Programme Specification: Undergraduate

For Academic Year 2026/27

1. Course Summary

Names of programme and award title(s)	MSci Geology and Physical Geography MSci Geology and Physical Geography with International Year (see Annex for details) MSci Geology and Physical Geography with Work Placement Year (see Annex for details)
Award type	Single Honours (Masters)
Mode of study	Full-time
Framework of Higher Education Qualification (FHEQ) level of final award	Level 7
Normal length of the programme	4 years; 5 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)	n/a
Regulator	Office for Students (OfS)
Tuition Fees	**UK students:** Fee for 2026/27 is £9,790* **International students:** Fee for 2026/27 is £18,200** The fee for the international year abroad is calculated at 15% of the standard year fee The fee for the work placement year is calculated at 20% of the standard year fee

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/*

*** These fees are for new students. 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

This course combines different approaches to studying the world around you. Physical Geography explores the Earth's varied landscapes and the complex, potentially fragile, global systems that connect them. Geology examines the structure and history of the Earth, its processes, materials and resources. Geology is also playing a key role in establishing a decarbonised, sustainable future through development of carbon neutral energy sources such as geothermal, sustainable extraction of mineral resources and geological sequestration of carbon dioxide. As a Geology and Physical Geography 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 physical and natural world around us.

The course includes a balance of physical geography and geology topics, as well as material from complementary disciplines such as geophysics, meteorology, geomorphology, and environmental science. Students will learn about the history of the Earth, its past and present environments, and the planet's resources and hazards. The programme will look at the Earth as a global system, including the causes and effects of global environmental change. There is strong emphasis on developing both laboratory and fieldwork skills.

In the first year of the course, we lay the foundations for more detailed study of geological and physical geography concepts in years 2 and 3. We assume that students have no previous knowledge of the subjects and, therefore, the course starts from basics. During year 2, particular attention will be paid to first-hand observation, recording and interpretation of geological and physical geography phenomena in the field and laboratory. It is the intention that by the end of the second year students will have been given a complete grounding in geology and physical geography that will enable them to carry out their own independent studies. In the final year of the programme all students complete an independent project worth 30-credits and select from a portfolio option modules that are designed to provide in-depth coverage of a particular topic.

Combining fieldwork, practical classes and lectures, this course provides a diverse range of specialist options. Students will focus particularly on research skills: they will learn to collect, analyse and interpret different types of data, and to carry out research using specialist software and equipment. Importantly, students will gain a wide range of skills that are currently in demand and, given current concerns around environmental change and natural resources, are likely to continue to be in strong demand in the future. What you learn on this degree programme will equip you for future employment and for a lifelong appreciation of the world around you.

MSci Geology and Physical Geography is a four-year undergraduate Integrated Masters course primarily designed for those considering a career in Geology/Geoscience and supports both vocational and academic interests. The course aims to provide an in-depth experience of geoscience topics at the forefront of the discipline along with training in research techniques, laboratory methods, computing techniques and other transferable skills. In particular, the forth year (level 7) will develop your independent research and project management skills, and allow you to work and specialise in an area of geology and/or Physical Geography of your choice.

4. Aims of the programme

The broad aims of the programme are to:

- enable you to specialise in Geology and Physical Geography via a three-year Single Honours programme to obtain a more in-depth experience of the subjects, as well as gaining additional experience in independent project work and key skills
- provide a broad-based introduction to Geology and Physical Geography at Level 4 that does not require previous knowledge of these subject areas, and to utilise the material covered at Level 4 to lay the foundations for detailed study of geological and physical geography concepts at Levels 5 & 6
- achieve a sound knowledge and understanding of a range of different specialisms within and approaches to Geology and Physical Geography, while recognising both the diversity of the disciplines and their unifying themes
- provide an understanding of the structure and composition of the Earth and other planets
- provide an integrated approach to understanding the present and past interactions between the physical, chemical and biological processes operating in the Earth's core, mantle, crust, and at the surface
- provide an understanding of the history of the Earth over geological time scales
- promote an awareness of the dual context of the subjects in society, as well as providing knowledge and understanding of both the exploitation and the conservation of the Earth's resources
- provide an understanding of the scientific fundamentals in geology and physical geography, and an adequate knowledge base for a career in research or industry
- emphasise the development of field, laboratory, presentational, writing and information technology skills to

prepare graduates for independent work in their professional careers
- provide a fully integrated fieldwork programme, including the opportunity to attend overseas field courses
- provide appropriate monitoring schemes and feedback for students on their progress
- provide a wide choice of subject options and all-round education
- enable students to specialise in Geology and Physical Geography via a four-year Integrated Masters programme to obtain a more in-depth experience of the subject, as well as gaining additional experience in independent research project work and key skills.

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
- Employability skills

Subject knowledge and understanding

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

- the terminology, nomenclature and classification of rocks, minerals, fossils and geological and geographical structures
- geological and earth surface processes and how they integrate to shape the natural world at different temporal and spatial scales
- the structure and composition of the Earth and other planets
- geological time, including the principles of stratigraphy, the stratigraphic column, dating techniques, rates of Earth processes and major events in Earth history
- the evolution of life on Earth as revealed by the fossil record
- major geoscience paradigms, including uniformitarianism, the extent of geological time and plate tectonics
- the need for both a multi-disciplinary and interdisciplinary approach to the development of knowledge in geology and physical geography
- the different components of the Earth system and how they interact to control changes of physical environments through time and, in turn, how they impact on society
- patterns of spatial variation as dynamic characteristics of the physical environment
- different methods used in the observation, analysis, interpretation and representation of geological and geographical information
- how the geology and physical geography of a field study area can be used to illustrate and deepen understanding of the evolution of a wider region
- modern environments and processes, and use of this knowledge to interpret aspects of the geological record
- issues concerning the exploration, availability and sustainability of natural resources
- geological and physical geography aspects of human impacts on the physical environment
- natural hazards and their impacts on society
- applications of geology and physical geography to the development of knowledge, wealth creation and improving quality of life
- the United Nations Sustainable Development Goals and how they relate to the geosciences

In addition to those outcomes listed above, which are developed through to level 7, as appropriate, to an advanced level, MSci Geology and Physical Geography students will also be able to demonstrate advanced knowledge and understanding of:

- the principles and applications of cutting-edge research methodologies and techniques in the study of Geology and Physical Geography, Earth Systems and the wider Geosciences to an advanced level;
- the context of their extended research project in relation to on-going research activity in their field of study and the wider Geosciences.

Subject specific skills

Successful students will be able to:

- identify a wide range of igneous, sedimentary and metamorphic rocks, as well as a wide range of minerals, fossils and geological structures
- implement three-dimensional analysis with particular reference to the subsurface distribution and relationships of rocks observed at the surface
- collect and record geological and geographical information in the field, including the production and interpretation of a variety of different map types
- plan, design and execute an independent piece of project work that integrates aspects of geology and physical geography, including acquisition and recording of data in the field, followed by the processing, interpretation and presentation of this data, and the production of a final report

- make safe and effective use of a range of field equipment commonly used by the geoscience profession and develop an understanding of the scope and limitations of such equipment
- 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
- 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
- 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 geological and geographical evidence using quantitative and qualitative approaches
- appreciate the issues of sample selection, accuracy, precision and uncertainty during collection, recording and analysis of geological and geographical data in the field and laboratory
- use powers of observation, analysis and imagination to make decisions in the light of uncertainty

In addition to those outcomes listed above, which are developed through to level 7, as appropriate, to an advanced level, MSci Geology and Physical Geography students will also:

- develop an advanced understanding of the processes involved in research design, funding, and dissemination;
- critically evaluate current literature and complex methodologies to an advanced level in relevant areas of contemporary Geology and Physical Geography.

Key or transferable skills (including employability skills)

Successful students will be able to:

- develop and sustain effective approaches to learning and study, including time management, flexibility, creativity and intellectual integrity
- communicate effectively to a variety of audiences in written, verbal and graphical forms
- work with numerical data using appropriate qualitative and quantitative techniques, as well as computer software packages
- work effectively with a variety of types of information technology to analyse and present information and data, as well as solve numerical problems
- use the internet as a means of communication and a source of information
- demonstrate competence in spatial awareness and observation
- conduct field and laboratory studies
- reference work in an appropriate manner
- work with information handling and retrieval systems using data from a wide range of sources
- work effectively both as an individual and as part of a group or team, recognising and respecting the viewpoints of others
- sustain motivation to work towards a goal over an extended period of time
- recognise responsibilities as a local, national and international citizen

In addition to those outcomes listed above, which are developed through to level 7, as appropriate, to an advanced level, MSci Geology (including specialist routes) students will also:

- identify, engage with, and evaluate geological information, issues and topics at the forefront of the discipline;
- develop greater autonomy in the planning and implementation of tasks associated with their research project and taking responsibility for their workload.

Keele Graduate Attributes

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

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
- Workshops
- Practical classes
- Field courses
- Individual progress interviews
- Directed reading
- Oral presentations and linked discussion
- Independent study and project work
- Use of online learning via the Keele Learning Environment (KLE) and other platforms (e.g. MS Teams, MS Sway)
- You will learn through a variety of engaging and innovative activities and assessments. The programmes are designed so that knowledge and skills are introduced in a supportive manner that leads to greater independence as you develop as a geologist.

MSci study at level 7 (fourth year): This will further develop your research skills in the critical evaluation of scientific literature and an extended research project will give you the opportunity to design and conduct an in-depth research project in an area of Geology and Physical Geography, including formulating a complete research strategy. Research skills in these areas will also be developed in a series of research seminars and journal club-style presentations/discussion in an Advanced Research Techniques module.

The directed reading, on-line learning materials and lecture slides available in advance on the KLE help you prepare for lecture-based material, while practical classes reinforce concepts learned in lectures through problem solving and practical application of geological and physical geography techniques. Some classes are taught in workshop format integrating both lecture and practical material. Fieldwork provides a deep, immersive learning experience that puts geological and physical geography processes and their features into their four dimensional context. The independent project provides the opportunity to bring together and demonstrate proficiency in all areas of geology and physical geography.

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

Our core teaching staff members between them have expertise and interests in all major areas of Earth Sciences as well as complementary vocational disciplines such as computing and forensic science. All current academic members of staff are active researchers and many have a distinguished track record in publication, the generation of grant income, industrial collaboration and journal editorship. Several staff have particular interests in the development of geoscience education and/or have played an active role in the promotion of UK geoscience activities (e.g. via membership of Geological Society committees). Several members of staff are Fellows/Senior Fellows of the Higher Education Academy (H.E.A.) with some having an MA in Teaching and Learning. Many have professional qualifications such as Fellow of the Geological Society (F.G.S.), Chartered Geologist (C.Geol), European Geologist (EurGeol), Fellow of the Royal Astronomical Society (F.R.A.S.), as well as others. Members of Geology staff have also won both group and individual Keele Teaching and Learning Excellence Awards.

The University will attempt to minimise changes to our core teaching teams, as the 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 two types of module delivered as part of your programme. They are:

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

Global Challenge Pathways

This programme includes the option for you to take a Global Challenge Pathway. These modules offer you an exciting opportunity to work with students and staff from different disciplines to explore topical global issues

such as power and conflict, health inequalities, climate change, generative AI, social justice, global citizenship, and enterprise from different perspectives.

Global Challenge Pathways can either be taken as one 15-credit module at Levels 4, 5 and 6, or one 15-credit module at Levels 5 and 6. For more information about our Global Challenge Pathways please visit: https://www.keele.ac.uk/study/undergraduate/globalchallengepathways/

Modern Languages or Certificate in TESOL

Alternatively, you could choose to study modules with the University Language Centre. The Language Centre offers three pathways; The Language Specialist, The Language Taster, and The Trinity Certificate in Teaching English to Speakers of Other Language (TESOL). Language Centre modules are available separately for students at Levels 4 and 5. At Level 6 they are included within the Global Challenge Pathways.

If you choose the Language Specialist pathway, you will automatically be enrolled on a Semester 2 Modern Language 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 Specialist Global Challenge Pathway the following academic year.

For more information about Language Centre option modules available to you please visit the following webpages.

For Level 4 and 5 students please visit: https://www.keele.ac.uk/study/languagecentre/languagecentreoptions/

For Level 6 students please visit: https://www.keele.ac.uk/students/academiclife/global-challenge-pathways/

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	
		Min	Max
Level 4	105	15	15
Level 5	90	30	30
Level 6	30	90	90
Level 7	120	0	0

Module Lists

Level 4

At Level 4, students take 105 credits of compulsory modules. The remaining 15 credits may either be used to take a Global Challenge Pathway or one of the optional modules listed below.

Compulsory modules	Module Code	Credits	Period
Minerals and Rocks	ESC-10070	15	Semester 1
Human and Physical Geographies for a Changing World	GEG-10017	30	Semester 1
Academic, Professional and Field Skills	ESC-10101	30	Semester 1-2
The Earth System	ESC-10048	15	Semester 2
Earth and Life Through Time	ESC-10103	15	Semester 2

Optional modules	Module Code	Credits	Period
Geoscience Data Interpretation, Analysis and Visualisation	ESC-10047	15	Semester 2
Roots and Future: exploring sustainable places	GEG-10023	15	Semester 2

Level 5

Compulsory modules	Module Code	Credits	Period
Igneous and Metamorphic Petrology	ESC-20001	15	Semester 1
Earth's Changing Landscapes	ESC-20110	15	Semester 1
Geographic Information Science and Remote Sensing	ESC-20132	15	Semester 1
Geological Field Skills	ESC-20126	30	Semester 1-2
Reconstructing Past Environments	ESC-20002	15	Semester 2

Optional modules	Module Code	Credits	Period
Palaeoclimatology and Quaternary Studies	ESC-20036	15	Semester 1
Flexible Work Placement (Level 5)	NAT-20011	15	Semester 1-2
Water in the Environment	ESC-20100	15	Semester 2
Geoethics and Environmental Justice	ESC-20142	15	Semester 2

Level 5 Module Rules

Please note: You cannot take both Flexible Work Placement (Level 5) and Flexible Work Placement (Level 6)

Level 6

Compulsory modules	Module Code	Credits	Period
Independent Research Dissertation	ESC-30144	30	Semester 1-2

Optional modules	Module Code	Credits	Period
Extinction!	ESC-30106	15	Semester 1
Extractive Resources and Critical Minerals	ESC-30146	30	Semester 1
Glacial Environments	ESC-30162	15	Semester 1
River Conservation & Management	ESC-30164	15	Semester 1
Quaternary Climate Change: from Ice Ages to a Warming World	ESC-30166	15	Semester 1
Applied GIS	ESC-30152	30	Semester 1-2
Flexible Work Placement (Level 6)	NAT-30008	15	Semester 1-2
Professional Experience in Education	NAT-30012	15	Semester 1-2
Natural Hazards	ESC-30009	15	Semester 2
Coastal Environments	ESC-30027	15	Semester 2
Structures and Sub-Surface Processes	ESC-30140	30	Semester 2
Engineering and Applied Geology	ESC-30156	30	Semester 2
Environmental and Wildlife Forensics	FSC-30029	15	Semester 2
Advanced Geographical Fieldwork	GEG-30051	15	Semester 2

Level 6 Module Rules

Students may choose to study ONE (or none) of the following modules:

- NAT-30008 - Flexible Work Placement (level 6);
- NAT-30012 - Professional Experience in Education;
- Global Challenge Pathway.

The options you choose should result in 60 credits being studied in Semester 1 and 60 in Semester 2.

In certain circumstances you may wish to take more credits in one semester than the other - please talk to your Academic Mentor if you are considering doing this.

Level 7

Compulsory modules	Module Code	Credits	Period
Literature Review and Grant Proposal	LSC-40065	30	Semester 1
Advanced Research Topics in Geoscience	LSC-40171	30	Semester 1
MSci Extended Research Project	LSC-40063	60	Semester 1-2

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

In Year 1 (Level 4) and Year 2 (Level 5) these learning outcomes are achieved in the compulsory modules which

all students are required to take. Some of these outcomes may also be achieved or reinforced in elective modules together with other outcomes not stated here. In Year 3 (Level 6) the stated outcomes are achieved by taking any of the modules offered in each semester.

Subject Knowledge and Understanding	
Learning Outcome	**Module in which this is delivered**
The terminology, nomenclature and classification of rocks, minerals, fossils and geological and geographical structures.	All Level 4 modules
Geological and earth surface processes and how they integrate to shape the natural world at different temporal and spatial scales.	ESC-10074 Earth Structure; GEG-10017 Human and Physical Geographies for a Changing World
The structure and composition of the Earth and other planets.	ESC-10074 Earth Structure.
Geological time, including the principles of stratigraphy, the stratigraphic column, dating techniques, rates of Earth processes and major events in Earth history.	ESC-10103 Earth and Life through time; ESC-10074 Earth Structure.
The evolution of life on Earth as revealed by the fossil record.	ESC-10103 Earth and Life through time
Major geoscience paradigms, including uniformitarianism, the extent of geological time and plate tectonics.	ESC-10074 Earth Structure; GEG-10017 Human and Physical Geographies for a changing world; ESC-10074 Earth Structure
The need for both a multi-disciplinary and interdisciplinary approach to the development of knowledge in geology and physical geography.	ESC-10101 Academic, Professional and Field Skills; GEG-10017 Human and Physical Geographies for a changing world.
The different components of the Earth system and how they interact to control changes of physical environments through time and, in turn, how they impact on society.	GEG-10017 Human and Physical Geographies for a changing world; ESC-10103 Earth and Life through time.
Patterns of spatial variation as dynamic characteristics of the physical environment.	GEG-10017 Human and Physical Geographies for a changing world.
Different methods used in the observation, analysis, interpretation and representation of geological and geographical information.	All level 4 modules.
How the geology and physical geography of a field study area can be used to illustrate and deepen understanding of the evolution of a wider region.	GEG-10017 Human and Physical Geographies for a changing world; ESC-10103 Earth and Life through time; ESC-10074 Earth Structure; ESC-10070 Minerals and Rocks
Modern environments and processes, and use of this knowledge to interpret aspects of the geological record.	GEG-10017 Human and Physical Geographies for a changing world.
Geological and physical geography aspects of human impacts on the physical environment.	GEG-10017 Human and Physical Geographies for a changing world.
Natural hazards and their impacts on society.	ESC-10074 Earth Structure.
Applications of geology and physical geography to the development of knowledge, wealth creation and improving quality of life.	All Level 4 modules.
The United Nations Sustainable Development Goals and how they relate to the geosciences	All Level 4 modules.

Subject Specific Skills	
Learning Outcome	**Module in which this is delivered**
Identify a wide range of igneous, sedimentary and metamorphic rocks, as well as a wide range of minerals, fossils and geological structures.	ESC-10070 Minerals and Rocks; ESC-10103 Earth and Life through time.
Implement three-dimensional analysis with particular reference to the subsurface distribution and relationships of rocks observed at the surface.	ESC-10074 Earth Structure.
Collect and record geological and geophysical information in the field, including the production and interpretation of a variety of different maps.	ESC-10103 Earth and Life through time; GEG-10017 Human and Physical Geographies for a changing world; ESC-10101 Academic, Professional and Field Skills.
Plan, design and execute an independent piece of project work that integrates aspects of geology and physical geography, including acquisition and recording of data in the field, followed by the processing, interpretation and presentation of this data, and the production of a final report.	All Level 4 modules.
Make safe and effective use of a range of field equipment commonly used by the geoscience profession and develop an understanding of the scope and limitations of such equipment.	ESC-10103 Earth and Life through time; GEG-10017 Human and Physical Geographies for a changing world; ESC-10101 Academic, Professional and Field Skills.
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.	ESC-10103 Earth and Life through time; GEG-10017 Human and Physical Geographies for a changing world; ESC-10101 Academic, Professional and Field Skills.
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.	ESC-10101 Academic, Professional and Field Skills; ESC-10070 Minerals and Rocks.
Prepare effective maps and diagrams using a range of appropriate technologies.	ESC-10103 Earth and Life through time; GEG-10017 Human and Physical Geographies for a changing world; ESC-10101 Academic, Professional and Field Skills.
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.	All Level 4 modules.
Combine and interpret different types of geological and geophysical evidence using quantitative and qualitative approaches.	All Level 4 modules.
Appreciate the issues of sample selection, accuracy, precision and uncertainty during collection, recording and analysis of geoscience data in the field and laboratory.	All Level 4 modules.
Use powers of observation, analysis and imagination to make decisions in the light of uncertainty.	All Level 4 modules.

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.	ESC-0101 Academic, Professional and Field Skills
Work with numerical data using appropriate qualitative and quantitative techniques, as well as computer software packages.	All Level 4 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 Level 4 modules.
Use the internet as a means of communication and a source of information.	All Level 4 modules.
Demonstrate competence in spatial awareness and observation.	All Level 4 modules.
Conduct field and laboratory studies.	All Level 4 modules.
Reference work in an appropriate manner.	All Level 4 modules.
Work with information handling and retrieval systems using data from a wide range of sources.	All Level 4 modules.
Work effectively both as an individual and as part of a group or team, recognising and respecting the viewpoints of others.	All Level 4 modules.
Sustain motivation to work towards a goal over an extended period of time.	All Level 4 modules.
Recognise responsibilities as a local, national and international citizen.	ESC-10101 Academic, Professional and Field Skills; GEG-10017 Human and Physical Geographies for a changing world.

Level 5

Subject Knowledge and Understanding	
Learning Outcome	**Module in which this is delivered**
The terminology, nomenclature and classification of rocks, minerals, fossils and geological and geographical structures.	All Level 5 modules.
Geological and earth surface processes and how they integrate to shape the natural world at different temporal and spatial scales.	All Level 5 modules.
The structure and composition of the Earth and other planets.	ESC-20001 Igneous and Metamorphic Petrology; ESC-20002 Reconstructing past environments; ESC-20110 Earth's Changing Landscape.
Geological time, including the principles of stratigraphy, the stratigraphic column, dating techniques, rates of Earth processes and major events in Earth history.	ESC-20126 Geological Field Skills; ESC-20001 Igneous and Metamorphic Petrology; ESC-20002 Reconstructing past environments; ESC-20110 Earth's Changing Landscape.
The evolution of life on Earth as revealed by the fossil record.	ESC-20126 Geological Field Skills; ESC-20002 Reconstructing past environments.
Major geoscience paradigms, including uniformitarianism, the extent of geological time and plate tectonics.	All Level 5 modules.
The need for both a multi-disciplinary and interdisciplinary approach to the development of knowledge in geology and physical geography.	ESC-20126 Geological Field Skills; ESC-220132 Geographical Information Science and Remote Sensing; ESC-20110 Earth's Changing Landscape.
The different components of the Earth system and how they interact to control changes of physical environments through time and, in turn, how they impact on society.	All Level 5 modules.
Patterns of spatial variation as dynamic characteristics of the physical environment.	ESC-20126 Geological Field Skills; ESC-220132 Geographical Information Science and Remote Sensing; ESC-20110 Earth's Changing Landscape.
Different methods used in the observation, analysis, interpretation and representation of geological and geographical information.	All Level 5 modules.
How the geology and physical geography of a field study area can be used to illustrate and deepen understanding of the evolution of a wider region.	ESC-20126 Geological Field Skills; ESC-20132 Geographical Information Science and Remote Sensing; ESC-20110 Earth's Changing Landscape.
Modern environments and processes, and use of this knowledge to interpret aspects of the geological record.	ESC-20132 Geographical Information Science and Remote Sensing; ESC-20110 Earth's Changing Landscape.
Geological and physical geography aspects of human impacts on the physical environment.	ESC-20110 Earth's Changing Landscape.
Natural hazards and their impacts on society.	ESC-20001 Igneous and Metamorphic Petrology; ESC-20110 Earth's Changing Landscape.
Applications of geology and physical geography to the development of knowledge, wealth creation and improving quality of life.	All Level 5 modules.
The United Nations Sustainable Development Goals and how they relate to the geosciences.	All Level 5 modules.

Subject Specific Skills	
Learning Outcome	**Module in which this is delivered**
Identify a wide range of igneous, sedimentary and metamorphic rocks, as well as a wide range of minerals, fossils and geological structures.	ESC-20126 Geological Field Skills; ESC-20001 Igneous and Metamorphic Petrology; ESC-20002 Reconstructing past environments.
Implement three-dimensional analysis with particular reference to the subsurface distribution and relationships of rocks observed at the surface.	ESC-20126 Geological Field Skills; ESC-20132 Geographical Information Science and Remote Sensing.
Collect and record geological and geophysical information in the field, including the production and interpretation of a variety of different maps	ESC-20126 Geological Field Skills; ESC-20132 Geographical Information Science and Remote Sensing; ESC-20002 Reconstructing past environments.
Plan, design and execute an independent piece of project work that integrates aspects of geology and physical geography, including acquisition and recording of data in the field, followed by the processing, interpretation and presentation of this data, and the production of a final report.	All Level 5 modules.
Make safe and effective use of a range of field equipment commonly used by the geoscience profession and develop an understanding of the scope and limitations of such equipment.	ESC-20126 Geological Field Skills
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.	ESC-20126 Geological Field Skills; ESC-20002 Reconstructing past environments.
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.	ESC-20001 Igneous and Metamorphic Petrology; ESC-20002 Reconstructing past environments.
Prepare effective maps and diagrams using a range of appropriate technologies.	ESC-20126 Geological Field Skills; ESC-20132 Geographical Information Science and Remote Sensing.
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.	All Level 5 modules.
Combine and interpret different types of geological and geophysical evidence using quantitative and qualitative approaches.	All Level 5 modules.
Appreciate the issues of sample selection, accuracy, precision and uncertainty during collection, recording and analysis of geoscience data in the field and laboratory.	All Level 5 modules.
Use powers of observation, analysis and imagination to make decisions in the light of uncertainty.	All Level 5 modules.

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 Leve 5 modules.
Communicate effectively to a variety of audiences in written, verbal and graphical forms.	All Level 5 modules.
Work with numerical data using appropriate qualitative and quantitative techniques, as well as computer software packages.	All Level 5 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 Level 5 modules.
Use the internet as a means of communication and a source of information.	All Level 5 modules.
Demonstrate competence in spatial awareness and observation.	All level 5 modules.
Conduct field and laboratory studies.	All Level 5 modules.
Reference work in an appropriate manner.	All Level 5 modules.
Work with information handling and retrieval systems using data from a wide range of sources.	All Level 5 modules.
Work effectively both as an individual and as part of a group or team, recognising and respecting the viewpoints of others.	All Level 5 modules.
Sustain motivation to work towards a goal over an extended period of time.	All Level 5 modules
Recognise responsibilities as a local, national and international citizen.	All Level 5 modules.

Level 6

Subject Knowledge and Understanding	
Learning Outcome	**Module in which this is delivered**
The terminology, nomenclature and classification of rocks, minerals, fossils and geological and geographical structures.	All Level 6 modules.
Geological and earth surface processes and how they integrate to shape the natural world at different temporal and spatial scales.	GEG-30045 International Geographical Field Course; ESC-30152 Applied GIS; ESC-30158 Geomorphology: Earth Surface Processes and Landscapes; ESC-30018 Global Environmental Change; ESC-30009 Natural Hazards.
The structure and composition of the Earth and other planets.	ESC-30156 Engineering and Applied Geology; ESC-30140 Structures, sub-surface processes; ESC-30146 Extractive resources and Critical Minerals.

Subject Knowledge and Understanding	
Learning Outcome	**Module in which this is delivered**
Geological time, including the principles of stratigraphy, the stratigraphic column, dating techniques, rates of Earth processes and major events in Earth history.	ESC-30156 Engineering and Applied Geology; ESC-30140 Structures, sub-surface processes; ESC-30146 Extractive resources and Critical Minerals; ESC-30158 Geomorphology: Earth Surface Processes and Landscapes; ESC-30018 Global Environmental Change; ESC-30009 Natural Hazards; ESC-30106 Extinction!
The evolution of life on Earth as revealed by the fossil record.	ESC-30018 Global Environmental Change; ESC-30106 Extinction!
Major geoscience paradigms, including uniformitarianism, the extent of geological time and plate tectonics.	All Level 6 modules.
The need for both a multi-disciplinary and interdisciplinary approach to the development of knowledge in geology and physical geography.	ESC-30045 International Geographical Field Course; ESC-30152 Applied GIS; ESC-30158 Geomorphology: Earth Surface Processes and Landscapes; ESC-30018 Global Environmental Change; ESC-30009 Natural Hazards; ESC-30106 Extinction!
The different components of the Earth system and how they interact to control changes of physical environments through time and, in turn, how they impact on society.	ESC-30152 Applied GIS; ESC-30156 Engineering and Applied Geology; ESC-30146 Extractive resources and Critical Minerals; ESC-30018 Global Environmental Change; ESC-30009 Natural Hazards; ESC-30106 Extinction!
Patterns of spatial variation as dynamic characteristics of the physical environment.	GEG-30045 International Geographical Field Course; ESC-30152 Applied GIS; ESC-30158 Geomorphology: Earth Surface Processes and Landscapes; ESC-30018 Global Environmental Change.
Different methods used in the observation, analysis, interpretation and representation of geological and geographical information.	All Level 6 modules.
How the geology and physical geography of a field study area can be used to illustrate and deepen understanding of the evolution of a wider region.	GEG-30045 International Geographical Field Course; ESC-30152 Applied GIS; ESC-30156 Engineering and Applied Geology; ESC-30140 Structures, sub-surface processes; ESC-30146 Extractive resources and Critical Minerals; ESC-30158 Geomorphology: Earth Surface Processes and Landscapes.
Modern environments and processes, and use of this knowledge to interpret aspects of the geological record.	GEG-30045 International Geographical Field Course; ESC-30158 Geomorphology: Earth Surface Processes and Landscapes; ESC-30018 Global Environmental Change.
Geological and physical geography aspects of human impacts on the physical environment.	ESC-30152 Applied GIS; ESC-30156 Engineering and Applied Geology; ESC-30140 Structures, sub-surface processes; ESC-30146 Extractive resources and Critical Minerals; ESC-30158 Geomorphology: Earth Surface Processes and Landscapes; ESC-30018 Global Environmental Change; ESC-30009 Natural Hazards.
Natural hazards and their impacts on society.	ESC-30156 Engineering and Applied Geology; ESC-30009 Natural Hazards.
Applications of geology and physical geography to the development of knowledge, wealth creation and improving quality of life.	All Level 6 modules.
The United Nations Sustainable Development Goals and how they relate to the geosciences.	All Level 6 modules.

Subject Specific Skills	
Learning Outcome	**Module in which this is delivered**
identify a wide range of Igneous, sedimentary and metamorphic rocks, as well as a wide range of minerals, fossils and geological structures.	ESC-30156 Engineering and Applied Geology; ESC-30140 Structures, sub-surface processes; ESC-30146 Extractive resources and Critical Minerals; ESC-30158 Geomorphology: Earth Surface Processes and Landscapes; ESC-30018 Global Environmental Change; ESC-30106 Extinction!
Implement three-dimensional analysis with particular reference to the subsurface distribution and relationships of rocks observed at the surface.	ESC-30045 International Geographical Field Course; ESC-30152 Applied GIS; ESC-30156 Engineering and Applied Geology; ESC-30140 Structures, sub-surface processes; ESC-30146 Extractive resources and Critical Minerals; ESC-30158 Geomorphology: Earth Surface Processes and Landscapes.
Collect and record geological and geophysical information in the field, including the production and interpretation of a variety of different maps.	ESC-30152 Applied GIS.
Plan, design and execute an independent piece of project work that integrates aspects of geology and physical geography, including acquisition and recording of data in the field, followed by the processing, interpretation and presentation of this data, and the production of a final report.	All Level 6 modules.
Make safe and effective use of a range of field equipment commonly used by the geoscience profession and develop an understanding of the scope and limitations of such equipment.	ESC-30045 International Geographical Field Course.
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.	ESC-30045 International Geographical Field Course.
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.	ESC-30156 Engineering and Applied Geology; ESC-30140 Structures, sub-surface processes; ESC-30146 Extractive resources and Critical Minerals; ESC-30018 Global Environmental Change.
Prepare effective maps and diagrams using a range of appropriate technologies.	GEG-30045 International Geographical Field Course; ESC-30152 Applied GIS.
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.	All Level 6 modules.
Combine and interpret different types of geological and geophysical evidence using quantitative and qualitative approaches.	All Level 6 modules.
Appreciate the issues of sample selection, accuracy, precision and uncertainty during collection, recording and analysis of geoscience data in the field and laboratory.	All Level 6 modules.
Use powers of observation, analysis and imagination to make decisions in the light of uncertainty.	All level 6 modules.

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 Level 6 modules.
Communicate effectively to a variety of audiences in written, verbal and graphical forms.	All Level 6 modules.
Work with numerical data using appropriate qualitative and quantitative techniques, as well as computer software packages.	All Level 6 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 Level 6 modules.
Use the internet as a means of communication and a source of information.	All Level 6 modules.
Demonstrate competence in spatial awareness and observation.	All Level 6 modules.
Conduct field and laboratory studies.	All Level 6 modules.
Reference work in an appropriate manner.	All Level 6 modules.
Work with information handling and retrieval systems using data from a wide range of sources.	All Level 6 modules.
Work effectively both as an individual and as part of a group or team, recognising and respecting the viewpoints of others.	All Level 6 modules.
Sustain motivation to work towards a goal over an extended period of time.	All Level 6 modules.
Recognise responsibilities as a local, national and international citizen.	All Level 6 modules.

Level 7

Subject Knowledge and Understanding	
Learning Outcome	**Module in which this is delivered**
the principles and applications of cutting-edge research methodologies and techniques in the study of Geology and Physical Geography, Earth Systems and the wider Geosciences to an advanced level;	All L7 Modules
the context of their extended research project in relation to on-going research activity in their field of study and the wider Geosciences.	All L7 Modules

Subject Specific Skills	
Learning Outcome	**Module in which this is delivered**
develop an advanced understanding of the processes involved in research design, funding, and dissemination;	All L7 Modules
critically evaluate current literature and complex methodologies to an advanced level in relevant areas of contemporary Geology and Physical Geography.	All L7 Modules

Key or Transferable Skills (graduate attributes)	
Learning Outcome	**Module in which this is delivered**
identify, engage with, and evaluate geological information, issues and topics at the forefront of the discipline;	All L7 Modules
develop greater autonomy in the planning and implementation of tasks associated with their research project and taking responsibility for their workload.	All L7 Modules

9. Final and intermediate awards

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

MSci Geology and Physical Geography	480 credits	You will require at least 120 credits at levels 4, 5, 6 and 7 You must accumulate at least 360 credits in your main subject (out of 480 credits overall) to graduate with a named single honours degree in this subject.
BSc (Hons) Geology and Physical Geography	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:

- **Technical reports** allow you to demonstrate your ability to articulate ideas clearly and concisely in a format used commonly in industry. Technical reports also develop and demonstrate research and presentation skills (including appropriate scholarly referencing)
- **Laboratory reports** - structured proformas and full laboratory reports are formal summaries of work carried out in the laboratory and test your understanding of the practical aspects of the programme and develop the skills necessary to enable you to present and analyse your results
- **Class tests** taken either in the laboratory or online via the Keele Learning Environment (KLE) assess your subject knowledge and your ability to apply it in a more structured and focused way
- **Dissertations** enable you to explore in depth an area of particular interest through a substantial piece of focused research and writing, and demonstrate a deeper understanding of geological and physical geography issues
- **Field course exercises** allow you to demonstrate your understanding of geological and physical geography features encountered in the field. This might include the contents of your field notebook, field sketches and maps
- **Oral and poster presentations and reports** assess your subject knowledge and understanding and your ability to articulate this orally and graphically. Group work also tests your ability to work effectively as members of a team, and to reflect on these processes as part of your own personal development
- **Literature Syntheses** of other scholars' work test your 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. They also help you provide a background context for your research project work
- **Portfolios** may consist of a range of different pieces of work but on a common theme to allow you to demonstrate your knowledge and understanding via a number of different formats

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)	31.5%	68.5%	0%
Year 2 (Level 5)	40.9%	58.3%	0.8%
Year 3 (Level 6)	27.5%	69.5%	3%

12. Accreditation

This programme is not currently accredited

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/

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

It is not possible to take both the Work Placement Year and the International Year option.

At this time there are no additional course regulations relating to accreditation. However, should these be required by the regulating body in the future, we might have to add programme regulations to maintain our accreditation. Should this be required we will inform you of any changes at the earliest opportunity.

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/

English for Academic Purposes

Please note: All new international students entering the university will provide a sample of Academic English during their registration Using this sample, 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

English Language Modules at Level 5:

- 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

English Language Modules at Level 6:

- Business - ENL-90003 Academic English for Business Students (Part 1); ENL-90004 Academic English for Business Students (2); ENL-90005 Advanced Business English Communication
- 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: https://www.keele.ac.uk/qa/programmesandmodules/recognitionofpriorlearning/

15. How are students supported on the programme?

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

Open Door Policy: Geology members of staff operate an 'Open Door Policy' where if we are free our office door will be open. If you what to have a chat about anything related to our courses, just knock and come in.

Academic Mentors: All students are allocated an Academic Mentor for the duration of their studies as part of the University's Academic Mentoring system. The role of the Academic Mentor is to meet formally with their mentees several times a year to discuss progress, performance and engagement and to offer support and advice. Students can make arrangements to see their Academic Mentor at any time.

Assessment & Feedback: On-going formative feedback on work is provided in practical classes and on fieldwork by discussion with members of staff or postgraduate demonstrators. Feedback on formative and

summative assessments is provided in many formats, as electronic or written comments (as appropriate to the type of work submitted), or verbally either as general comments to a group or individual. You can consult your Academic Mentor about feedback on your assessments or consult module leaders regarding course content

Use of e-learning/the Keele Learning Environment (KLE): All modules belonging to the Geology programmes are supported by learning materials that are accessible to students via the KLE and other linked platforms (e.g. Microsoft Teams).

Option Module Choice: General advice is given at the end of Level 5 (Year 2) on your choice of Level 6 option modules. You can then talk to either your Academic Mentor and/or the Course Director about how your choice of modules would match your career aspirations

Placement and project manager: All students undertaking the work placement degree programme will be provided with support at Keele. Students will be expected to find their own work placements (we will share information about any we are aware of); however, support will be provided throughout the placement process. This will involve support ensuring the appropriateness of the placement prior to starting the Placement Year, and email/telephone/face-to-face contact with support at Keele throughout the placement at regular intervals.

Health and Safety: All students admitted to the course are expected to abide by the rules and regulations governing the efficient working, safety and welfare of all members both within the University and in the field. First aid training for working in field environments are provided on the course.

Career Choice: Any member of the geology staff will be happy to discuss careers with you. You can consult them at any time regarding questions you might have regarding future careers. Career development skills such as CV writing and applying for jobs are embedded within several modules - and support is available from the Careers team at Keele.

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

Student Experience and Support: All students can access advice, guidance, and one to one support from their Student Experience and Support team, based within their academic School or Faculty.

16. Learning Resources

The majority of teaching staff on the Geology programme are based in the William Smith building. This building hosts several theatres and labs that our programmes make use of. The Office is open during the week to answer student queries and deal with administrative tasks. Our programmes also use the Central Science Laboratory - state of the art lab spaces recently built for teaching across the Faculty of Natural Sciences. We make use of our extensive geological collections; we have thousands of minerals, rocks, fossils and thin sections. Our campus has a range of geographical features that we make use of in our teaching; lakes, woods, meadows (etc.), plus a solar and wind farm! We have a wide range of modern equipment which we like our students to get hands on experience with, this includes microscopes, geophysics equipment, a drone fleet, analytical equipment, specialised software and more.

17. Other Learning Opportunities

Study abroad (semester)

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

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

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

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

Study Abroad (International Year)

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

Work Placement Year

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. Eligibility rules are included in the Annex.

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.

18. Additional Costs

Mandatory costs

You can expect some additional costs as a student on this course, which may support learning activities, specialist equipment, fieldwork, placements, or other course-related requirements. Details of these mandatory costs are outlined below to help you plan accordingly.

Compulsory field courses (levels 4 and 5) : approx. £35 a day to cover subsistence costs for lunches and dinners.

Field Notebook(s): £30

Waterproof and appropriate clothing and footwear for field courses : £200.00

Optional costs

In addition to the mandatory costs listed below, there may be optional costs that students can choose to incur to enhance their learning experience. These are not required to complete the course. Details of these optional costs are outlined below to help you plan accordingly.

Optional international field course: £200-£1,600 depending on location, plus subsistence costs for lunches and dinners (estimated at £35 per day).

Activity	Estimated Cost
Mandatory costs	
Compulsory field courses (levels 4 and 5):	£0.00
Compulsory field courses (levels 4 and 5) - approx. £35 a day to cover subsistence costs for lunches and dinners.	£35 a day
Equipment - waterproof and appropriate clothing and footwear for field courses:	£200.00
Field Notebook(s):	£30
Optional costs	
Optional international field course:	£200-£1,600 depending on location
Optional international field course - subsistence costs for lunches and dinners (estimated at £35 per day)	£35 a day
Total estimated additional costs (maximum amount is based on a student attending all optional field courses as well as having to purchase all outdoor clothing)	£265 - £2,400

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%.

Students may also incur general expenses related to university study, such as for printing, textbooks and other materials. Students who undertake a placement may be responsible for additional costs, such as travel, accommodation, and subsistence costs. For further information, please refer to the additional costs information.

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:

- 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

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

d. Accreditation scheme of the Geological Society of London: https://www.geolsoc.org.uk/accreditation

e. Accreditation scheme of the Royal Geographical Society (with IBG): https://www.rgs.org/research/programme-accreditation

21. Annex - International Year

BSc Geology and Physical Geography with International Year

International Year Programme

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.

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.

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

International Year Programme Aims

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

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

Entry Requirements for the International Year

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

The criteria to be applied are:

- Academic Performance (an average of 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. Design, plan and critically evaluate a practical investigation within geology and physical geography, record relevant information accurately and systematically and be able to reflect upon the data in a critical manner.
5. Integrate, apply and develop fundamental geology and physical geography principles to describe and explain phenomena and solve problems in the context of selected topics within geology and physical geography.

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

BSc Geology and Physical 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 in the geological sector 2. enhanced employability skills training
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, (* or equivalent, work placement), will be automatically transferred onto the 3-year degree programme.

* We recommend where possible students undertake a placement of between 9 - 12 months on a full-time basis to maximize academic and personal growth. However, the Work Placement Year mandates a minimum of 24 weeks in duration, ideally on a full-time basis, but no less than 21 hours per week. This enables those undertaking an unpaid placement to work on a part-time basis alongside.

The criteria to be applied are:

- A good University attendance record and be in 'good academic standing'.
- Academic Performance (an average of 50% across all modules in Semester 1 at Level 5 is normally required. Places on the Work Placement Year are then conditional on achieving an average mark of 50% across all Level 5 modules. Students with up to 15 credits of re-assessment who meet the 50% requirement may progress to the Work Placement 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(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 afters 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 their career
3. apply academic theory learnt as part of the taught degree to real situations in the work place
4. evaluate their own employability skills (via a SWOT Analysis) and create Intended Learning Outcomes for their placement in order to develop the skills areas which they have identified as being weak or needing further enhancement
5. develop, through practice in the work place, the work-related skills identified through their SWOT analysis and Intended Learning Outcomes

These learning outcomes will be assessed through the Work Placement Year module (NAT-30010) which involves:

1. Submission of a mid-placement portfolio comprising evaluation of employability skills and ILOs, action plan and an evaluation of the student's performance based on the placement supervisor's initial report.
2. Submission of a final placement report comprising a reflective diary and an evaluation of the their performance based on the placement supervisor's final report.

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 'Work Placement Year' module (NAT-30010)
- 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.
- If a student chooses to start their work placement prior to the September of their placement year, then the student must ensure that they negotiate time off to attend any relevant field courses and fieldwork. Failure to attend field-courses or undertake fieldwork due to a work placement position will not be considered as exceptional circumstances.

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

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Previous documents

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