

Programme Specification: Undergraduate

For students starting in Academic Year 2023/24

1. Course Summary

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| Names of programme and award title(s) | BSc (Hons) Environmental Science and Geography BSc (Hons) Environmental Science and Geography with International Year (see Annex for details) BSc (Hons) Environmental Science and Geography with Work Placement Year (see Annex for details) |
| Award type | Single 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 pending accreditation from the Institution of Environmental Sciences (IES), the Institute of Environmental Management and Assessment (IEMA), and Royal Geographical Society (RGS). For further details see the section on Accreditation. |
| Regulator | Office for Students (OfS) |
| Tuition Fees | <p>UK students:</p> <p>Fee for 2023/24 is £9,250*</p> <p>International students:</p> <p>Fee for 2023/24 is £18,800**</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 Single Honours programme?

The Single Honours programme described in this document allows you to focus more or less exclusively on this subject. In keeping with Keele's commitment to breadth in the curriculum, the programme also gives you the opportunity to take some modules in other disciplines and in modern foreign languages as part of a 360-credit Honours degree. Thus it enables you to gain, and be able to demonstrate, a distinctive range of graduate attributes.

3. Overview of the Programme

Environmental Science and Geography BSc brings together two incredibly relevant subjects for today's global societies with ever-increasing employment prospects and career opportunities. An interdisciplinary course, it 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; and physical geography techniques and knowledge to understand the processes that shape the Earth's surface and how they impact on human lives.

The first year highlights the basic principles of the chemical, ecological and geographical subjects underpinning the fields of environmental science and physical geography. This broad-based introductory programme provides a platform from which knowledge, understanding and skills can subsequently be developed. The second year places an emphasis on developing practical and research skills, and developing deeper scientific understanding behind a range of environmental issues. The final year provides the opportunity to specialise or to maintain a broad portfolio, while maintaining a strong basis in the skills and techniques of environmental science and physical geography. The programme also culminates with the opportunity for students to unleash their creativity and apply the techniques they have acquired throughout their studies by completing an independent research project on a topic of their choice.

Exploring the ecology, geology, geography, and chemistry disciplines that underpin the subjects, the programme places strong emphasis on developing practical, laboratory and field-based skills which enable students to develop a wide range of both subject-specific and transferable skills to take into future employment. Students will develop an awareness of the nature, causes and scope of environmental, ecological and sustainability challenges and develop professional skills in areas including fieldwork, programming and statistics. This application of professional skills to real-world situations equips students to drive positive environmental change within a wide variety of sectors and for life as a responsible global citizen.

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.
- achieve a sound knowledge and understanding of a range of different specialisms within and approaches to Geography, while recognising both the diversity of the discipline and its unifying theme.
- 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;
- acquire a range of cognitive, generic, and transferable skills, including practical and technical skills and techniques appropriate to environmental science and geography, and to deploy these skills to tackle a range of environmental and geographical issues and problems.
- 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, teamwork and independent work, problem solving and searching and evaluating literature and related-resources.
- make critical assessments of sources of information, to engage effectively in their own independent research, and to communicate ideas in a concise and effective way.
- become expert in specific areas of the discipline or particular interest and/or relevance to future career pathways.

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

The Environmental Science and Geography programme aligns itself closely with key aspects of 'The Keele Approach to Education', including interdisciplinarity, sustainability, internationality, decolonising the curriculum, and employability. The University Campus, which has lakes, woods, wildflower meadows, a renewable energy park and many more features is used to teach skills in an authentic manner where the intersection of nature and human activity is explicit.

Interdisciplinarity: This is an explicitly interdisciplinary subject synthesising material from a broad range of subject areas such as geology, biology, history, and sociology. Taught by a range of expert staff with specialisms ranging from glaciology and paleoecology to social policy and anthropology and taking advantage of close collaboration with other courses such as Geology, Environment and Sustainability, and Ecology and Conservation this course adopts an interdisciplinary approach to teaching and encourages an interdisciplinary attitude in students and graduates. Even our most specialised modules allow students to identify and explore connections with other disciplines both in research and in the application of subject knowledge to specific authentic problems such as resource management and hazard mitigation.

Sustainability: Interactions between people and their environment are at the heart of Environmental Science and Geography, and the subject engages directly with global challenges such as climate change, food security and the energy transition. The subject matter and approach of the course is clearly aligned with two of the core areas of sustainability identified by Bone and Agombar, HEA, 2011: living within environmental limits and using sound science responsibly. The HEFCE (2008) strategic review asserted that "Teaching (or research) that is significant for sustainable development will include a significant element related to either or both of the natural environment and natural resources, PLUS a significant element related to either or both of economic or social issues." Environmental Science and Geography clearly addresses both the natural environment and natural resources, and also puts those issues clearly into the context of economic and social issues. All students at Levels 4, 5 and 6 will have the opportunity to study the relationship between people and the environment, including the interplay between economic development and environmental impacts.

Internationality: This course focuses explicitly on processes and phenomena that occur at a range of scales including the global scale. These can range from the examination of the environmental impact of an individual to the local and regional impacts of climate change. It is at its very core about achieving an insight into the way the world works that transcends physical and political boundaries and gives students a thorough appreciation of the international global context of local issues. Environmental Science and Geography as a scientific and applied discipline is conducted as an international enterprise by scientists and practitioners from across the globe, and students will engage with their work to encounter international case studies, people and issues. In some topics, such as attitudes to the exploitation of Arctic resources, conflicting opinions are based on national affiliations or local contexts, and students are required to understand how those different international perspectives influence attitudes to the environment in their field of study. Many topics in Environmental Science and Geography are explicitly transnational, and our teaching explicitly requires students to take an international perspective to scientific and applied issues. All students take part in field courses, all are encouraged to consider opportunities for periods of international study, and all have the opportunity to engage in international work in their final-year dissertation project. Environmental Science and Geography at Keele focuses on the global context of local issues, and all students encounter transnational topics and international practitioners on a global stage.

Decolonising the Curriculum: Keele is committed to Decolonising the Curriculum (DTC), and to this end, every single school in every faculty in the university has a DTC Network comprising of both staff and students. Moreover, Keele has established a new role - the Academic Lead of DTC in Keele - who is tasked with leading DTC efforts and the DTC working group which comprises academics, professional staff, Student Union officers, and KIITE officers. All programmes in the School of Geography, Geology and the Environment are working towards Decolonising the Curriculum to ensure the greater inclusivity, diversity, and representativeness of the discipline. To that end, throughout Level 4, 5, and 6, we embed an understanding of the imperial roots/foundation of the discipline and its far-reaching implications, we critique the structure and processes and methods of our teaching and research, ensure greater levels of internationalisation and intersectionality in creating a pluriversal and sited syllabi, and intentionally create safer classrooms.

Employability: Our focus on climate change, global responsibility, sustainability, and the application of professional environmental and geographical skills to real-world situations will prepare you for a wide range of careers and for life as a responsible global citizen. What you learn here will equip you for future employment and for a lifelong appreciation of the world around you.

Environmental Science and Geography students acquire a wide range of skills that are directly relevant both in vocationally specific Geographical careers and in non-Geography employment. Career-relevance is embedded within our course, parts of which (e.g., 2nd year practical programme) were developed in consultation with industrial partners to ensure that employability skills were included. In evidence to the UK Parliament Commons Select Committee on Business Innovation and Skills in 2010, Richard Waite, Managing

Director of ESRI UK, said that: "Studying geography and learning how to utilise geographic information gives new employees many of the key skills that businesses are crying out for... But if business needs geographers now, this will be even more true in the future. Location is becoming increasingly recognised as an important factor in decision making."

"A survey of 200 business leaders across the public and private sectors showed that the skills they are looking for in future employees are critical thinking (nominated by 78 per cent of businesses leaders as key for graduates), advanced analytical skills (76 per cent), understanding and interpreting complex data (71 per cent), advanced technology skills (57 per cent) ... all of which can be gained through this degree...

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 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 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:

- the application of the ecological, biological, geological 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
- the interdependence of human and physical aspects of the geographical environment
- the contribution of research to the development of geographical knowledge
- the dynamic, plural and contested nature of the discipline
- patterns of spatial variation as dynamic characteristics of the human and physical environment
- characteristics, diversity and interdependence of places outside their own everyday experience
- the way that human and physical environments change through time
- the significance of spatial and temporal scale in human and physical processes
- diverse manners of representing human and physical environments
- the use of systems at a range of scales to conceptualise patterns, processes, interactions and change in the human and physical world
- different methodological strategies used in the observation, analysis, interpretation and representation of geographical information
- applications and limitations of Geography in problem solving, equitable and sustainable development, and improving quality of life

Subject specific skills

The acquisition of subject specific skills is an important part of the Environmental Science and Geography 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) and geographical 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 or physical geography, 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 and Geography 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 and Geography 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
- plan, design and execute a piece of research in Geography, including production of a final report
- prepare effective maps and diagrams using a range of appropriate technologies
- employ a variety of technical, statistical, qualitative and laboratory-based methods for the collection and analysis of spatial, social, and environmental information
- assess and use different types of documentary data sources
- combine and interpret different types of geographical evidence
- recognise moral and ethical issues involved in geographical debates
- effectively employ a range of specialist software to address a variety of geographical problems (e.g. use of GIS software to visualise and analyse geographical data)

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

Intellectual skills are developed throughout the programme but are addressed most explicitly within the practical's and field courses in year 1 (Academic, Fieldwork and Employability Skills); the practical's, seminars and field courses in year 2 (Environmental Impact Assessment: Practical Geographical and Environmental Skills); and the dissertation supervision meetings in the final year. Particular attention is paid to key transition skills in the year 1 practical programme, covering for example essay writing skills and information literacy skills. Students also have the opportunity to learn additional intellectual skills within the Personal Development theme of the Keele Approach to Education and through engagement with away day sessions run in collaboration with Student Learning.

Assessment of intellectual skills is achieved through a range of means including group discussions, coursework and examination essays, literature reviews, reflective diaries, practical exercises, practical exercises, fieldwork exercises and the final-year dissertation.

Employability Skills are embedded within the modules in all three years in order to equip students with core skills and knowledge, which are transferable into post-University experience. In addition, where relevant, modules seek to highlight relevant employment opportunities for geography graduates and in some cases involve activities and assignments that replicate those undertaken in related professions (e.g. Environmental Impact Assessment: Practical Geographical and Environmental Skills; Employability Training: Engaging with the Workplace; Environmental Analytical Methods). Students can also elect to take a work-placement module in year 2 that provides an explicit opportunity to gain direct experience of a professional working environment.

Successful students will develop proficiency in the following skill sets:

- **Written communication skills:** The development of written communication skills is a key element of the programme and students are required to complete various written assignments in all three years including essays, poster presentations, technical reports and a large dissertation. Specific training is provided within the year 1 module Academic, Fieldwork and Employability Skills in particular, which addresses relevant skills including referencing and academic writing skills
- **Oral presentation skills:** Students gain experience in oral presentation skills within various modules including the year 1 module Academic, Fieldwork and Employability Skills, the year 2 UK-based field courses and various option modules
- **Communication skills:** Students are encouraged to discuss and debate ideas within small-seminar sessions within year 1. In addition, students are continually encouraged to discuss specific aspects of their work with their peers and with their module tutors.
- **Problem solving skills:** The ability to resolve problems with complex solutions is an important part of the programme and is included within a range of module assessments and fieldwork activities
- **Fieldwork skills:** Students are introduced to a range of field skills such as surveying during the course of the degree programme. They are also trained in risk assessment techniques that are central to safe working in the field
- **Numeracy skills:** Numerous practical exercises include the analysis and manipulation of numerical datasets. The first-year practical programme in particular involves the geographical application of a variety of statistical techniques
- **Independent research skills:** Successful completion of the degree programme requires students to work independently. This ranges from the wider reading required to expand on material covered within the lectures, to the final completion of a major independent research project in year 3
- **Information literacy skills:** Effective engagement with a range of advanced sources requires the development of sophisticated search skills and an ability to engage with material at the forefront of the discipline. These skills are introduced in the year 1 module Academic, Fieldwork and Employability Skills and further developed in years 2 and 3 of the programme
- **Team working:** Team work is an integral part of the field courses in years 1 and 2 and students therefore have numerous opportunities to work as part of a team. Some modules include assessments that require students to work as a group (e.g. Environmental Impact Assessment: Practical Geographical and Environmental Skills)
- **IT skills:** Key IT skills are taught to all undergraduates at the beginning of Year 1. Instruction is given in core software applications (e.g. spreadsheet software) so that all students have the same level of core knowledge of essential computing techniques. Particular emphasis is placed on the use of industry-standard GIS software (ArcGIS) to analyse, visualise and integrate spatial datasets.

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
- Field courses
- Practical classes
- Project work
- Seminars, group presentations and workshops
- Individual progress interviews, including personal development planning
- Directed reading and independent study
- A research dissertation
- Interactive online e-learning via 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 Academic Mentors or module lecturers on a one-to-one basis.

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. Geography is a modular degree programme taught within the School of Geography, Geology and the Environment, which includes lecturers with expertise in Geography, Earth Sciences and Environmental Sciences.

All Environmental Science and Geography teaching staff are actively involved in research and/or scholarship and most are internationally recognised experts in their fields. Environmental Scientists and Geographers have won the annual Keele University "Excellence in Teaching" award a number of times, including individual awards for excellence in teaching and a team award for excellence to the whole programme.

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.

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;
- Global Challenge Pathways (students studying at Level 6 in 2023/24 may take electives instead) - a choice of modules from different subject areas within the University that count towards the overall credit requirement but not the number of subject-related credits.

Students at Level 4 and Level 5 in 2023/24 have the option of taking a Global Challenge Pathway, which includes one 15-credit module in each year of the degree. Information about Global Challenge Pathways can be found after the module lists for Level 5.

For further information on the content of modules currently offered, please visit:

<https://www.keele.ac.uk/recordsandexams/modulecatalogue/>

A summary of the credit requirements per year is as follows.

| Year | Compulsory | Optional | | Electives | |
|---------|------------|----------|-----|-----------|-----|
| | | Min | Max | Min | Max |
| Level 4 | 90 | 15 | 30 | 0 | 15 |
| Level 5 | 105 | 0 | 15 | 0 | 15 |
| Level 6 | 0 | 105 | 120 | 0 | 15 |

Module Lists

Level 4

At Level 4, BSc Environmental Science and Geography students take 90 compulsory credits. The remaining 30 credits may either be used to take a Global Challenge Pathway and an optional module, or two optional modules, from the list above.

| Compulsory modules | Module Code | Credits | Period |
|---|-------------|---------|--------------|
| Introductory Environmental Chemistry | CHE-10044 | 15 | Semester 1 |
| Fundamentals of Physical Geography | ESC-10039 | 15 | Semester 1 |
| Introductory Geology | ESC-10092 | 15 | Semester 1 |
| Studying the Environment | ESC-10061 | 15 | Semester 1-2 |
| Academic, Professional and Fieldwork Skills | ESC-10094 | 30 | Semester 1-2 |

| Optional modules | Module Code | Credits | Period |
|---|--------------------|----------------|---------------|
| Nature, Conservation & Society | GEG-10015 | 15 | Semester 1 |
| Science & Society | NAT-10001 | 15 | Semester 1-2 |
| People and the Environment | ESC-10041 | 15 | Semester 2 |
| Greening Business: Employability and Sustainability | ESC-10043 | 15 | Semester 2 |
| Climate Change: The Scientific and Societal Context | ESC-10066 | 15 | Semester 2 |

NB: Global Challenge Pathways (GCPs) - students at Level 4 and Level 5 in 2023/24 have the option of taking a Global Challenge Pathway, which includes one 15-credit module in each year of the degree. Information on GCPs is shown under the Level 5 modules below.

Language modules

Students on this programme will also be able to study language modules offered by the Language Centre, as part of a Global Challenge Pathway. You can enrol on either a Modern Language module [more information available at this [link](#)] (Semester 1 only) or Teaching English to Speakers of Other Languages (TESOL) (Semesters 1 and 2) module (ENL-10053).

If you choose a Modern Language, you can add a Semester 2 module as a continuation of your language of choice as a faculty funded 'additional' module. Undertaking a Modern Languages module in Semester 2 is compulsory if you wish to continue to the language GCP the following academic year.

Level 5

| Compulsory modules | Module Code | Credits | Period |
|--|--------------------|----------------|---------------|
| Human Impact on the Environment, scientific perspectives | ESC-20017 | 15 | Semester 1 |
| Cartography and Geographic Information Science | ESC-20102 | 15 | Semester 1 |
| Environmental Impact Assessment: Practical Geographical and Environmental Skills | ESC-20108 | 15 | Semester 1 |
| Earth's Changing Landscapes | ESC-20110 | 15 | Semester 1 |
| Employability Training: Engaging with the Workplace | ESC-20092 | 15 | Semester 1-2 |
| Environmental Analytical Methods | ESC-20032 | 15 | Semester 2 |
| Geographical and Environmental Field Skills | ESC-20106 | 15 | Semester 2 |

| Optional modules | Module Code | Credits | Period |
|---|-------------|---------|--------------|
| Palaeoclimatology and Quaternary Studies | ESC-20036 | 15 | Semester 1 |
| Interdisciplinary Perspectives on Wicked Problems | NAT-20007 | 15 | Semester 1-2 |
| Sustainable Chemistry | CHE-20032 | 15 | Semester 2 |
| Geoscience and Society | ESC-20037 | 15 | Semester 2 |
| Biodiversity Crisis | LSC-20093 | 15 | Semester 2 |

Level 5 Module Rules

At Level 5, there are 105 compulsory credits the remaining 15 credits may either be used to take a Global Challenge Pathway or an optional module from the list above.

Global Challenge Pathways (GCPs)

Students at Level 4 and Level 5 in 2023/24 have the option of taking a Global Challenge Pathway, which includes one 15-credit module in each year of the degree. Students at Level 5 will continue the Global Challenge Pathway they started at Level 4.

Global Challenge Pathways offer students the chance to fulfil an exciting, engaging route of interdisciplinary study. Choosing a pathway, students will be presented with a global issue or 'challenge' which directly relates to societal issues, needs and debates. They will be invited to take part in academic and external facing projects which address these issues, within an interdisciplinary community of students and staff. Students completing a Global Challenge Pathway will receive recognition on their degree certificate.

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| <p>Digital Futures</p> | <p>The Digital Futures pathway offers you the opportunity to become an active contributor to current debates, cutting-edge research, and projects with external partners, addressing both the exciting potential and the challenges of disruptive digital transformation across all spheres of life.</p> <p>Part of a diverse and interdisciplinary pathway community, you will engage in exciting, impactful collaborative project work in innovative formats. Engaged in real-world scenarios, you will use digital technology and creativity to promote inclusive, empowering, and sustainable change at local and global levels.</p> <p>Level 4 Module: A digital life: challenges and opportunities (GCP-10005)</p> <p>Level 5 Module: Digital World - People, Spaces, and Data (GCP-20005)</p> |
| <p>Climate Change & Sustainability</p> | <p>Through the Climate Change & Sustainability pathway you will develop the skills, understanding and drive to become agents of change to tackle climate change and wider sustainability challenges.</p> <p>You will work with international partners to explore climate change and sustainability in different international contexts; lead your own projects to drive real change in your communities; and be part of educating others to help achieve a more sustainable future.</p> <p>Level 4 Module: Climate Change and Sustainable Futures: Global Perspectives (GCP-10009)</p> <p>Level 5 Module: Climate Change and Sustainability: Action and Activism (GCP-20009)</p> |

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|---|---|
| <p>Social Justice</p> | <p>Students on this pathway will embark on a reflective journey drawing upon decolonising, feminist, and ethical perspectives on social justice, forging transformative outputs as agents of change.</p> <p>You will enter a dialogue with local, national, and international partners from Universities, NGOs, International Human Rights Committees. You will engage with key societal challenges, for example Covid 19 as a social crisis with impact on gender and racial identities. The pathway will allow you to monitor and critically evaluate policies and human rights treaties, and produce and disseminate digitally fluent, international and sustainable project findings.</p> <p>Level 4 Module: Reflections on Social Injustices, Past and Present (GCP-10003)</p> <p>Level 5 Module: Strategic Interventions for Social Justice (GCP-20003)</p> |
| <p>Enterprise & the Future of Work</p> | <p>If we are to achieve the promise of Sustainable Development Goals, solve the climate crisis and take advantage of the changes that the digital revolution provide, we need to understand the power of enterprise and prepare for future contexts of work, creativity and disruption.</p> <p>Supporting you to be part of future-facing solutions, this pathway will give you the ability to make judgements on the utilisation of resources, labour and capital. It will support you in developing creative, original thinking, allowing you to collaborate on projects that persuade and effect change, setting you up to thrive in future environments of work and innovation.</p> <p>Level 4 Module: Enterprise and the Future of Work (GCP-10007)</p> <p>Level 5 Module: Enterprise and the Future of Work: Collaborate to Innovate (GCP-20007)</p> |
| <p>Global Health Challenges</p> | <p>By taking the global health challenge pathway you will develop solutions to improve the health and quality of life for particular people and communities, engaging with these groups to co-design interventions.</p> <p>This pathway will provide you with skills that go beyond a focus on health and will allow you to develop your ability to work in a team and lead change in society. The knowledge, skills and work experience will complement your core degree and enhance your career opportunities and graduate aspirations.</p> <p>Level 4 Module: Key concepts and challenges in global health (GCP-10001)</p> <p>Level 5 Module: Using Evidence to Improve Global Health (GCP-20001)</p> |

Languages & Intercultural Awareness

An understanding of language and culture opens the doorway to understanding what happens, why it happens and how you can make a difference. Why learn Russian now? How will an understanding of intercultural values impact on global development? How can you use English to work your way around the world? Importantly - how do language and culture impact on the UN Sustainability Goals?

The Languages and Intercultural Awareness pathway offers you four distinct strands.

The Language Specialist: Become a specialist in one of our languages and graduate with a degree title that includes '... with competency in (Language)'.
The Language Taster: Explore a new language every year

The Certificate in TESOL (Teaching English to Speakers of Other Languages): Train to teach English as a Foreign Language, gain a globally recognised teaching qualification and work with asylum seekers and refugees.

The Intercultural Explorer: Explore cultural practices around the world and discover how the power of language and culture can be forces for breaking down barriers and achieving intercultural understanding, but how they can also be used to create political and social barricades.

Modules available:

The Language Specialist:

Any Semester 1 Language Module (the level at which you enter will be determined by your previous language learning experiences).

The Language Taster:

Any Semester 1 Language Module (the level at which you enter will be determined by your previous language learning experiences)

The Certificate in TESOL:

ENL-10053 TESOL 1

ENL-20007 TESOL 2

The Intercultural Explorer:

ENL-10057 The stories we live by

ENL-20009 Who do you think you are?

Information on Global Challenge Pathways can be found here:
<https://www.keele.ac.uk/study/undergraduate/globalchallengepathways/>

Language modules

You can enrol on the continuing Modern Language module [more information available at this [link](#)] (Semester 1 only) or the continuing TESOL (Semesters 1 and 2) module (ENL-20007).

If you choose a Modern Language, you can add a Semester 2 module as a continuation of your language of choice as a faculty funded 'additional' module. Undertaking a Modern Languages module in Semester 2 is compulsory if you wish to continue to the language GCP the following academic year.

Level 6

| 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 |
| Sustainability Consultancy | ESC-30060 | 15 | Semester 1 |
| Economic Development and Environmental Transformation | GEG-30016 | 15 | Semester 1 |
| Animals and Society | GEG-30021 | 15 | Semester 1 |
| Conservation Biology | LSC-30043 | 15 | Semester 1 |
| Insect Ecology and Pest Management | LSC-30070 | 15 | Semester 1 |
| Work Placement Year | ESC-30042 | 120 | Semester 1-2 |
| Dissertation | ESC-30047 | 30 | Semester 1-2 |
| Dissertation (15-credit) | ESC-30050 | 15 | Semester 1-2 |
| Advanced Fieldwork in Geography | GEG-30027 | 15 | Semester 1-2 |
| Hydrological and Engineering Geology | ESC-30022 | 15 | Semester 2 |
| Coastal Environments | ESC-30027 | 15 | Semester 2 |
| Blue Economy: sustainable futures with an ocean focus | ESC-30108 | 15 | Semester 2 |
| Inspirational Landscapes | GEG-30014 | 15 | Semester 2 |
| Animal Welfare | LSC-30072 | 15 | Semester 2 |
| Plant Science and Sustainability | LSC-30076 | 15 | Semester 2 |

Level 6 Module Rules

Of the 90 credits of option modules, at least 45 credits must come from ESC- coded modules. Students must take ESC-30047 (30 credits) or ESC-30050 (15 credits) as a compulsory module.

Language modules: You can enrol on a Modern Language module (Semester 1 or 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.

Level 4

| Subject Knowledge and Understanding | |
|--|--|
| Learning Outcome | Module in which this is delivered |
| the application of the ecological, biological and chemical sciences to environmental science; | Introductory Environmental Chemistry - CHE-10044 Introductory Geology - ESC-10092 |
| fundamental principles of chemistry relevant to the Environmental Sciences; the application of fundamental chemical principles to a range of applications in environmental chemistry; | Introductory Environmental Chemistry - CHE-10044 Introductory Geology - ESC-10092 |
| the ways in which populations and communities function and interact; | People and the Environment - ESC-10041 Studying the Environment - ESC-10061 Climate Change: The Scientific and Societal Context - ESC-10066 |
| theories and concepts in ecology and conservation; | Nature, Conservation & Society - GEG-10015 Studying the Environment - ESC-10061 |
| the ecology and environmental issues of a specified ecosystem; | Studying the Environment - ESC-10061 |
| the interdependence of human and physical aspects of the geographical environment; | People and the Environment - ESC-10041 |
| the contribution of research to the development of geographical knowledge; | People and the Environment - ESC-10041 Fundamentals of Physical Geography - ESC-10039 |
| the dynamic, plural and contested nature of the discipline; | People and the Environment - ESC-10041 Fundamentals of Physical Geography - ESC-10039 |
| patterns of spatial variation as dynamic characteristics of the human and physical environment; | Fundamentals of Physical Geography - ESC-10039 People and the Environment - ESC-10041 |
| characteristics, diversity and interdependence of places outside their own everyday experience; the way that human and physical environments change through time; the significance of spatial and temporal scale in human and physical processes; diverse manners of representing human and physical environments; | Climate Change: The Scientific and Societal Context - ESC-10066 People and the Environment - ESC-10041 Academic, Professional and Fieldwork Skills - ESC-10094 Studying the Environment - ESC-10061 Nature, Conservation & Society - GEG-10015 Fundamentals of Physical Geography - ESC-10039 |
| the use of systems at a range of scales to conceptualise patterns, processes, interactions and change in the human and physical world; | All modules |
| different methodological strategies used in the observation, analysis, interpretation and representation of geographical information; | Fundamentals of Physical Geography - ESC-10039 Academic, Professional and Fieldwork Skills - ESC-10094 |
| applications and limitations of Geography in problem solving, equitable and sustainable development, and improving quality of life. | Nature, Conservation & Society - GEG-10015 Studying the Environment - ESC-10061 People and the Environment - ESC-10041 |

| 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 | Introductory Environmental Chemistry - CHE-10044 |

| Subject Specific Skills | |
|--|--|
| Learning Outcome | Module in which this is delivered |
| 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 |
| demonstrate familiarity with a range of ecological and geochemical laboratory and field techniques | Academic, Professional and Fieldwork Skills - ESC-10094 |
| collect, synthesize, evaluate and present environmental (geochemical, ecological, geological) and geographical data | Academic, Professional and Fieldwork Skills - ESC-10094 |
| perform calculations involving simple population dynamics models | Academic, Professional and Fieldwork Skills - ESC-10094 |
| 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 | Academic, Professional and Fieldwork Skills - ESC-10094 Introductory Environmental Chemistry - CHE-10044 |
| apply relevant quantitative techniques to the analysis of environmental problems | Academic, Professional and Fieldwork Skills - ESC-10094 Introductory Environmental Chemistry - CHE-10044 Fundamentals of Physical Geography - ESC-10039 |
| manipulate, analyse and interpret data sets relating to an area of environmental science | All modules |
| integrate biological, geological and chemical aspects of field (and laboratory) study by preparing a report/presentation on investigations of several habitats | Introductory Environmental Chemistry - CHE-10044 Introductory Geology - ESC-10092 |
| evaluate solutions to problems of managing a disturbed/degraded area | Climate Change: The Scientific and Societal Context - ESC-10066 Studying the Environment - ESC-10061 People and the Environment - ESC-10041 |
| evaluate possible options for alternative solutions to environmental problems | Climate Change: The Scientific and Societal Context - ESC-10066 Greening Business: Employability and Sustainability - ESC-10043 People and the Environment - ESC-10041 Studying the Environment - ESC-10061 |
| demonstrate familiarity with a range of field and laboratory techniques appropriate to Environmental Science and Geography investigation | Academic, Professional and Fieldwork Skills - ESC-10094 Introductory Environmental Chemistry - CHE-10044 Introductory Geology - ESC-10092 |
| 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 | Introductory Environmental Chemistry - CHE-10044 |
| 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 | Studying the Environment - ESC-10061 |
| prepare effective maps and diagrams using a range of appropriate technologies | Academic, Professional and Fieldwork Skills - ESC-10094 |
| employ a variety of technical, statistical, qualitative and laboratory-based methods for the collection and analysis of spatial, social, and environmental information | Academic, Professional and Fieldwork Skills - ESC-10094 |

| Subject Specific Skills | |
|---|---|
| Learning Outcome | Module in which this is delivered |
| assess and use different types of documentary data sources; combine and interpret different types of geographical evidence | Studying the Environment - ESC-10061 People and the Environment - ESC-10041 Climate Change: The Scientific and Societal Context - ESC-10066 |
| recognise moral and ethical issues involved in geographical debates | Climate Change: The Scientific and Societal Context - ESC-10066 People and the Environment - ESC-10041 Studying the Environment - ESC-10061 Nature, Conservation & Society - GEG-10015 Fundamentals of Physical Geography - ESC-10039 |
| effectively employ a range of specialist software to address a variety of geographical problems (e.g. use of GIS software to visualise and analyse geographical data) | Academic, Professional and Fieldwork Skills - ESC-10094 |

| Key or Transferable Skills (graduate attributes) | |
|---|---|
| Learning Outcome | Module in which this is delivered |
| develop and sustain effective approaches to learning and study, including time management, flexibility, creativity and intellectual integrity | All modules |
| 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 |
| 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 |
| use the internet as a means of communication and a source of information | All modules |
| demonstrate competence in spatial awareness and observation | Studying the Environment - ESC-10061 Introductory Geology - ESC-10092 Academic, Professional and Fieldwork Skills - ESC-10094 |
| conduct field and laboratory studies | Studying the Environment - ESC-10061 Academic, Professional and Fieldwork Skills - ESC-10094 |
| reference work in an appropriate manner | All modules |
| work with information handling and retrieval systems using data from a wide range of sources | All modules |
| 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 |

| Subject Knowledge and Understanding | |
|--|--|
| Learning Outcome | Module in which this is delivered |
| the application of the ecological, biological and chemical sciences to environmental science; | Geographical and Environmental Field Skills - ESC-20106 Environmental Impact Assessment: Practical Geographical and Environmental Skills - ESC-20108 |
| fundamental principles of chemistry relevant to the Environmental Sciences; | Sustainable Chemistry - CHE-20032 Environmental Analytical Methods - ESC-20032 |
| the application of fundamental chemical principles to a range of applications in environmental chemistry; | Sustainable Chemistry - CHE-20032 Environmental Analytical Methods - ESC-20032 |
| theories and concepts in ecology and conservation; | Environmental Analytical Methods - ESC-20032 Human Impact on the Environment, scientific perspectives - ESC-20017 |
| the ecology and environmental issues of a specified ecosystem; | Environmental Analytical Methods - ESC-20032 Human Impact on the Environment, scientific perspectives - ESC-20017 |
| 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); | Environmental Analytical Methods - ESC-20032 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; | Environmental Analytical Methods - ESC-20032 Human Impact on the Environment, scientific perspectives - ESC-20017 |
| 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) | Sustainable Chemistry - CHE-20032 Environmental Analytical Methods - ESC-20032 |
| a key multidisciplinary issue/problem reflecting the student's interests at the forefront of Environmental Science | Environmental Analytical Methods - ESC-20032 |
| the interdependence of human and physical aspects of the geographical environment; | Cartography and Geographic Information Science - ESC-20102 |
| the dynamic, plural and contested nature of the discipline; | Cartography and Geographic Information Science - ESC-20102 Geographical and Environmental Field Skills - ESC-20106 |
| patterns of spatial variation as dynamic characteristics of the human and physical environment; | Geographical and Environmental Field Skills - ESC-20106 Cartography and Geographic Information Science - ESC-20102 |
| characteristics, diversity and interdependence of places outside their own everyday experience; the way that human and physical environments change through time; the significance of spatial and temporal scale in human and physical processes; diverse manners of representing human and physical environments; | Geographical and Environmental Field Skills - ESC-20106 Earth's Changing Landscapes - ESC-20110 Cartography and Geographic Information Science - ESC-20102 |
| the use of systems at a range of scales to conceptualise patterns, processes, interactions and change in the human and physical world; | All modules |

| Subject Knowledge and Understanding | |
|---|--|
| Learning Outcome | Module in which this is delivered |
| different methodological strategies used in the observation, analysis, interpretation and representation of geographical information; | Geographical and Environmental Field Skills - ESC-20106 Earth's Changing Landscapes - ESC-20110 Cartography and Geographic Information Science - ESC-20102 |
| applications and limitations of Geography in problem solving, equitable and sustainable development, and improving quality of life; | Geographical and Environmental Field Skills - ESC-20106 |

| 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 Sustainable Chemistry - CHE-20032 |
| 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) | Environmental Analytical Methods - ESC-20032 |
| demonstrate familiarity with a range of ecological and geochemical laboratory and field techniques | Sustainable Chemistry - CHE-20032 Environmental Analytical Methods - ESC-20032 |
| collect, synthesize, evaluate and present environmental (geochemical, ecological, geological) and geographical data | 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; apply relevant quantitative techniques to the analysis of environmental problems; manipulate, analyse and interpret data sets relating to an area of environmental science | Environmental Analytical Methods - ESC-20032 Sustainable Chemistry - CHE-20032 |
| design an achievable piece of research applicable to the field of environmental science or physical geography, showing an ability to synthesize and interrogate the research literature and evaluate and select appropriate techniques | Environmental Analytical Methods - ESC-20032 |
| 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 |
| evaluate solutions to problems of managing a disturbed/degraded area | Geographical and Environmental Field Skills - ESC-20106 |
| 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 and Geography investigation | Environmental Analytical Methods - ESC-20032 |
| 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 Earth's Changing Landscapes - ESC-20110 |

| Subject Specific Skills | |
|---|---|
| Learning Outcome | Module in which this is delivered |
| 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 | Environmental Impact Assessment: Practical Geographical and Environmental Skills - ESC-20108 Geographical and Environmental Field Skills - ESC-20106 |
| apply their own knowledge, skills and experience to an aspect of current Environmental Science and Geography 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 | Geographical and Environmental Field Skills - ESC-20106 Environmental Analytical Methods - ESC-20032 |

| Key or Transferable Skills (graduate attributes) | |
|---|--|
| Learning Outcome | Module in which this is delivered |
| develop and sustain effective approaches to learning and study, including time management, flexibility, creativity and intellectual integrity | All modules |
| 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 |
| 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 |
| use the internet as a means of communication and a source of information | All modules |
| demonstrate competence in spatial awareness and observation | Cartography and Geographic Information Science - ESC-20102 Human Impact on the Environment, scientific perspectives - ESC-20017 |
| conduct field and laboratory studies | Environmental Impact Assessment: Practical Geographical and Environmental Skills - ESC-20108 Environmental Analytical Methods - ESC-20032 |
| reference work in an appropriate manner | All modules |
| work with information handling and retrieval systems using data from a wide range of sources | All modules |
| 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 |

Level 6

| Subject Knowledge and Understanding | |
|---|---|
| Learning Outcome | Module in which this is delivered |
| the application of the ecological, biological and chemical sciences to environmental science; | Dissertation (15-credit) - ESC-30050 Dissertation - ESC-30047 Global Environmental Change - ESC-30018 Natural Hazards - ESC-30009 |
| fundamental principles of chemistry relevant to the Environmental Sciences; | All modules |
| the application of fundamental chemical principles to a range of applications in environmental chemistry; | All modules |
| the ways in which populations and communities function and interact; | Animals and Society - GEG-30021 Economic Development and Environmental Transformation - GEG-30016 Sustainability Consultancy - ESC-30060 Applied GIS - ESC-30044 Global Environmental Change - ESC-30018 Natural Hazards - ESC-30009 |
| theories and concepts in ecology and conservation; | Animals and Society - GEG-30021 Conservation Biology - LSC-30043 Insect Ecology and Pest Management - LSC-30070 Plant Science and Sustainability - LSC-30076 |
| the ecology and environmental issues of a specified ecosystem; | Conservation Biology - LSC-30043 Plant Science and Sustainability - LSC-30076 Insect Ecology and Pest Management - LSC-30070 |
| 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); | Natural Hazards - ESC-30009 Advanced Fieldwork in Geography - GEG-30027 Sustainability Consultancy - ESC-30060 Global Environmental Change - ESC-30018 |
| pressures and threats on terrestrial and aquatic ecosystems as well as the Earth's climate that are related to human activity; | Natural Hazards - ESC-30009 Coastal Environments - ESC-30027 Global Environmental Change - ESC-30018 |
| possible options for alternative solutions to environmental problems and their implications for nature and society; possible options for alternative solutions to environmental problems and their implications for nature and society; | Natural Hazards - ESC-30009 Coastal Environments - ESC-30027 Sustainability Consultancy - ESC-30060 Global Environmental Change - ESC-30018 |
| environmental management issues in a range of different environments | Natural Hazards - ESC-30009 Sustainability Consultancy - ESC-30060 Global Environmental Change - ESC-30018 |
| 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) | Natural Hazards - ESC-30009 Advanced Fieldwork in Geography - GEG-30027 Economic Development and Environmental Transformation - GEG-30016 Global Environmental Change - ESC-30018 |
| a key multidisciplinary issue/problem reflecting the student's interests at the forefront of Environmental Science | Global Environmental Change - ESC-30018 Dissertation (15-credit) - ESC-30050 Dissertation - ESC-30047 |
| the interdependence of human and physical aspects of the geographical environment; | Global Environmental Change - ESC-30018 Natural Hazards - ESC-30009 |
| the dynamic, plural and contested nature of the discipline; | All modules |
| patterns of spatial variation as dynamic characteristics of the human and/or physical environment; | Applied GIS - ESC-30044 Glaciers and Glacial Geomorphology - ESC-30006 |
| characteristics, diversity and interdependence of places outside their own everyday experience; | Advanced Fieldwork in Geography - GEG-30027 Glaciers and Glacial Geomorphology - ESC-30006 |

| Subject Knowledge and Understanding | |
|--|--|
| Learning Outcome | Module in which this is delivered |
| the way that human and physical environments change through time; | Natural Hazards - ESC-30009 Applied GIS - ESC-30044 Global Environmental Change - ESC-30018 |
| the significance of spatial and temporal scale in human and/or physical processes; | Glaciers and Glacial Geomorphology - ESC-30006 Applied GIS - ESC-30044 Coastal Environments - ESC-30027 Animals and Society - GEG-30021 Advanced Fieldwork in Geography - GEG-30027 Economic Development and Environmental Transformation - GEG-30016 |
| diverse manners of representing human and physical environments; | Natural Hazards - ESC-30009 Applied GIS - ESC-30044 Global Environmental Change - ESC-30018 |
| the use of systems at a range of scales to conceptualise patterns, processes, interactions and change in the human and physical world; | Applied GIS - ESC-30044 Dissertation (15-credit) - ESC-30050 Dissertation - ESC-30047 |
| different methodological strategies used in the observation, analysis, interpretation and representation of geographical information; | Applied GIS - ESC-30044 Economic Development and Environmental Transformation - GEG-30016 Advanced Fieldwork in Geography - GEG-30027 Dissertation - ESC-30047 Dissertation (15-credit) - ESC-30050 Animals and Society - GEG-30021 |
| applications and limitations of Geography in problem solving, equitable and sustainable development, and improving quality of life. | Applied GIS - ESC-30044 Dissertation (15-credit) - ESC-30050 Dissertation - ESC-30047 |

| 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 | Ecotoxicology and Risk Assessment - ESC-30056 |
| 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) | All modules |
| demonstrate familiarity with a range of ecological and geochemical laboratory and field techniques | Advanced Fieldwork in Geography - GEG-30027 Ecotoxicology and Risk Assessment - ESC-30056 |
| collect, synthesise, evaluate and present environmental (geochemical, ecological, geological) and geographical data | Applied GIS - ESC-30044 Ecotoxicology and Risk Assessment - ESC-30056 Coastal Environments - ESC-30027 Advanced Fieldwork in Geography - GEG-30027 Sustainability Consultancy - ESC-30060 |
| 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 | Applied GIS - ESC-30044 Dissertation (15-credit) - ESC-30050 Dissertation - ESC-30047 |

| Subject Specific Skills | |
|---|--|
| Learning Outcome | Module in which this is delivered |
| design an achievable piece of research applicable to the field of environmental science or physical geography, showing an ability to synthesize and interrogate the research literature and evaluate and select appropriate techniques | Dissertation (15-credit) - ESC-30050 Dissertation - ESC-30047 |
| integrate biological, geological and chemical aspects of field (and laboratory) study by preparing a report/presentation on investigations of several habitats | Dissertation (15-credit) - ESC-30050 Dissertation - ESC-30047 |
| evaluate solutions to problems of managing a disturbed/degraded area | Global Environmental Change - ESC-30018 Natural Hazards - ESC-30009 |
| evaluate possible options for alternative solutions to environmental problems | Natural Hazards - ESC-30009 Global Environmental Change - ESC-30018 Animals and Society - GEG-30021 Economic Development and Environmental Transformation - GEG-30016 Sustainability Consultancy - ESC-30060 |
| demonstrate familiarity with a range of field and laboratory techniques appropriate to Environmental Science and Geography investigation | Dissertation - ESC-30047 Advanced Fieldwork in Geography - GEG-30027 Dissertation (15-credit) - ESC-30050 |
| 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 - ESC-30047 Advanced Fieldwork in Geography - GEG-30027 Dissertation (15-credit) - ESC-30050 |
| apply their own knowledge, skills and experience to an aspect of current Environmental Science and Geography 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 | Sustainability Consultancy - ESC-30060 Advanced Fieldwork in Geography - GEG-30027 Dissertation (15-credit) - ESC-30050 Dissertation - ESC-30047 |

| Key or Transferable Skills (graduate attributes) | |
|---|---|
| Learning Outcome | Module in which this is delivered |
| develop and sustain effective approaches to learning and study, including time management, flexibility, creativity and intellectual integrity | All modules |
| 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 |
| 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 |
| use the internet as a means of communication and a source of information | All modules |
| conduct field and laboratory studies | Applied GIS - ESC-30044 Advanced Fieldwork in Geography - GEG-30027 Ecotoxicology and Risk Assessment - ESC-30056 |
| reference work in an appropriate manner | All modules |
| work with information handling and retrieval systems using data from a wide range of sources | All modules |
| 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 | You will require at least 120 credits at levels 4, 5 and 6 You must accumulate at least 270 credits in your main subject (out of 360 credits overall), with at least 90 credits in each of the three years of study, to graduate with a named single honours degree in this subject. |
| 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 'with Work Placement Year' wording. Students who do not complete, or fail the work 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:

- **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).
- **Technical reports** - structured proformas and reports are formal summaries of work that test students' understanding of the practical aspects of the programme and develop the skills necessary to enable students to present and analyse their results.
- **Reflective diaries** require students to keep a record of their critical or creative responses to the work of the module. 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.
- **Maps and Poster presentations** demonstrate the ability of the student to present complex concepts and information in a clear and concise manner, to interact and communicate effectively to a wide range of professional environments, including to both scientific and non-scientific audiences.
- **In-class and online exercises** 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.
- **Individual or group oral presentations** assess individual student's 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 notebook and portfolios** assess work that has been carried out in the field, and typically include field notebooks, research proposals, short quizzes and both oral and written presentations. The specific assessment portfolio will vary according to the field course destination and subject focus.
- **Fieldwork** is a distinctive core component of all the Geography courses.
- **Research proposals** require students to develop an independent research project and think through theoretical problems surrounding methodology and practical concerns relating to, for example, availability of sample, financial restrictions, and time limits. This form of assessment is key to the development of independent research skills and a portfolio of employability skills.
- **Independent Project** work test students' 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.
- **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.
- **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.
- **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) | 32% | 68% | 0% |
| Year 2 (Level 5) | 24% | 76% | 0% |
| Year 3 (Level 6) | 15% | 85% | 0% |

12. Accreditation

This programme is pending accreditation by the Institution of Environmental Sciences (IES), the Institute of Environmental Management and Assessment (IEMA), and Royal Geographical Society (RGS). 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'.

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

Students are expected to attend all practical classes, tutorials, seminars, fieldcourses and lectures. Attendance at all these sessions is monitored and checked by the academic support staff and course directors. Students who display a poor attendance record for no good reason may be subject to disciplinary action. Students are required to follow the guidelines provided in the Safety and Fieldcourse Handbooks. Instructions contained in course, year and module handbooks constitute part of the regulations.

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.

English for Academic Purposes

Please note: All new international students entering the university will sit a diagnostic language assessment. Using this assessment, the Language Centre may allocate you to an English language module which will become compulsory. This will replace any GCP modules. *NB:* students can take an EAP module only with the approval of the English Language Programme Director and are not able to take any other Language modules in the same academic year.

English Language Modules at Level 4:

- Business - ENL-90003 Academic English for Business Students (Part 1); ENL-90004 Academic English for Business Students (2)
- Science - ENL-90013 Academic English for Science Students
- General - ENL-90006 English for Academic Purposes 2; ENL-90001 English for Academic Purposes 3; ENL-90002 English for Academic Purposes 4

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/ga/accrreditationofpriorlearning/>

15. How are students supported on the programme?

Support for student learning on the Programme is provided in the following ways:

Student Experience and Support Officer (SESO): All students have access and support from the SESO, who provides support throughout the duration of the undergraduate experience. The School administration team are also available to provide advice and guidance.

Academic Mentors: All students are allocated an Academic Mentor for the duration of their studies as part of the University's Academic Mentor system. Module Leaders: All module leaders and teaching staff can be accessed for subject-specific support and advice.

Director of Geography Programmes: Wider programme-related advice is available from the Director of Geography Programmes. Use of e-learning/the Keele Learning Environment (KLE): All modules are supported by learning materials that are accessible to students via the KLE.

Health and Safety: All students admitted to the programme are expected to read the Earth Sciences and Geography 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. They are also required to declare any medical conditions that may influence their ability to work in the field so that these can be discussed and suitable adjustments made if necessary.

Students with disabilities: Students with disabilities or medical problems will meet with a member of the University's Disability & Dyslexia Support service and the Geography Disability Liaison Officer at the start of the programme in order to discuss any special requirements. Procedures will then be implemented according to 14 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.

Further information: It is essential that students consult the course website at regular intervals for definitive versions of the Geography handbooks, on-line course materials, and programme and module specifications. These can be accessed at: <http://www.keele.ac.uk/gge/students/geography/> On-line learning and teaching materials related to individual modules are available on the Keele Learning Environment.

16. Learning Resources

Environmental Science and Geography is based within the School of Geography, Geology and the Environment. The School has its own building (the William Smith Building) that contains well-equipped laboratories, computing suites and lecture theatres. All undergraduate practical classes take place in the University's new state-of-the-art Central Science Laboratory, which contains well-equipped research laboratories and computer suites.

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. Please note that students cannot take both a Global Challenge Pathway (GCP) and the semester abroad option.

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 who meet external eligibility criteria 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

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 their year-long placement. To be eligible for the placement year, students must have a good University attendance record. They must also have passed all Year 1 and Year 2 Semester 1 modules. Students must have met the progression requirements to proceed to their final year of study prior to commencing a placement.

Students wishing to take the work placement year should meet with the Programme Director to obtain their signature to confirm agreement before they will be allowed to commence their placement.

International students who require a Tier 4 visa must check with the Immigration Compliance Team prior to commencing any form of placement.

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.

Other opportunities

Fieldwork is an important part of geographer's training, providing 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.

Other opportunities

18. Additional Costs

Field Course Costs

ALL students undertake compulsory field courses as part of their studies - these are provided at no cost. There is a range of field courses, and costs are dependent on degree route, module choices and the nature of the independent project work taken by students. Independent project work carried out by students for their final year dissertation may be associated with additional costs.

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. Students are responsible for their own subsistence.

OPTIONAL FIELD TRIPS:

In addition to compulsory field courses, the programme offers optional overseas field trips as part of second- or third-year modules. The cost of this is subsidized by the University but you will incur additional costs of independently arranged student international travel.

To help students manage their field course costs, the payments are spread over the course of the academic year in which you participate in the field course. The first instalment is non-refundable due to the need to pre-book accommodation etc. in advance. The costs of field courses are indicated at the start of the year, with details clearly communicated to students.

INDEPENDENT RESEARCH PROJECT

ALL 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.

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).

The costs below are only for indicative purposes and correct at the time of printing. Costs may vary, and will depend on students' choices of any optional courses.

| Activity | Estimated Cost |
|--|---|
| Field courses - compulsory | £0 |
| Field courses - optional | £0 - £500.00 |
| Travel to optional field course | £0 - £700.00 - depending on destination |
| Equipment - appropriate waterproof clothing and footwear for fieldwork | £200.00 |
| Total estimated additional costs | £200.00 -£1,400.00 |

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 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 Revalidation 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/earth-sciences-environmental-science-and-environmental-studies>; Geography (2022): <https://www.qaa.ac.uk/quality-code/subject-benchmark-statements/geography>
- c. Keele University Regulations and Guidance for Students and Staff: <http://www.keele.ac.uk/regulations>

21. Annex - International Year

Environmental Science and Geography with International Year

| |
|--|
| International Year Programme |
| <p>Students registered for this Single Honours programme may either be admitted for or apply to transfer during their period of study at Level 5 to the International Year option. Students accepted onto this option will have an extra year of study (the International Year) at an international partner institution after they have completed Year 2 (Level 5) at Keele.</p> <p>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 standard programme and progress to Level 6 on that basis. The failure will be recorded on the student's final transcript.</p> <p>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.</p> |
| International Year Programme Aims |
| <p>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:</p> <ol style="list-style-type: none">1. Personal development as a student and a researcher with an appreciation of the international dimension of their subject2. 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 55% 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 55% across all Level 5 modules. Students with up to 15 credits of re-assessment who meet the 55% requirement may progress to the International Year. 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 Academic Mentor, 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 tutor, in line with recommended Academic Mentoring 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 and Geography degree.
5. Integrate, apply and develop fundamental geographical principles to describe and explain phenomena and solve problems in the context of selected topics within contemporary Environmental Science and Geography.

In addition, students who complete the International Year will be able to:

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.

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 they will study 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 who meet external eligibility criteria 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 and Geography 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 academic mentor, 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 the 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.

Version History

This document

Date Approved: 24 February 2023

Previous documents

| Version No | Year | Owner | Date Approved | Summary of and rationale for changes |
|------------|---------|-------------------|---------------|--------------------------------------|
| 1 | 2022/23 | ANDREA WITHINGTON | | |