2

Level 5 Module Rules

ESC-20080 (Environmental and Sustainability Impact Assessment) is co-taught with the core Geography module ESC-20029 (Practical Physical Geography) as a double-badged module. Students will take this as their choice of one of the two module codes and take in addition a 15 credit option from one of ESC-20092 (Employability Training: Engaging with the Workplace; semesters 1-2) or ESC-20030 (Regional Landscapes; semester 1)

Field courses	
Environmental and Sustainability Impact Assessment and Research Planning (local)	Based in a local country park, students work in project groups to undertake an Environmental Impact Assessment (EIA). (1 day)
Environmental and Sustainability Impact Assessment and Research Planning (residential)	A residential field course investigating issues of environmental science and management (6-8 days depending on dates of Easter vacation). In 2016/17 options were the Lake District, UK or Bordeaux, France.

***Note about field courses:** these may change depending on factors such as staff availability, staff changes, staff expertise, costs, student numbers, other factors outside of our control (earthquakes, volcanic eruptions etc.). Locations of 'local area' field days change on a year by year basis.

Work Placement Year

Students taking the 4-year with 'work placement year' undertake their work placement between Year-2 and Year-3 of their degree programme. During the work placement year, students undertake a work placement (minimum 30 weeks full time (1,050 hours) or

equivalent) with an environmentally-focussed company or organisation. Students take the ESC-30042 (non-credit bearing) Work Placement Year module.

Core modules	Credits
Work placement year	n/a

Level 6

Field courses:

The field courses undertaken during the third year will depend on the modules chosen. It should be noted that for many students their Independent Project work is likely to include a significant amount of fieldwork.

Level 6 specialism options:

BSc Environmental Science (Combined Honours) students can drop Environmental Science at L6, taking no environment modules and specialising in their other subject for the award "BSc X **with** Environmental Science".

Students can continue with both subjects for the award "BSc Environmental Science **and** X".

Students can also specialise in Environmental Science at L6 for the award "BSc Environmental Science **with** X", in which case they take the 30 credit dissertation ESC-30047 and have the additional compulsory modules ESC-30056 (Ecotoxicology and Risk Assessment) and ESC-30058 (The Science of Soil).

Students taking Environmental Science as a core discipline within BSc Natural Sciences (which follows the Combined Honours diet) must take 60 credits of Environmental Science modules at Level 6 (15 credits core and 45 credits of options).

Compulsory modules	Module Code	Credits	Period
Dissertation (15-credit)	ESC-30050	15	Semester 1-2

Optional modules	Module Code	Credits	Period
Glaciers and Glacial Geomorphology	ESC-30006	15	Semester 1
Natural Hazards	ESC-30009	15	Semester 1
Global Environmental Change	ESC-30018	15	Semester 1
Clean Technology	ESC-30040	15	Semester 1
Applied GIS	ESC-30044	15	Semester 1
Ecotoxicology and Risk Assessment	ESC-30056	15	Semester 1
Applied Insect Ecology	LSC-30003	15	Semester 1
Conservation Biology	LSC-30043	15	Semester 1
Sustainability Consultancy	ESC-30060	15	Semester 1-2
Water Resources	ESC-30020	15	Semester 2
Hydrological and Engineering Geology	ESC-30022	15	Semester 2
Coastal Environments	ESC-30027	15	Semester 2
The Science of Soil	ESC-30058	15	Semester 2
Animal Welfare	LSC-30072	15	Semester 2
Plant Science and Sustainability	LSC-30076	15	Semester 2

If you choose to specialise in this subject in your final year you will study the following modules:

Compulsory modules	Module Code	Credits	Period
Ecotoxicology and Risk Assessment	ESC-30056	15	Semester 1
Dissertation	ESC-30047	30	Semester 1-2
The Science of Soil	ESC-30058	15	Semester 2

Optional modules	Module Code	Credits	Period
Glaciers and Glacial Geomorphology	ESC-30006	15	Semester 1
Natural Hazards	ESC-30009	15	Semester 1
Global Environmental Change	ESC-30018	15	Semester 1
Clean Technology	ESC-30040	15	Semester 1
Applied GIS	ESC-30044	15	Semester 1
Applied Insect Ecology	LSC-30003	15	Semester 1
Conservation Biology	LSC-30043	15	Semester 1
Sustainability Consultancy	ESC-30060	15	Semester 1-2
Water Resources	ESC-30020	15	Semester 2
Hydrological and Engineering Geology	ESC-30022	15	Semester 2
Coastal Environments	ESC-30027	15	Semester 2
Animal Welfare	LSC-30072	15	Semester 2
Plant Science and Sustainability	LSC-30076	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
the application of the biological, ecological, and chemical sciences to environmental science;	Environmental and Sustainability Impact Assessment - ESC-20080 Research and fieldwork planning - ESC-20081 All modules
fundamental principles of chemistry relevant to the Environmental Sciences;	Introductory Environmental Chemistry - CHE-10044
the application of fundamental chemical principles to a range of applications in environmental chemistry	Introductory Environmental Chemistry - CHE-10044
the ways in which populations and communities function and interact;	Human Impact on the Environment, scientific perspectives - ESC-20017
basic theories and concepts in ecology and conservation;	Studying the Environment - ESC-10061 Environmental and Sustainability Impact Assessment - ESC-20080
the ecology and environmental issues of a specified ecosystem;	Environmental and Sustainability Impact Assessment - ESC-20080 Studying the Environment - ESC-10061
the ideological and philosophical underpinning of different approaches to environmental and sustainability research	Research and fieldwork planning - ESC-20081 Environmental and Sustainability Impact Assessment - ESC-20080
the impact of human activity, particularly resource exploitation on the Earth's surface and near surface environments (using well-established principles and examples from the forefront of the discipline);	Human Impact on the Environment, scientific perspectives - ESC-20017
pressures and threats on terrestrial and aquatic ecosystems as well as the Earth's climate that are related to human activity;	Human Impact on the Environment, scientific perspectives - ESC-20017 Environmental Analytical Methods - ESC-20032
possible options for alternative solutions to environmental problems and their implications for nature and society;	Human Impact on the Environment, scientific perspectives - ESC-20017 Environmental Analytical Methods - ESC-20032
environmental management issues in a range of different environments;	Environmental Analytical Methods - ESC-20032
the process and application of a range of analytical techniques relevant to the analysis of the composition of different environmental media (including soil, water, vegetation);	Environmental Analytical Methods - ESC-20032
a key multidisciplinary issue/problem reflecting the student's interests at the forefront of Environmental Science	Dissertation - ESC-30047 Environmental Analytical Methods - ESC-20032
the biological, geological, chemical and social aspects of the fields of environmental science and sustainability	Research and fieldwork planning - ESC-20081 Environmental and Sustainability Impact Assessment - ESC-20080

Subject Specific Skills	
Learning Outcome	Module in which this is delivered
carry out and record practical chemistry experiments relevant to the environmental sciences, including the analysis and interpretation of data generated	Environmental Analytical Methods - ESC-20032 Introductory Environmental Chemistry - CHE-10044
demonstrate competency in a range of skills necessary for successful study of environmental science in higher education (e.g. numeracy, IT, visual, oral and written communication);	Studying the Environment - ESC-10061 Environmental Analytical Methods and all modules
demonstrate familiarity with a range of ecological and geochemical laboratory and field techniques	Environmental Analytical Methods - ESC-20032 Introductory Environmental Chemistry - CHE-10044

Subject Specific Skills	
Learning Outcome	Module in which this is delivered
assess solutions to problems of managing disturbed/degraded/disadvantaged areas and demonstrate an understanding of environmental management issues in a range of environments and contexts	Environmental and Sustainability Impact Assessment - ESC-20080 Research and fieldwork planning - ESC-20081
apply theoretical knowledge and understanding of environmental science and sustainability issues to specific social, geographical and environmental contexts	Research and fieldwork planning - ESC-20081 Environmental and Sustainability Impact Assessment - ESC-20080
evaluate possible options for alternative solutions to environmental problems	Human Impact on the Environment, scientific perspectives - ESC-20017
demonstrate familiarity with a range of field and laboratory techniques appropriate to Environmental Science investigation	Environmental Analytical Methods - ESC-20032 Introductory Environmental Chemistry - CHE-10044 Dissertation
demonstrate technical appreciation of the process and application of a range of analytical techniques relevant to the analysis of the composition of different environmental media	Environmental Analytical Methods - ESC-20032
collect, synthesize, evaluate and present environmental (geochemical, ecological, geological) data	The Science of Soil - ESC-30058 Environmental and Sustainability Impact Assessment - ESC-20080 All modules
work safely in a scientific laboratory, with awareness of standard methods and procedures and with due regard for risk assessment and relevant health and safety regulations	Introductory Environmental Chemistry - CHE-10044 Environmental Analytical Methods - ESC-20032 Dissertation
apply relevant quantitative techniques to the analysis of environmental problems	Introductory Environmental Chemistry - CHE-10044 Environmental Analytical Methods - ESC-20032 Dissertation
undertake effective fieldwork with due regard for safety, risk assessment, rights of access, relevant health and safety regulations and sensitivity to the impact of investigations on the environment	Dissertation (15-credit) - ESC-30050 Environmental Analytical Methods - ESC-20032 Studying the Environment - ESC-10061 Environmental and Sustainability Impact Assessment - ESC-20080 Dissertation
apply their own knowledge, skills and experience to an aspect of current Environmental Science research (through the use of established, analytical scientific methods, literature review, data collection and interpretation etc.) and to have developed the skills necessary to exercise own independent analysis, initiative and self-learning	Dissertation (15-credit) - ESC-30050 Environmental Analytical Methods - ESC-20032 Dissertation
manipulate, analyse and interpret data sets relating to an area of environmental science	Environmental Analytical Methods - ESC-20032 Introductory Environmental Chemistry - CHE-10044 Dissertation
design an achievable piece of research applicable to the field of environmental science, showing an ability to synthesize and interrogate the research literature and evaluate and select appropriate techniques	Environmental Analytical Methods - ESC-20032 Research and fieldwork planning - ESC-20081 Dissertation
integrate biological, geological and chemical aspects of field (and laboratory) study by preparing a report/presentation on investigations of several habitats	Environmental Analytical Methods - ESC-20032 Introductory Environmental Chemistry - CHE-10044 Dissertation

Key or Transferable Skills (graduate attributes)	
Learning Outcome	Module in which this is delivered
develop effective approaches to learning and study, including time management, flexibility, creativity and intellectual integrity	All modules
communicate effectively enabling them to communicate effectively to a variety of audiences in written, verbal and graphical forms	All modules
work with numerical data using appropriate qualitative and quantitative techniques, as well as computer software packages	All modules but specifically: Studying the Environment; Introductory Environmental Chemistry; Biodiversity, Ecology and Environment; Environmental Analytical Methods; Dissertation
work effectively with a variety of types of information technology to analyse and present information and data, as well as solve numerical problems	All modules but specifically: Studying the Environment; Introductory Environmental Chemistry; Biodiversity, Ecology and Environment; Environmental Analytical Methods; Dissertation
use the internet as a means of communication and a source of information	All modules
demonstrate competence in spatial awareness and observation	Human Impact on the Environment, scientific perspectives - ESC-20017 Studying the Environment - ESC-10061
conduct field and laboratory studies	Environmental Analytical Methods - ESC-20032 Studying the Environment - ESC-10061 Dissertation (15-credit) - ESC-30050 Dissertation
reference work in an appropriate manner	All modules
work with information handling and retrieval systems using data from a wide range of sources	Environmental Analytical Methods - ESC-20032 Studying the Environment - ESC-10061 Dissertation
design a piece of research achievable as a third year dissertation project and applicable to the field of Environment & Sustainability; showing an ability to synthesize the research literature, select appropriate techniques for data collection and analysis, and conduct research ethically and safely	Environmental and Sustainability Impact Assessment - ESC-20080 Research and fieldwork planning - ESC-20081
work effectively both as an individual and as part of a group or team, recognising and respecting the viewpoints of others	All modules
sustain motivation to work towards a goal over an extended period of time	All modules
recognise responsibilities as a local, national and international citizen	All modules

9. Final and intermediate awards

Credits required for each level of academic award are as follows:

Honours Degree	360 credits	<p>You will require at least 120 credits at levels 4, 5 and 6</p> <p>You must accumulate a minimum of 135 credits in each Principal Subject (270 credits in total), with at least 45 credits at each level of study (Levels 4, 5 and 6) in each of two Principal Subjects (90 credits per year). Your degree title will be 'subject X and subject Y'.</p> <p>If you choose to study one Principal subject in your final year of study a minimum of 90 credits in that subject is required. Your degree title will be 'subject X with subject Y'.</p>
Diploma in Higher Education	240 credits	You will require at least 120 credits at level 4 or higher and at least 120 credits at level 5 or higher
Certificate in Higher Education	120 credits	You will require at least 120 credits at level 4 or higher

International Year option: in addition to the above students must pass a module covering the international year in order to graduate with a named degree including the 'international year' wording. Students who do not complete, or fail the international year, will be transferred to the three-year version of the programme.

Work Placement Year option: in addition to the above students must pass a non-credit bearing module covering the work placement year in order to graduate with a named degree including the 'work placement year' wording. Students who do not complete, or fail the placement year, will be transferred to the three-year version of the programme.

10. 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:

- **Unseen closed and open book examinations** in different formats test students' knowledge and understanding of the subject. Examinations may consist of essay, short answer and/or multiple choice questions, and paper comprehension.
- **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.
- **Poster presentations:** enable students to develop their communication skills and summarize the findings of their research in a clear, concise 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.
- **Oral presentations** assess individual students' subject knowledge and understanding. They also test their ability to work effectively as members of a team, to communicate what they know orally and visually, and to reflect on these processes as part of their own personal development.
- **Field Course Portfolios** document a range of activities and exercises undertaken in the field, either individually or in small groups.
- **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 in.
- **Reflective Diaries** enable you to critically reflect on your learning experiences, for example as part of a work placement experience. They are assessed on the quality of this reflection and on their ability to respond constructively to the challenges and difficulties they encounter in the process of their own creative development and learning.
- **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 students' understanding of the practical aspects of the programme and develop the skills necessary to enable students to present and analyse their results.
- **Class tests** taken either conventionally or online via the Keele Learning Environment (KLE) assess students' subject knowledge

and their ability to apply it in a more structured and focused way.

- **Dissertations** enable students to explore in depth an area of particular interest through a substantial piece of focused research and writing, and test their ability to formulate and answer research questions.
- **Research projects and reports** test student's knowledge of different research methodologies and the limits and provisional nature of knowledge. They also enable students to demonstrate their ability to formulate research questions and to answer them using appropriate methods.
- **Peer assessment:** in some cases students will be involved in marking other students' work, usually with a prescriptive marking guide. This helps students to appreciate where marks are gained and lost and gives them the opportunity to see the common mistakes made by other students.
- **Reviews** of other scholars' work test students' ability to identify and summarise the key points of a text and to evaluate the quality of arguments and the evidence used to support them. In the case of work based on empirical research, reviews also assess students' knowledge of research methodologies and their ability to make critical judgements about the appropriateness of different strategies for collecting and analysing data.

Marks are awarded for summative assessments designed to assess your achievement of learning outcomes. You will also be assessed formatively 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 within three working weeks of submission, unless there are compelling circumstances that make this impossible, and more informally in the course of tutorial and seminar discussions.

11. 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)	47%	53%	0%
Year 2 (Level 5)	29%	71%	0%
Year 3 (Level 6)	13%	87%	0%

12. Accreditation

This programme is accredited by the Institution of Environmental Sciences (IES) and by the Institute of Environmental Management and Assessment (IEMA). Students enrolled on IES accredited programmes may apply for Student Membership of the institution which provides a range of benefits: <http://www.ies-uk.org.uk>

13. 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'.

Students should note that it is not possible to take both the Work Placement Year and International Year options.

A student who has completed a semester abroad will not normally be eligible to transfer onto the International Year option.

14. What are the typical admission requirements for the Programme?

See the relevant course page on the website for the admission requirements relevant to this programme: <https://www.keele.ac.uk/study/>

Applicants who are not currently undertaking any formal study or who have been out of formal education for more than 3 years and are not qualified to A-level or BTEC standard may be offered entry to the University's Foundation Year Programme.

Applicants for whom English is not a first language must provide evidence of a recognised qualification in English language. The minimum score for entry to the Programme is Academic IELTS 6.0 or equivalent.

Please note: All non-native English speaking students are required to undertake a diagnostic English language assessment on arrival at Keele, to determine whether English language support may help them succeed with their studies. An English language module may be compulsory for some students during their first year at Keele.

Recognition of Prior Learning (RPL) is considered on a case-by-case basis and those interested should contact the Programme Director. The University's guidelines on this can be found here: <http://www.keele.ac.uk/qa/accreditationofpriorlearning/>

15. How are students supported on the programme?

Personal Tutors: All students are allocated a Personal Tutor for the duration of their studies as part of the University's Personal Tutor system. Students can make arrangements to see their Personal Tutor or other staff at any time and an open door policy is operated by all Environmental Science teaching staff so students can easily get in contact with staff either personally or via email or phone. There are very strong communication links between students and staff and a friendly and supportive environment throughout the Environmental Science course.

Work Placement Tutor: All students undertaking the work placement degree programme will be provided with an academic tutor, based at Keele. Students will be expected to find their own work placements; however, support will be provided throughout the placement process. This will involve support ensuring the appropriateness of the placement prior to starting the Placement Year, and email/telephone/face-to-face contact with the academic tutor throughout the placement at regular intervals.

Use of e-learning/the Keele Learning Environment (KLE): All modules are supported by learning materials that are accessible to students via the KLE. The School supports the University's policy on module support on the KLE.

Health and Safety: All students admitted to the course are expected to read the Geography, Geology and Environment Safety Handbook. Students are required to sign an agreement that they have read this Handbook, and that they will abide by the rules and regulations governing the efficient working, safety and welfare of all members both within the University and in the field.

Students with disabilities: Students with disabilities or medical problems, who are admitted onto the Environmental Science degree programme, will meet with a member of the University's Disability Services department, the Environmental Science Course Director and the Geography, Geology and Environment Disability Officer at the very start of the course in order to discuss any special requirements. Procedures will then be implemented according to the nature of the student's disability or medical problem. These procedures can range, for example, from allowing extra examination time for students diagnosed as dyslexic, to allocating additional staff or demonstrators to field classes to help students with mobility problems.

Careers: In addition to the University's central Careers service there is a specific Environmental Science careers tutor. Students are encouraged to seek the careers tutor for any help with deciding on postgraduate courses and funding opportunities, discussing career options, discussing option choices in relation to specific career routes, and for help and assistance in applying for jobs and placements. Within the Keele Learning Environment there is a dedicated page to careers including several subject specific careers sites.

16. Learning Resources

The School of Geography, Geology and the Environment has its own building (the William Smith Building) that contains well-equipped laboratories and lecture theatres that are used throughout the Environmental Science programme. This concentration of teaching into one building wherever possible enables students to identify with a specific base within the University. The foyer provides pleasant surroundings for students to meet and socialise with their peers. The Office is currently open during the week from 8.45am to 5.00pm to answer student queries. Teaching on specific modules takes place elsewhere in the University when there is a need for more specialised teaching facilities allowing the Environmental Science programme to benefit from a wide-range of cutting-edge teaching facilities and analytical instrumentation based elsewhere within the University. Students also have access to computing facilities within the School of Geography, Geology and the Environment.

17. Other Learning Opportunities

Study abroad (semester)

Students on the programme have the potential opportunity to spend a semester abroad in their second year studying at one of Keele's international partner universities.

Exactly which countries are available depends on the student's choice of degree subjects. An indicative list of countries is on the website (<http://www.keele.ac.uk/studyabroad/partneruniversities/>); however this does not guarantee the availability of study in a specific country as this is subject to the University's application process for studying abroad.

No additional tuition fees are payable for a single semester studying abroad but students do have to bear the costs of travelling to and

from their destination university, accommodation, food and personal costs. Depending on the destination they are studying at additional costs may include visas, study permits, residence permits, and compulsory health checks. Students should expect the total costs of studying abroad to be greater than if they study in the UK, information is made available from the Global Education Team throughout the process, as costs will vary depending on destination.

Whilst students are studying abroad any Student Finance eligibility will continue, where applicable students may be eligible for specific travel or disability grants. Students studying in Erasmus+ destinations may be eligible for grants as part of this programme. Students studying outside of this programme may be eligible for income dependent bursaries at Keele. Students travel on a comprehensive Keele University insurance plan, for which there are currently no additional charges. Some governments and/or universities require additional compulsory health coverage plans; costs for this will be advised during the application process.

Study Abroad (International Year)

A summary of the International Year, which is a potential option for students after completion of year 2 (Level 5), is provided in the Annex for the International Year.

Work placement Year

A summary of the Work Placement Year, which is a potential option for students after completion of year 2 (Level 5), is provided in the Annex for the Work Placement Year.

Fieldwork

Fieldwork is an essential part of an environmental scientist's training, providing both the opportunity to acquire and practice field-based skills, to develop skills of observation and recording and to work as effective members of a team. Keele is ideally located to be able to integrate a large component of field work into its environmental science programmes with a wide range of habitats in easy reach, including the Keele campus itself with its lake system and extensive woodlands, in addition to the mining and industrial heritage of the local area providing ideal opportunities for the study of the impact of these activities on the environment. The field courses in the second year provide the opportunity to investigate environmental science and management issues and environmental change within an unfamiliar environment. Students are also encouraged to make the most of other opportunities for field work with external organisations such as Operation Wallacea, which can form part of students third year independent project work.

18. Additional Costs

All students will do mandatory field courses as part of their degree programme. There is a range of field courses and costs are dependent on degree route and the nature of the independent project work taken by students.

The University provides significant financial support for the compulsory fieldwork elements of the degree programme and the costs of travel and accommodation for compulsory field courses are fully paid for by the University up to and including Year 2.

ALL Environmental Science students undertake an independent research project, which MAY include fieldwork that is normally carried out during the summer vacation between years 2 and 3. Students are responsible for organising their own transport and accommodation as well as paying any costs incurred whilst carrying out fieldwork. These costs are extremely variable as they are dependent on where the student carries out their project. Costs are minimal if the project work is undertaken in the students' local area.

IMPORTANT: Students are expected to have adequate clothing for field trips. We reserve the right to change the venues of field courses due to both cost and academic considerations. Some field courses are fully or partly catered for. Others are self-catered and students are expected to purchase meals (e.g. lunch and/or evening meal).

NB: as detailed in the Programme-Specific Regulations (Annex), should you be required to retake the Introductory Environmental Chemistry module you will be charged additional fees.

We try to ensure that core text books are supplied by the library in adequate number or are available as E-books. However, students may choose to purchase their own copies of books for ease of access.

Activity	Estimated cost
Field courses - compulsory	£0
Field courses - optional	£0
Equipment - waterproof clothing and footwear for field courses	£150
Total estimated additional costs	£150

These costs have been forecast by the University as accurately as possible but may be subject to change as a result of factors outside of our control (for example, increase in costs for external services). Forecast costs are reviewed on an annual basis to ensure they remain representative. Where additional costs are in direct control of the University we will ensure increases do not exceed 5%.

As to be expected there will be additional costs for inter-library loans and potential overdue library fines, print and graduation. We do

not anticipate any further costs for this undergraduate programme.

19. 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/>

20. 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: Earth Sciences, Environmental Sciences and Environmental Studies (2014) <https://www.qaa.ac.uk/quality-code/subject-benchmark-statements?indexCatalogue=document-search&searchQuery=Earth%20Sciences&wordsMode=AllWords>
- c. Keele University Regulations and Guidance for Students and Staff: <http://www.keele.ac.uk/regulations>
- d. Accreditation guidelines of the Institution of Environmental Sciences: <https://www.the-ies.org/accreditation>

21. Annex - International Year

Environmental Science with International Year

Please note: in order to be eligible to take the International Year option your other subject must also offer this option. Please refer to the information published in the course document for your other subject.

International Year Programme

Students registered for this Combined Honours programme may either be admitted for or apply to transfer during their period of study at Level 5 to the Combined Honours programme in both their principal subjects, providing that they meet the progression criteria outlined in this document. Students accepted onto the International Year programme will have an extra year of study at an international partner institution after they have completed Year 2 (Level 5) at Keele.

Students who successfully complete both the second year (Level 5) and the International Year will be permitted to progress to Level 6. Students who fail to satisfy the examiners in respect of the International Year will normally revert to the Combined Honours programme without the International Year and progress to Level 6 on that basis. The failure will be recorded on the student's final transcript.

Study at Level 4, Level 5 and Level 6 will be as per the main body of this document. The additional detail contained in this annex will pertain solely to students registered for the International Year option.

International Year Programme Aims

In addition to the programme aims specified in the main body of this document, the international year programme of study aims to provide students with:

1. Personal development as a student and a researcher with an appreciation of the international dimension of their subject
2. Experience of a different culture, academically, professionally and socially

Entry Requirements for the International Year

Students may apply to the 4-year programme during Level 5. Admission to the International Year is subject to successful application, interview and references from appropriate staff.

The criteria to be applied are:

- Academic Performance (an average of 60% across all modules in Semester 1 at Level 5 is normally required. Places on the International Year are then conditional on achieving an average mark of 54% across all Level 5 modules with no module fails. Where no Semester 1 marks have been awarded performance in 1st year marks and ongoing 2nd year assessments are taken into account)
- General Aptitude (to be demonstrated by application for study abroad, interview during the 2nd semester of year 2 (Level 5), and by recommendation of the student's personal tutor, 1st and 2nd year tutors and programme director)

Students may not register for both an International Year and a Placement Year.

Student Support

Students will be supported whilst on the International Year via the following methods:

- Phone or Skype conversations with Study Abroad tutors, in line with recommended Personal Tutoring meeting points.
- Support from the University's Global Education Team

Learning Outcomes

In addition to the learning outcomes specified in the main text of the Programme Specification, students who complete a Keele undergraduate programme with International Year will be able to:

1. Describe, discuss and reflect upon the cultural and international differences and similarities of different learning environments
2. Discuss the benefits and challenges of global citizenship and internationalisation
3. Explain how their perspective on their academic discipline has been influenced by locating it within an international setting.
4. Apply their experiences abroad to the specific Graduate Attributes associated with their Environmental Science degree programme;
5. Integrate, apply and develop fundamental environmental science principles to describe and explain phenomena and solve problems in the context of selected topics within contemporary Environmental Science.

Please note that students on Combined Honours programmes with International Year must meet the subject-specific learning outcomes for BOTH their principal subjects.

These learning outcomes will all be assessed by the submission of a satisfactory individual learning agreement, the successful completion of assessments at the partner institution and the submission of the reflective portfolio element of the international year module.

Course Regulations

Students registered for the International Year are subject to the programme-specific regulations (if any) and the University regulations. In addition, during the International Year, the following regulations will apply:

Students undertaking the International Year must complete 120 credits, which must comprise *at least 40%* in the student's discipline area.

This may impact on your choice of modules to study, for example you will have to choose certain modules to ensure you have the discipline specific credits required.

Students are barred from studying any module with significant overlap to the Level 6 modules to be studied on their return. Significant overlap with Level 5 modules previously studied should also be avoided.

Additional costs for the International Year

Tuition fees for students on the International Year will be charged at 15% of the annual tuition fees for that year of study, as set out in Section 1. The International Year can be included in your Student Finance allocation, to find out more about your personal eligibility see: www.gov.uk

Students will have to bear the costs of travelling to and from their destination university, accommodation, food and personal costs. Depending on the destination they are studying at additional costs may include visas, study permits, residence permits, and compulsory health checks. Students should expect the total costs of studying abroad be greater than if they study in the UK, information is made available from the Global Education Team throughout the process, as costs will vary depending on destination.

Students studying in Erasmus+ destinations may be eligible for grants as part of this programme. Students studying outside of this programme may be eligible income dependent bursaries at Keele.

Students travel on a comprehensive Keele University insurance plan, for which there are currently no additional charges. Some Governments and/or universities require additional compulsory health coverage plans; costs for this will be advised during the application process.

22. Annex - Work Placement Year

Environmental Science with Work Placement Year

Work Placement Year summary

Students registered for this programme may either be admitted for or apply to transfer during their studies to the 'with Work Placement Year' option (NB: for Combined Honours students the rules relating to the work placement year in the subject where the placement is organised are to be followed). Students accepted onto this programme will have an extra year of study (the Work Placement Year) with a relevant placement provider after they have completed Year 2 (Level 5) at Keele.

Students who successfully complete both the second year (Level 5) and the Work Placement Year will be permitted to progress to Level 6. Students who fail to satisfactorily complete the Work Placement Year will normally revert to the 3-year programme and progress to Level 6 on that basis. The failure will be recorded on the student's final transcript.

Study at Level 4, Level 5 and Level 6 will be as per the main body of this document. The additional detail contained in this annex will pertain solely to students registered for the Work Placement Year option.

Work Placement Year Programme Aims

In addition to the programme aims specified in the main body of this document, the Work Placement Year aims to provide students with:

1. the opportunity to carry out a long-term work-based learning experience.
2. first-hand experience of the work place environment in a role highly relevant to the degree.

Entry Requirements for the Work Placement Year

Admission to the Work Placement Year is subject to successful application, interview and references from appropriate staff. Students have the opportunity to apply directly for the 4-year 'with work placement year' degree programme, or to transfer onto the 4-year programme at the end of Year-1 and in Year-2 at the end of Semester 1. Students who are initially registered for the 4-year degree programme may transfer onto the 3-year degree programme at any point in time, prior to undertaking the year-long work placement. Students who fail to pass the work placement year, and those who fail to meet the minimum requirements of the work placement year module (minimum 30 weeks full time (1,050 hours), or equivalent, work placement), will be automatically transferred onto the 3-year degree programme.

The criteria to be applied are:

- A good University attendance record and be in 'good academic standing'.
- Passed all Year-1 and Year-2 Semester 1 modules with an overall module average of > 55%
- General Aptitude (to be demonstrated by application(s) to relevant placement providers with prior agreement from the Programme Lead, interview during the 2nd semester of year 2 (Level 5), and by recommendation of the student's personal tutor, 1st and 2nd year tutors and Programme Lead)
- Students undertaking work placements will be expected to complete a Health and Safety checklist prior to commencing their work experience and will be required to satisfy the Health and Safety regulations of the company or organisation at which they are based.
- (*International students only*) Due to visa requirements, it is not possible for international students who require a Tier 4 Visa to apply for direct entry onto the 4-year with Work Placement Year degree programme. Students wishing to transfer onto this programme should discuss this with student support, the academic tutor for the work placement year, and the Programme Lead. Students should be aware that there are visa implications for this transfer, and it is the student's responsibility to complete any and all necessary processes to be eligible for this programme. There may be additional costs, including applying for a new Visa from outside of the UK for international students associated with a transfer to the work placement programme.

Students may not register for both an International Year and a Work Placement Year.

Student Support

Students will be supported whilst on the Work Placement Year via the following methods:

- Regular contact between the student and a named member of staff who will be assigned to the student as their University supervisor. The University supervisor will be in regular contact with the student throughout the year, and be on hand to provide advice (pastoral or academic) and liaise with the Placement supervisor on the student's behalf if required.
- Two formal contacts with the student during the placement year: the University supervisor will visit the student in their placement organization at around the 5 weeks after placement has commenced, and then visit again (or conduct a telephone/video call tutorial) at around 15 weeks into the placement.
- Weekly supervision sessions will take place with the placement supervisor (or his/her nominee) throughout the duration of the placement.

Learning Outcomes

In addition to the learning outcomes specified in the main text of the Programme Specification, students who complete the 'with Work Placement Year' option will be able to:

1. Critically evaluate their learning from the work placement.
2. Explain how the professional environmental sector operates and what skills are needed to develop a career within it.
3. Apply academic theory learnt as part of the taught degree to real situations in the work place.

These learning outcomes will be assessed through the non-credit bearing Work Placement Year module (ESC-30042) which involves:

1. 10 hours of scheduled learning and teaching activities comprising workshops covering: CV and cover letter production, finding a placement, personal skills audits, internship/placement preparation, and pre-departure briefing including completion of necessary paperwork.
2. Mid-Placement Portfolio completion (a strength, weaknesses, opportunities and threats (SWOT) self-analysis; a personal action plan aimed at strengthening employability skills; and a performance report from the placement host).
3. End of placement Portfolio (a reflective diary of the placement experience; and a final performance report from the placement host).

Regulations

Students registered for the 'with Work Placement Year' option are subject to programme-specific regulations (if any) and the University regulations. In addition, during the Work Placement Year, the following regulations will apply:

- Students undertaking the Work Placement Year must successfully complete the zero-credit rated 'Work Placement Year' module (ESC-30042)
- In order to ensure a high quality placement experience, each placement agency will sign up to a placement contract (analogous to a service level agreement).
- Once a student has been accepted by a placement organisation, the student will make a pre-placement visit and a member of staff identified within the placement contract will be assigned as the placement supervisor. The placement supervisor will be responsible for ensuring that the placement experience meets the agreed contract agreed with the University.
- The placement student will also sign up an agreement outlining his/her responsibilities in relation to the requirements of each organisation.

Students will be expected to behave professionally in terms of:

(i) conforming to the work practices of the organisation; and

(ii) remembering that they are representatives of the University and their actions will reflect on the School and have an impact on that organisation's willingness (or otherwise) to remain engaged with the placement.

Additional costs for the Work Placement Year

Tuition fees for students on the Work Placement Year will be charged at 20% of the annual tuition fees for that year of study, as set out in Section 1. The Work Placement Year can be included in your Student Finance allocation; to find out more about your personal eligibility see: www.gov.uk

Students will have to bear the costs of travelling to and from their placement provider, accommodation, food and personal costs. Depending on the placement provider additional costs may include parking permits, travel and transport, suitable clothing, DBS checks, and compulsory health checks.

A small stipend may be available to students from the placement provider during the placement but this will need to be explored on a placement-by-placement basis as some organisations, such as charities, may not have any extra money available. Students should budget with the assumption that their placement will be unpaid.

Eligibility for student finance will depend on the type of placement and whether it is paid or not. If it is paid, this is likely to affect student finance eligibility, however if it is voluntary and therefore unpaid, should not affect student finance eligibility. Students are required to confirm eligibility with their student finance provider.

International students who require a Tier 4 visa should check with the Immigration Compliance team prior to commencing any type of paid placement to ensure that they are not contravening their visa requirements.

23. Annex - Programme-specific regulations

Programme Regulations: Environmental Science

Final Award and Award Titles	BSc Environmental Science (Combined Honours) BSc Environmental Science (Single Honours) BSc Environmental Science with Work Placement year (SH/Combined Honours) BSc Environmental Science with International year (SH/Combined Honours)
Intermediate Award(s)	Diploma in Higher Education Certificate in Higher Education
Last modified	August 2019
Programme Specification	https://www.keele.ac.uk/qa/programmespecifications

The University's Academic Regulations which can be found on the Keele University website (<https://www.keele.ac.uk/regulations/>)[1] apply to and regulate the programme, other than in instances where the specific programme regulations listed below over-ride them. These programme regulations list:

- *Exemptions* which are characterised by the omission of the relevant regulation.
- *Variations* which are characterised by the replacement of part of the regulation with alternative wording.
- *Additional Requirements* which set out what additional rules that apply to students in relation to this programme.

The following **exemptions, variations** and **additional requirements** to the University regulations have been checked by Academic Services and have been approved by the Faculty Education Committee.

A) EXEMPTIONS

The clause(s) listed below describe where an exemption from the University's Academic Regulations exists:

For the whole duration of their studies, students on this Programme are exempt from the following regulations:

- **No exemptions apply.**

B) VARIATIONS

The clause(s) listed below describe where a variation from the University's Academic Regulations exists:

Variation 1: Re-assessment and alternative assessment of missed work

This programme varies from Regulation D1,12.3

Reassessment, or alternative work to replace a missed assessment supported by exceptional circumstances, may sometimes take a different form from the original assessment where it is not feasible to recreate the original circumstances of assessment, for example in the case of fieldwork, group work or peer-assessed activities. Appropriate alternative assessments may be substituted in these situations. Where fieldwork is missed and supported by exceptional circumstances where appropriate students may be given the option of taking the field course the following year or completing alternative assessment.

Additional Requirements

The programme requirements listed below are in addition to the University's Academic Regulations:

Additional requirement 1: Attendance Requirements

Students are required to attend all practical classes, tutorials, seminars, field courses and lectures. Attendance at all these sessions is monitored and checked by the academic support staff. Any absences due to exceptional circumstances should be notified as soon as possible to the School Office who will then pass on this information to tutors, as necessary. Any exceptional circumstances must be

notified using the appropriate form following University regulations. Students who display a poor attendance record for no good reason are likely to be subject to disciplinary action. In addition, when taking modules from subjects other than those in the School of Geography, Geology and the Environment students must inform themselves of, and abide by, any additional attendance and notification requirements of that particular School.

Self-certification of illness as a reason for absence from compulsory classes will be accepted for no more than three occasions per Semester. Any subsequent absence for reasons of illness must be accompanied by a doctor's note.

Individual modules within the Environmental Science programmes have specific attendance regulations:

Life Science (LSC) module attendance

Attendance at practical classes, tutorials and seminars is compulsory in the School of Life Sciences. Registers will be taken at all compulsory sessions. It is the student's responsibility to ensure that they are recorded on the register as present. The office should be contacted by telephone on (01782) 733028 or (01782) 733677 or by e-mail at lifesci-office@keele.ac.uk as soon as possible to report an absence.

Failure to attend one compulsory session without good cause will result in an informal warning letter from the year tutor. Failure to attend any subsequent sessions without good cause will lead to the issuing of a formal warning from the Head of School. A maximum of two formal warnings will be issued and a fourth absence will result in a 3rd and final warning from the Director of Academic Services, which could result in the requirement to **withdraw** from the University.

The following School (Life Sciences) regulations will also apply:

- A student who is absent without good cause from 50% or more of the compulsory sessions in any module may be deemed to have failed the module.
- Self-certification of illness as a reason for absence from compulsory classes will be accepted for no more than two classes per module. Any subsequent absence for reasons of illness must be accompanied by a doctor's note.

Chemical Science (CHE) module attendance

Attendance at practical sessions is compulsory. **You cannot pass Introductory Environmental Chemistry unless you gain a mark of at least 40% for the practical component of the module.** Unsatisfactory attendance will result in automatic failure of the module. Students who fail Introductory Environmental Chemistry will need to re-take the module the following academic year and will be **charged additional fees** to do so. You must arrive in good time for the commencement of laboratory sessions and may only leave prior to the end time with the express permission of the academic staff member in charge of the laboratory.

Additional requirement 2: Regulations governing fieldwork

Students are expected to read the online Safety Handbook for the School of Geography, Geology and the Environment at registration in Year 1. Students are required to sign an agreement that they have read the Safety Handbook, and that they will abide by the rules and regulations governing the efficient working, safety and welfare of all members both within the School and in the field

Students are required to follow all instructions provided by course staff within the Safety and Field Course Handbooks and in person in the field. This includes instructions given by postgraduate demonstrators. Students must make staff aware of any pre-existing medical conditions or other issues that may be relevant to field course safety prior to attending the field course.

Students, who by thoughtless actions or rowdy behaviour put the course, other students and the reputation of the University in jeopardy, will be immediately sent home to face disciplinary procedures by the University. Additionally, they will be required to attend the next scheduled field course as a re-assessment and at their own expense. Examples of serious misconduct include: wilful damage to property, injury to persons, ingestion of alcohol or illegal substances in the field so as to endanger themselves or other members of the course, improper use of safety equipment and/or failure to attend commitments.

Additional requirement 3: Form and submission of in-course assessments

The form and submission of coursework are determined by module leaders and announced in module documentation. Unless otherwise stated, work should be word processed. Students must familiarise themselves with the module documentation for information about how specific coursework assessments should be submitted. When taking modules from subjects other than those from within Geography, Geology and the Environment, students must inform themselves of, and abide by, the assessment and submission requirements of that School.

In the absence of agreed exceptional circumstances, work submitted late but within one week of the deadline will be marked to a maximum of 40%. Work submitted more than one week late will be given a mark of zero. Requests for extensions to deadlines should be made to the relevant module tutor and the Programme Director in advance of the coursework deadline using the University's exceptional circumstances online system.

Marks indicated on returned work are provisional and subject to change until ratified by the appropriate examination board. Although marked assignments are returned to students to provide feedback, any work that counts towards the final degree result has to be made available for consultation by the External Examiner at the end of the programme. Students must be in a position to be able to resubmit work in good condition when required by the School.

Additional requirement 4: Field work expenses

Fieldwork is a compulsory part of the Environmental Science degree programme and forms components of assessed modules. The University provides significant financial support for the compulsory fieldwork elements of the degree programme and the costs of travel and accommodation for compulsory field courses are fully paid for by the University up to and including Year 2.

ALL Environmental Science students undertake an independent research project in their final year, which MAY include fieldwork. Students are responsible for organising their own transport and accommodation as well as paying any costs incurred whilst carrying out fieldwork. These costs are extremely variable as they are dependent on where the student carries out their project. Costs are minimal if the project work is undertaken in the students' local area.

Additional requirement 5: Requirements governing Study Abroad

Students spending a semester abroad in year two must agree a programme of study with the Study Abroad tutor before they leave, and must agree any changes that become necessary. They should study an equivalent number of credits to that which they would have studied at Keele. They must submit a portfolio of work on their return. Marks will be converted into their Keele equivalents according to the agreement between Keele and the partner universities.

Additional requirement 6: Regulations governing the 4-year 'with work placement' degree programme

Students have the opportunity to apply directly for the 4-year 'with work placement year' degree programme, or to transfer onto the 4-year degree programme at the end of Year-1 and in Year-2 at the end of Semester 1. Students who are initially registered for the 4-year degree programme may transfer onto the 3-year degree programme at any point in time, prior to undertaking the year-long work placement. Students who fail to pass the work placement year, and those who fail to meet the minimum requirements of the work placement year module (minimum 30 weeks full time (1,050 hours), or equivalent, work placement), will be automatically transferred onto the 3-year degree programme.

Students opting to undertake the work placement year are strongly encouraged to take the existing Year-2 optional Work Placement module to help prepare for their work experience.

To be eligible for the work placement year, students must have a good University attendance record and be in 'good academic standing'. They must also have passed all Year-1 and Year-2 Semester 1 modules with an overall module average of > 55%. If a student chooses to start their work placement prior to the August of their placement year, then the student MUST ensure that they negotiate time off to attend any relevant field courses. Failure to attend field-courses due to a work placement position will not be considered as exceptional circumstances.

Students undertaking work placements will be expected to complete a Health and Safety checklist prior to commencing their work experience and will be required to satisfy the Health and Safety regulations of the company or organisation at which they are based.

[1] References to University Regulations in this document apply to the content of the University's Regulatory Framework as set out on the University website here <https://www.keele.ac.uk/regulations/>.

Version History

This document

Date Approved: 07 April 2021

Previous documents

Version No	Year	Owner	Date Approved	Summary of and rationale for changes
2	2020/21	IAN OLIVER	30 April 2020	At Level 4, 'Biodiversity, Ecology and the Environment' has been replaced by 'Introductory Geology for the Environmental Sciences' as a compulsory module, and there is a 15 instead of 30-credit Dissertation module at Level 6. There is also an additional compulsory module at Level 6 if specialising in this subject ('The Science of Soil').
1	2020/21	IAN OLIVER	25 February 2020	
2	2019/20	IAN OLIVER	01 May 2020	Changes to Level 5 and Level 6 modules including two new optional modules at Level 6
1	2019/20	EDWARD MCCAULEY	03 September 2019	