

Programme Specification: Undergraduate

For students starting in Academic Year 2017/2018

1. Course Summary

Names of programme(s) and award title(s)	BSc (Hons) Physical Geography BSc (Hons) Physical Geography with International Year (see Annex A for details)
Award type	Dual Honours/Major/Minor All students who study a science Principal subject are candidates for the degree of Bachelor of Science (with Honours) (BSc Hons) irrespective of their second Principal subject.
Mode of study	Full time
Framework of Higher Education Qualification (FHEQ) level of final award	Level 6
Duration	3 years 4 years with International Year
Location of study	Keele University – main campus
Accreditation (if applicable)	Not applicable
Regulator	Higher Education Funding Council for England (HEFCE)
Tuition Fees	UK/EU students: Fee for 2017/18 is £9,250* International students: Fee for 2017/18 is £14,150** <i>or</i> £15,250** <i>(if combined with a laboratory-based Principal Subject)</i> The fee for the international year abroad is calculated at 15% of the standard year fee
Additional Costs	Refer to section 18

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 Dual Honours programme?

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

In a Dual Honours degree you must take at least 120 credits in each Principal Subject, accrued over all three levels of study, with at least 30 credits in Year 1 (Level 4) and at least 45 credits in each of Years 2 and 3 (Levels 5 and 6) in each of two Principal Subjects. The remaining available credits can be filled with modules from these subjects or other subjects entirely.

What is a Major/Minor programme?

Major/Minor degrees are degrees that are taken in two different subjects, much like a Dual Honours degree, except that you will specialise in the Major subject. In a Major/Minor degree you will need at least 225 credits in your Major subject over your three years of study with at least two modules (30 credits) taken each year in your Major Subject, although some Principal Subjects will require you to take more than this and this will be stated in the relevant programme specification. You will also need 90 credits in your Minor subject with a minimum of 30 credits (two modules) taken in Year 1 (Level 4) and 45 credits (three modules) taken in Year 2 (Level 5).

Students taking the Minor Route in Physical Geography might not necessarily be able to demonstrate that they have achieved all of the Programme's learning outcomes.

3. Overview of the Programme

Physical Geography at Keele explores the Earth's varied landscapes and the complex, potentially fragile, global systems that connect them. As a student at Keele you will learn about the rapidly evolving science at the heart of global environmental change and discover new ways of understanding and appreciating the natural world around us. What you learn here will equip you for future employment and for a lifelong appreciation of the world around you.

4. Aims of the Programme

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

- establish a sound knowledge and understanding of the discipline that will serve as a basis for employment, postgraduate research or advanced study;
- explore the key elements of current knowledge and understanding of subjects within Physical Geography, including the research foundations and reliability of that knowledge and understanding;
- acquire a range of practical and technical skills and techniques appropriate to Physical Geography, and to use these skills to tackle geographical issues;
- make critical assessments of sources of information, to engage successfully in independent research, and to communicate ideas concisely and effectively;
- achieve a knowledge and understanding of a range of different approaches to Physical Geography, while recognising both the diversity of the discipline and its unifying themes;
- become expert in specific areas of the discipline that particularly interest you or have particular relevance to intended future employment.

The Physical Geography programme aligns itself closely with key aspects of the Keele Approach to Education (<http://www.keele.ac.uk/journey/>), including interdisciplinarity, sustainability, internationality and employability:

Interdisciplinarity

Physical Geography is an explicitly interdisciplinary subject synthesising material from areas such as geology, biology and meteorology to achieve a holistic engagement with Earth's surface and near-surface environments.

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 and Environmental Science, Physical Geography at Keele adopts an interdisciplinary approach to teaching and encourages an interdisciplinary attitude in students and graduates. All students have the opportunity to combine Physical Geography with another subject in a Dual Honours programme, and even our most specialised Physical Geography modules allow students to identify and explore connections with other disciplines both in research and in the application of Physical Geography subject knowledge to specific real-world problems such as resource management and hazard mitigation. We offer core introductory lectures addressing interdisciplinarity in ESC-10039, modules explicitly combining diverse disciplines (e.g. Hydrology with Oceanography in ESC-20050), module topics requiring interdisciplinary analysis (e.g. Water Resources ESC-30020), modules integrating students from different programmes in joint exercises (e.g. Natural Hazards ESC-30009), guest teaching in Physical Geography modules by staff from other subject areas and opportunities for extended interdisciplinary research projects in Dissertation modules.

Sustainability

Interactions between people and their environment are at the heart of Physical Geography, and the subject engages directly with challenges such as climate change, food security and energy choices. The subject matter and approach of Physical Geography 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." Physical Geography clearly addresses both the natural environment and natural resources, and also puts those issues clearly into the context of economic and social issues. For example, all students take module ESC-10041 (People and Environment) that specifically explores those connections in the first year of the course, and module ESC-10038 (Practice of Physical Geography) in which we explore issues such as the wide ranging impacts of major earth-engineering works (landfills, reservoirs, etc). Specialist modules such as Global Environmental Change (ESC-30018) and Glaciers & Glacial Geomorphology (ESC-30006) engage with the implications of economic developments on the natural environment. Many of our students take the opportunity to combine Physical Geography in a dual honours combination with another environmental discipline to expand their engagement with these issues

Internationality

Physical Geography is about the whole Earth as a global system and as a home to humankind. 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. Physical Geography as a scientific and applied discipline is conducted as an international enterprise by scientists and practitioners from across the globe, and Physical Geography 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 Physical Geography are explicitly transnational (e.g. Global Environmental Change, module ESC-30018), and our teaching explicitly requires students to take an international perspective to scientific and applied issues. All Physical Geography students take part in an overseas field course, 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. Physical Geography at Keele focuses on the global context of local issues, and all students encounter transnational topics and international practitioners on a global stage.

Employability

Physical 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 a geography degree... As a company we therefore place a high value on the teaching of geography in Higher Education. ...there is evidence that the generic skills acquired through the study of geography are in high demand right across the business sector." Richard Waite, Managing Director ESRI UK

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
- Intellectual skills
- Employability skills

Subject knowledge and understanding

Successful students will be able to:

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

Teaching and learning employed to achieve these outcomes include: Formal classes (lectures, practicals, fieldcourses, seminars, workshops and tutorials); Directed reading and web-supported study; Independent study and reflection. The acquisition of knowledge and understanding underpins most of the programme, but is most explicitly addressed in lecture modules. The Dissertation ultimately allows students to combine knowledge, understanding and skills in a research project.

Assessment of students' knowledge and understanding is achieved by: formative assessment in individual or small group tutorials; coursework essays, posters, technical reports and web-pages; in-class and online exercises and tests; individual or group oral presentations; end-of-course examinations.

Subject specific skills

Successful students will be able to:

- plan, design and execute a piece of research in Physical Geography, including production of a final report
- undertake effective Physical Geography fieldwork with due regard for safety and risk assessment
- work safely in a Physical Geography laboratory, with awareness of standard procedures
- prepare effective maps and diagrams using a range of appropriate technologies
- employ a variety of technical field and laboratory-based methods for the collection and analysis of spatial

- and environmental information including surveying and the use of GIS
- combine and interpret different types of geographical evidence

Subject specific skills are taught most explicitly in the practical and field course programmes and in the ISP modules. Teaching and learning strategies and methods employed to achieve these outcomes include: Practical classes, field courses and independent project work; Individual dissertation tutorials; Directed reading and independent study.

Assessment of students' subject-specific skills is achieved (depending on option choices) by: a 6,000 or 11,000 word independent research project (dissertation); a formal research proposal and risk assessment; in-class exercises and tests; coursework essays, posters, technical reports and web-pages; fieldcourse or practical class reports.

Intellectual skills

Successful students will be able to:

- assess the merits of contrasting theories, explanations and policies
- analyse and solve problems
- make reasoned decisions
- evaluate evidence and make critical judgements
- make critical interpretations of data and text
- abstract and synthesise information
- develop a reasoned argument
- take responsibility for their own learning and develop a habit of reflection upon that learning

Intellectual skills are developed throughout the course, and handled most explicitly in tutorial, workshop and practical classes, as well as in the dissertation and in individual progress interviews. Teaching and learning strategies and methods employed to achieve these outcomes include: Formal classes (lectures, practicals, fieldcourses, seminars, workshops and tutorials); Individual dissertation tutorials and Individual progress interviews; Independent project work; Directed reading and web-supported study; Independent study and reflection.

Assessment of students' intellectual skills is achieved (depending on option choices) by: Tutorial assignments and group discussion; a 6,000 or 11,000 word independent research project; Coursework presentations; End of course examinations; Practical class exercises; Formative assessment and feedback in individual progress interviews.

Employability skills

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. Generic employability skills included within the programme include:

- **Written communication skills:** The development of written communication skills is a key element of the programme. Students complete various written assignments in all three years including essays, poster presentations, technical reports and a large dissertation. Specific training is provided in the year 1 tutorial programme, addressing academic writing skills such as referencing.
- **Oral presentation skills:** Students gain experience in oral presentation skills within many modules including the year 1 tutorial programme.
- **Communication skills:** Students are encouraged to discuss and debate ideas in small-group tutorial sessions in year 1, and are encouraged to discuss specific aspects of their work with their peers and their module tutors. This is facilitated by the open-door policy operated by the geography staff.
- **Problem solving:** The ability to resolve problems with complex solutions is an important part of the programme and is included within a number 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.
- Working independently: 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.
- Literature searching: In years 2 and 3 in particular, students are required to make use of journal literature. Effective engagement with these advanced sources requires the development of sophisticated search skills that are introduced in the year 1 tutorials and further developed in the year 2 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. ESC-20029: Practical Physical Geography).
- 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.
- Learning to Learn: The first-year tutorial programme recognises the challenge posed by the transition from Secondary to Higher Education (Goal 2, University and School Learning and Teaching Strategies) and consequently focuses on introducing students to the key study skills required to work effectively in a university environment (e.g. time management, note taking, use of feedback and reflection, how to find relevant literature, referencing and plagiarism etc.). This is facilitated by the small-group learning and close support from a nominated member of staff from their arrival at Keele.

Keele Graduate attributes

Physical Geography at Keele University is proud of its distinctive educational environment, which is designed to enable students to develop into *distinctive graduates* able to balance *specialist and expert knowledge* with a *broad outlook* and an *independent approach*. Keele identifies a set of distinctive graduate attributes that characterise successful Keele students.

The content, structure and intended learning outcomes of our programme, which are described in this Programme Specification, are explicitly designed to facilitate the achievement of these capabilities.

Specifically, we provide:

- opportunities throughout Physical Geography to develop the subject-specific skills and knowledge that are at the heart of the programme
- opportunities throughout Physical Geography to develop personal and professional attributes, abilities and attitudes appropriate to lifelong learning, employability and citizenship
- opportunities within the wider Keele framework to develop a broad set of attributes that are not subject specific but define an intellectually well-rounded and confident graduate
- a supportive network of staff within Physical Geography who aim to demonstrate these attributes by their own example and who are dedicated to working alongside students exploring and developing them as they progress through the programme.

The preceding sections in the Programme Specification illustrate the ways in which these attributes can be achieved through what we include in the course, and a more detailed analysis of how specific Graduate Attributes relate to specific elements of the course can be found below.

Keele's Graduate Attributes are listed in the table below, along with comments about how they apply to Physical Geography students.

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.

Keele Graduate Attribute 1.

An open and questioning approach to ideas, demonstrating curiosity, independence of thought and the ability to appreciate a range of perspectives on the natural and social worlds

Physical Geography students:

- encounter a huge range of ideas as they explore our “plural and contested” discipline
- are rewarded for recognising and making sense of different points of view
- are required to develop their own well-informed opinions on controversial topics
- are explicitly taught to explore, research and investigate the world around them
- can do hands-on fieldwork and project work throughout the programme

Keele Graduate Attribute 2.

An appreciation of the development and value of Geography, awareness of its context and links with other disciplines, and awareness of the provisional and dynamic nature of knowledge

Physical Geography students:

- learn explicitly about the history, development and applications of the discipline
- are rewarded for appreciating the “plural and contested” nature of Geography
- explore work at the cutting edge of new ideas that constantly renew or replace our knowledge of the world around us
- carry out their own independent research close to the forefront of the discipline

Keele Graduate Attribute 3.

Information literacy: the ability to locate, evaluate and synthesise large amounts of frequently conflicting information, ideas and data

Physical Geography students:

- have specific training in information literacy and are rewarded for good practice
- learn to evaluate sources critically and make choices between alternative sources
- access, evaluate and use many different types of information
- create original data of their own by fieldwork or experimentation, and use this in combination with previously published data
- become adept in collecting, analysing, and representing data in different forms

Keele Graduate Attribute 4.

The ability creatively to solve problems using a range of different approaches and techniques, and to determine which techniques are appropriate for the issue at hand

Physical Geography students:

- learn a wide range of research and analytical techniques
- carry out group and independent project work doing real research

- are taught research-design skills, and apply them in both field and laboratory
- are given the flexibility to try out different approaches in their own work
- are set a variety of different challenges requiring different solutions

Keele Graduate Attribute 5.

An appreciation of the social, environmental and global implications of your studies and other activities, including recognition of any ethical implications

Physical Geography students:

- are explicitly trained to recognise ethical and safety issues related to their work
- are assessed on the completion of risk and ethics assessments for projects
- explore environmental hazards, resources, and environmental change
- study the global environment as the home of humankind
- study within a School with strong environmental, social and ethical commitments

Keele Graduate Attribute 6.

The ability to communicate clearly and effectively in written and verbal forms for different purposes and to a variety of audiences

Physical Geography students:

- have clarity of communication at the heart of their idea of professional good practice
- work to a clearly articulated “House Style” that encourages careful discipline
- learn presentation skills including report writing, giving talks, and creating posters
- have the opportunity to take part in conference-style presentations
- are taught to present work in particular styles for particular purposes or audiences

Keele Graduate Attribute 7.

The knowledge, skills, self-confidence and self-awareness actively to pursue your future goals

Physical Geography students:

- have the opportunity to develop real expertise in their chosen options
- can carry out advanced independent project work to an extremely high level
- are offered challenges within the course, and gain confidence in meeting them
- are provided with tools and training to record their progress and achievements
- work within a community that is supportive and constructive but critical and reflective
- are taught to see their subject knowledge and skills in an employability context
- are encouraged to aspire to goals that exceed their pre-University expectations

Keele Graduate Attribute 8.

The ability and motivation to participate responsibly and collaboratively as an active citizen in the communities in which you live and work

Physical Geography students:

- learn to work individually and in groups within a larger academic community
- engage in complex collaborative project work and team-based exercises
- learn about the broad international community of scientific practice
- work in a subject that has clear links to wider society and environment
- have very clear career opportunities linked to the wellbeing of the community

Keele Graduate Attribute 9.

A professional and reflective approach, including qualities of leadership, responsibility, personal integrity, empathy, care and respect for others, accountability and self-regulation

Physical Geography students:

- are taught about professional standards by tutors with professional qualifications
- are rewarded in assessments for adopting good professional practice
- follow clear guidelines in their work, including rules about personal integrity and respect for others
- have opportunities to develop leadership skills through teamwork
- are given the freedom that requires them to exercise self-regulation
- are taught by staff who value, adopt and exemplify these characteristics

Keele Graduate Attribute 10.

The flexibility to thrive in rapidly changing and uncertain external environments and to update skills and knowledge as circumstances require

Physical Geography students:

- work closely with the idea of environmental change and dynamic systems
- learn that old techniques can be adapted and re-applied for use with new problems
- learn explicitly about the provisional and dynamic nature of knowledge
- become familiar with working in rapidly changing environments
- gain confidence both in their expertise and in their own flexibility by tackling difficult challenges within their work

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
- Tutorials
- Project work
- Seminars, group presentations and workshops
- Lectures
- 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 Personal Tutors or module lecturers on a one-to-one basis.

7. Teaching Staff

Physical 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 the current Physical Geography lecturers hold PhDs and most are internationally recognised experts in their fields.

Physical Geographers have won the annual Keele University “Excellence in Teaching” award five times, including individual awards for excellence in teaching to four members of staff and a team award for excellence to the whole programme.

The Physical Geography team currently includes National Teaching Fellows, a Senior Fellow of the Higher Education Academy, a Chartered Geographer, Fellows of the Royal Geographical Society, and Fellows of the Higher Education Academy. Staff details are available at <http://www.keele.ac.uk/gge/people/>

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 course to course, 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 this programme. They are:

- Compulsory core module – a module that you are required to study on this course;
- Optional core module – these allow you some limited choice of what to study from a list of modules;
- Programme approved elective module – subject-related modules that count towards the number of subject credits required by your degree;

The Physical Geography programme is modular in structure. In years 1 and 2 students must combine Physical Geography with another principal subject. In year 3 students may continue with the dual honours route or may drop their other subject to continue with Physical Geography as a major route (no other subject in year 3).

The programme provides a broad-based first year followed by more specialised second year and third-year studies. We assume no prior expertise in Physical Geography, and begin with introductory modules that provide a platform from which students can develop their knowledge, understanding and skills. First year is an introductory year in which students acquire essential academic skills and a foundation of knowledge of the underlying concepts and principles of the subject. Second year develops a critical understanding of more advanced topics and conceptual issues in the subject, and helps students to establish skills in independent research. Third year allows students to explore specialised topics of their choice at the level of the most recent scientific research, and to develop a range of advanced skills.

Year 1 (Level 4)

Compulsory Core modules	Credits	Elective modules	Credits
Fundamentals of Physical Geography	15	None	
Geographical Skills	15		
The Practice of Physical Geography	15		
People and the Environment	15		

Year 2 (Level 5)

Compulsory Core modules	Credits	Elective modules	Credits
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Dynamic Geographies	15	None	
Practical Physical Geography	15		
Regional Landsystems	15		
Geographical Research Training	15		

Year 3 (Level 6) (Dual Honours)

Students take either 60 credits from the list below, or 45 credits from this list plus 15 credits from an elective outside this list. Students may take no more than one of the ISPs on this list, and do not need to take a Geography Independent Study Project (ISP) as long as there is an ISP included within their overall dual honours module diet.

Optional Core / Programme Approved Elective modules	Credits	Optional Core / Programme Approved Elective modules	Credits
Double Dissertation ISP	30	Natural Hazards	15
Single Dissertation ISP	15	Inspirational Landscapes	15
Glaciers and Glacial Geomorphology	15	Applied GIS	15
Global Environmental Change	15	Coastal Environments	15
Water Resources	15		

Year 3 (Level 6) (Major Route)

Students take either 120 credits from the list below, or 105 credits from this list plus 15 credits from an elective outside this list. Students must take one of the two Dissertation ISP options below.

Optional Core / Programme Approved Elective modules	Credits	Optional Core / Programme Approved Elective modules	Credits
Double Dissertation ISP	30	Natural Hazards	15
Single Dissertation ISP	15	Inspirational Landscapes	15
Glaciers and Glacial Geomorphology	15	Applied GIS*	15
Global Environmental Change	15	Coastal Environments	15
Water Resources	15	Trees in their Environment*	15

* Applied GIS and Trees in their Environment are not available to Minor Route students

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

www.keele.ac.uk/recordsandexams/az

Learning Outcomes

YEAR 1 (LEVEL 4)		
First Year Material	Module in which this is delivered	Principal forms of assessment (of the Level Outcome) used
Knowledge and understanding of core Physical Geography topics and concepts.	Lecture modules	Essays, short-answer tests and unseen exams.
Fundamental skills and techniques in practical Physical Geography, including fieldwork.	Practical and fieldwork classes	Practical assignments and fieldwork exercises.

Essential study and communications skills.	Weekly tutorials and practical classes	Essays, oral presentations and written exercises.
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YEAR 2 (LEVEL 5)

In the second year students develop a critical understanding of more advanced topics and conceptual issues, and establish skills in independent research.

Second Year Material	Module in which this is delivered	Principal forms of assessment (of the Level Outcome) used
Knowledge and understanding of advanced Physical Geography topics and concepts.	Lecture modules with option-based content	A flexible mix of essays, posters, scrapbooks, websites, etc.; short-answer tests; unseen exams.
Advanced skills and techniques in practical Physical Geography, including fieldwork.	Practical and fieldwork classes including one overseas fieldcourse	Practical assignments, technical report, and fieldwork exercises.
Core skills in research design and project formulation.	Practical classes, tutorials and fieldcourse	Research proposal. Research Design practical exercises.
Advanced study skills and engagement with research-level literature.	Fortnightly tutorials, work within lecture modules	Tutorial exercises (e.g. abstracts), lecture-module assignments.

YEAR 3 (LEVEL 6)

In the third year students gain skills and knowledge specific to Physical Geography, but also a range of skills and knowledge applicable to a wide range of employment opportunities that will also establish the basis for a future of lifelong learning.

Third Year Material	Module in which this is delivered	Principal forms of assessment (of the Level Outcome) used
Specialist knowledge and understanding of Physical Geography topics and concepts at the cutting edge of the discipline	Option-based lecture modules	A flexible mix of essays, posters, projects, etc., depending on options taken; short-answer tests; unseen exams.
Advanced research skills and practical techniques in Physical Geography, including fieldwork.	Dissertation	Dissertation: report on independent project work

9. Final and intermediate awards

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

Honours Degree	360 credits	<p>You will require at least 120 credits at levels 4, 5 and 6.</p> <p>The number of Physical Geography credits you require depends on whether Physical Geography is taken as a Dual or Minor subject.</p> <p>Dual Honours: You will require at least 120 credits in both Physical Geography and your other principal subject (out of</p>
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		<p>360 credits overall), with at least 30 credits in Year 1 (Level 4) and at least 45 credits in each of Years 2 and 3 (Levels 5 and 6) in each of your two Principal Subjects. You will also be required to take at least one Independent Study Project in your final year.</p> <p>Students following the Dual Honours Physical Geography programme outlined in this specification will typically take 60 credits in Physical Geography in each of the three years.</p> <p>Major route: You will require at least 225 credits in Physical Geography and at least 90 credits in your other Minor subject over the course of the degree. Students taking Physical Geography as a Major subject must obtain at least 30 credits in Physical Geography in each level of study. You will also be required to take at least one Independent Study Project in your final year.</p> <p>Students following the Major Physical Geography programme outlined in this specification will typically take 60 credits in Physical Geography at each of levels 4 and 5 (1st and 2nd year), and at least 105 credits from Physical Geography at level 6 (3rd year).</p> <p>Minor route: You will require at least 90 credits in Physical Geography and at least 225 credits in your other Major subject over the course of the degree. Students taking Physical Geography as a Minor subject must obtain at least 30 credits in Physical Geography in Year 1 (level 4) and 45 credits in Physical Geography in Year 2 (level 5).</p> <p>Students following the Minor Honours Physical Geography programme outlined in this specification will typically take 60 credits in Physical Geography at each of levels 4 and 5 (1st and 2nd years), and need not take any Physical Geography at level 6 (3rd year).</p>
Diploma in Higher Education	240 credits	You will require at least 120 credits at level 4 or higher and at least 120 credits at level 5 or higher
Certificate in Higher Education	120 credits	You will require at least 120 credits at level 4 or higher

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

10. How is the Programme assessed?

The wide variety of assessment methods used within Physical Geography 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 within Physical Geography:

- **End of semester examinations** test the ability of the student to describe, explain, and critically discuss

the principles of the subject and to demonstrate competence in applying these principles to applications and to solve problems from appropriate areas of the discipline.

- **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 student's knowledge of different research methodologies and the limits and provisional nature of knowledge. They also enable students to demonstrate their ability to formulate research questions and to answer them using appropriate methods.

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	Year 1 (Level 4)	Year 2 (Level 5)	Year 3 (Level 6)
Scheduled learning and teaching activities	44%	43%	19%
Guided independent Study	56%	57%	81%
Placements	0%	0%	0%

12. Accreditation

This programme does not have accreditation from an external body.

13. 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/>

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

Physical Geography Regulations

Students are expected to attend all practical classes, tutorials, seminars, field courses and lectures. Attendance at all these sessions is monitored and checked by the academic support staff 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 Field Course Handbooks. Instructions contained in course, year and module handbooks constitute part of the regulations.

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

Subject	A-level	Subjects not included	International Baccalaureate	BTEC	Access to Higher Education Diploma	GCSE requirements
Physical Geography (Dual Hons)	<p>BBC A level Geography or related subject at grade B or above.</p> <p>If the related subject includes A level Biology, Chemistry or Physics (England), a pass in Science practical will be required. **</p> <p>** Science practical only required from applicants taking reformed A level Biology, Chemistry or Physics in England.</p>	General Studies and Critical Thinking	30 points to include Higher Level Geography at 6 or above.	<p>DDM - DMM</p> <p>Students must have taken sufficient Geography units.</p>	<p>Obtain Access to Higher Education Diploma with 30 Level 3 credits at Distinction.</p> <p>Students must have taken sufficient Geography units.</p>	<p>Maths or Science @ C (or 4)</p> <p>English Language @ C (or 4)</p>

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

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

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

Accreditation of Prior Learning (APL) is considered on a case-by-case basis and those interested should contact the Programme Director. The University's guidelines on this can be found here:

<http://www.keele.ac.uk/qa/accreditationofpriorlearning/>

15. How are students supported on the programme?

Personal Tutors: All students are allocated a Personal Tutor for the duration of their studies as part of the University's Personal Tutor system.

Subject Tutors: Each student in Physical Geography is supported by the Year Tutor for their year of study, and also by a Physical Geography tutor with whom the student will meet on a weekly basis throughout the 1st year and fortnightly in 2nd year. Students have free access to these tutors at all times throughout their studies. They are also supported by the Physical Geography Course Director who is always available to help, and by the Head 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 Officer at the start of the programme in order to discuss any special requirements. Procedures will then be implemented according to the nature of the student's disability or medical problem. These procedures can range, for example, from allowing extra examination time for students diagnosed as dyslexic, to allocating additional staff or demonstrators to field classes to help students with mobility problems.

Further information: It is essential that students consult the course website at regular intervals for definitive versions of the Physical 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. This handbook can be accessed at: <http://www.keele.ac.uk/gge/handbooks/>.

16. Learning Resources

Physical Geography is based with the other Geography and Geoscience subjects in the William Smith Building, which contains well-equipped laboratories and lecture theatres. This concentration of facilities and staff into one building enables students to identify with a specific base within the University. The School Office is open continuously during the week from 9am to 5pm to answer student queries and deal with administrative tasks. Staff operate an open-door policy so that students can easily obtain support and advice. All modules are

supported by Keele's online Virtual Learning Environment. The William Smith Building is conveniently located close to the library and other campus facilities.

17. Other learning opportunities

Study abroad (semester)

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

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

No additional tuition fees are payable for a single semester studying abroad but students do have to bear the costs of travelling to and from their destination university, accommodation, food and personal costs. Depending on the destination they are studying at additional costs may include visas, study permits, residence permits, and compulsory health checks. Students should expect the total costs of studying abroad to be greater than if they study in the UK, information is made available from the Global Education Team throughout the process, as costs will vary depending on destination

Whilst students are studying abroad any Student Finance eligibility will continue, where applicable students may be eligible for specific travel or disability grants. Students studying in Erasmus+ destinations may be eligible for grants as part of this programme. Students studying outside of this programme may be eligible for income dependent bursaries at Keele.

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

Study Abroad (International Year)

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

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.

18. Additional costs

Physical Geography Programme Costs

Field Course Costs

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

The University provides significant financial support to subsidise the cost of the field course programme for students. Students will have the option to choose field course destinations that involve no additional cost, or to choose destinations that, although still subsidised, will involve some additional cost to the student. In order 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, normally December, March and May. The first instalment is non-refundable due to the need to pre-book accommodation, flights, etc. in advance. The costs of field courses are indicated at the start of the year, with details posted on student notice boards to enable students to make informed decisions on the choices available.

First Year Students

There are no charges to year 1 students taking field courses in the first year of their programme. The University pays for these costs.

Second Year Students

Indicative costs for field courses based on the 2016/17 academic year:

One-week, compulsory residential field course to EITHER Almeria, southern Spain (no additional cost) OR Iceland (approximately £700).

Third Year Students

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

IMPORTANT: Students are expected to have adequate clothing for field trips. Costs are only for indicative purposes and correct at the time of printing. Costs are dependent on the options chosen by students and susceptible to changes in the number of students taking field courses and changes in external factors such as flight and accommodation costs outside the University's control. In addition, we reserve the right to change the venues of field courses due to both cost and academic considerations.

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 ceremonies.

Activity	Estimated cost
Field course costs depend on student's choice of destination. Typically Almeria, southern Spain (no additional cost) or Iceland (approx. £700).	£0-£700
Equipment: Waterproof clothing and footwear for field courses	£100
Total estimated additional costs	£100-£800

19. Quality management and enhancement

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

- The Learning and Teaching Committee of the School of Geography, Geology and the Environment is responsible for reviewing and monitoring quality management and enhancement procedures and activities across the School.
- Individual modules and the Physical Geography 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 and as part of the University's Curriculum Annual Review and Development (CARD) process.
- The programmes are run in accordance with the University's Quality Assurance procedures and are subject to periodic reviews under the Internal Quality Audit (IQA) process.

Student evaluation of, and feedback on, the quality of learning on every Physical Geography 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 the Curriculum Annual Review and Development (CARD) process.

- Findings related to the Physical Geography Programmes 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 Physical Geography Programme is considered and acted on at regular meetings of the Programmes Staff/Student Liaison 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/ga/externalexaminers/currentexternalexaminers/>

20. The principles of programme design

The Physical Geography 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/assuring-standards-and-quality/the-quality-code>
- b. QAA Subject Benchmark Statement: Geography (2014) <http://www.qaa.ac.uk/en/Publications/Documents/SBS-geography-14.pdf>
- c. Keele University Regulations and Guidance for Students and Staff: <http://www.keele.ac.uk/regulations>

21. Document Version History

Version history	Date	Notes
Date first created	October 2016	
Revision history		
Date approved		

Programme Specification

Annex A for Dual Honours Programmes

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

International Year Programme

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

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

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

International Year Programme Aims

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

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

Entry Requirements for the International Year

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

The criteria to be applied are:

- Academic Performance (an average of 60% across all modules at Level 5 is normally required)
- General Aptitude (to be demonstrated by application for study abroad, interview during the 2nd semester of year 2 (Level 5), and by recommendation of the student's personal tutor, 1st and 2nd year tutors and programme director)

Student Support

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

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

Learning Outcomes

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

- a. Describe, discuss and reflect upon the cultural and international differences and similarities of different learning environments
- b. Discuss the benefits and challenges of global citizenship and internationalisation
- c. Explain how their perspective on their academic discipline has been influenced by locating it within an international setting.

In addition, students who complete 'Physical Geography with International Year' will be able to:

- i) Apply their experiences abroad to the specific graduate attributes associated with their Physical Geography degree.
- ii) Integrate, apply and develop fundamental geographical principles to describe and explain phenomena and solve problems in the context of selected topics within contemporary Physical Geography.

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

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

Course Regulations

Students registered for the 'Physical Geography with International Year' are subject to the course 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 areas.

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 Physical Geography module with significant overlap to Level 6 modules to be studied on their return. Significant overlap with Level 5 modules previously studied should also be avoided.

Additional costs for the International Year

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

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

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

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