

Course Information Document: Undergraduate

For Academic Year 2025/26

1. Course Summary

Names of programme and award title(s)	BSc (Hons) Geoscience (apprenticeship programme)
Award type	Single Honours
Mode of study	Part-time
Framework of Higher Education Qualification (FHEQ) level of final award	Level 6
Normal length of the programme	5 years
Maximum period of registration	The normal length as specified above plus 3 years
Location of study	Keele Campus
Accreditation (if applicable)	N/A
Regulator	Office for Students (OfS); Institute for Apprenticeships and Technical Education (IfATE)
Tuition Fees	The employer pays all course fees and no fees are charged to apprentice students. Programme price is set at the maximum funding band for this apprenticeship standard set by the Institute for Apprenticeships and Technical Education (IfATE) which is a government non-departmental body sponsored by the Department for Education (DFE). We reserve the right to increase price in future. Fees will be paid by the employer on behalf of the apprentice using Levy or co-funding arrangements. For further information please visit: https://www.gov.uk/government/publications/apprenticeship-funding-from-may-2017 A full breakdown of costs is set out in the training plan.

How this information might change: Please read the important information at <http://www.keele.ac.uk/student-agreement/>. This explains how and why we may need to make changes to the information provided in this document and to help you understand how we will communicate with you if this happens.

2. What is a Single Honours programme?

The Single Honours programme described in this document allows you to focus exclusively on this subject.

All Higher and Degree Apprenticeships combine higher education study and work-based learning to enable apprentices to achieve a higher-level award whilst in work. The provision of an academic award is integrated with experience, practice and learning in the workplace where the apprentice has paid employment status. Higher and Degree Apprenticeships are co-designed by training providers and employers to ensure that apprentices are equipped with the skills employers need and to develop their own careers.

3. Overview of the Programme

Degree Apprenticeships combine higher education study and work-based learning to enable apprentices to achieve a higher-level award whilst in work. The provision of an academic award is integrated with experience, practice and learning in the workplace where the apprentice has paid employment status. Higher and Degree Apprenticeships are co-designed by training providers and employers to ensure that apprentices are equipped with the skills employers need and to develop their own careers. This BSc Geoscience (Degree Apprenticeship) honours degree is designed to deliver on all aspects of the Geoscientist (integrated degree) apprenticeship standard. Apprenticeship standards are co-designed by employers and training providers to ensure that apprentices are equipped with the skills employers need. All higher and degree apprenticeships combine work-based learning with part-time study leading to a recognised qualification. The programme has been designed for delivery in a work-based learning context, where assessments for each module of the programme provide opportunities for the student to apply the learning from the module back into their workplace context.

During delivery we will work with you and your employer to ensure that you progress through your apprenticeship, as a job with training. This will involve regular tripartite review meetings, monitoring compliance with apprenticeship requirements, such as the 20% of the job and identifying any changes required to your learning plan. Throughout your apprenticeship, you and your employer will have access to Aptem, our apprenticeships management system, where you will be required to sign and submit documents to demonstrate your progress and adhere to compliance requirements.

Achievement of the apprenticeship is through the End Point Assessment (EPA) and further details are provided in the section titled 'How is the programme assessed?'

The End Point Assessment for this programme is integrated.

This programme will provide you with the skills, knowledge and attributes that underpin the interdisciplinary discipline of geoscience. You will gain theoretical understanding of how our planet formed, has changed through time, and how it might change in the future. You will learn about the resources we extract from the ground to sustain civilization, how life originated and developed on Earth, and how we can reconstruct the past by studying the present. Geoscientists are in high demand and by linking your learning on this programme to your on-job learning, you will also develop a range of transferable and corporate skills (working with and to policy and standards, managing and planning site work etc).

Teaching takes place through several week-long "bootcamps" on Keele campus, where you will undertake many of the applied aspects of the course, this learning is scaffolded by online delivery of material; this will be a mixture of live and recorded sessions plus a wide range of other content types. Further to this, two week-long residential field courses are embedded across the course, in addition to several day-long field courses to locations close to Keele.

The first level (Level 4) of the programme focusses on introducing you to some of Earth's broadest (but vitally important) systems such as plate tectonics and large-scale geological processes. We will introduce concepts such as evolution and extinction, learn how to describe rocks and interpret their origins. This is placed alongside an introduction to important tools for recording and analysing geological features such as photogrammetry, remote sensing, geological maps and GPS. You will also undertake a module developing your academic, corporate, and field skills.

The second level (Level 5) sees more applied techniques and activities. You will learn how geophysical equipment can be utilised for a range of geological investigations, conduct an Environmental Impact Assessment and develop knowledge in the areas of geochemistry and critical minerals. In parallel, you will learn about the wider impact's geoscience activities have on the economy, environment and society.

In your final level (Level 6) you will undertake a project bespoke to you, enabling you to focus on an area of geoscience that is either critical in your employment, or something you are particularly interested in. There is also the opportunity to study modules that you and your employer think are a good fit for your employed role. The programme is designed to support part-time, flexible learning. You will have periods of time on Keele campus learning applied aspects of the course, and online materials (including a range of activities) where you will develop knowledge and skills.

Geoscience is a broad discipline covering everything about the planet we live on (and some extraterrestrial stuff too!) The discipline is vital in sustaining civilization and is increasingly recognised as a discipline required to help face many of the world's grand challenges.

4. Aims of the programme

The broad aims of the programme (as established in the IfATE apprenticeship standard) enable you to:

- Evaluate earths systems and advise on the viable exploration, management, development, remediation and storage of earth's resources;
- Mitigate and advise on geohazards, the energy transition and alternative energy sources that relate to the route to net zero;
- Understand and use engineering geology and geotechnical engineering approaches in activities that include land restoration, site investigations, waste disposal and civil engineering;
- Investigate the past to understand the present and help model the future (e.g. understanding climate change and its impact on the environment)

5. What you will learn

The content, subject knowledge, subject specific and transferable skills covered in this programme are informed by the Duties, Knowledge, Skills and Behaviours outlined in the Geoscientist Apprenticeship Standard.

Subject knowledge and understanding

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

- The Earths systems, Earths resources and materials, Earth history including evolution and extinction of life on Earth, petrology of igneous, sedimentary and metamorphic rocks;
- Geoethics and Environmental Justice and the importance of EDI in the geosciences;
- A wide range of geoscience methods, including their theoretical underpinning;
- The relevance and importance of geosciences for a sustainable future

Subject specific skills

Successful learners will be able to:

- Gather, collate and analyse geoscientific data using a range of digital, and non-digital methods
- Apply appropriate geoscience methods and skills for appropriate activities;
- Undertake a range of fieldwork activities

Key or transferable skills (including employability skills)

Successful learners will be able to:

- Communicate their science to a variety of stakeholders;
- Design and conduct multidisciplinary projects;
- Prepare factual and interpretive reports, figures and diagrams;
- Disseminate knowledge in a variety of ways;
- Help inform policy, adapt strategy and support and manage investigation;
- Work in accordance to professional and ethical standards.

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 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 (including in-person, online and pre-recorded material)

- Tutorials, seminars and workshops (in-person and online)
- Practical and lab-based sessions
- Field courses
- Problem-solving sessions
- Extended reality scenarios and simulations
- Independent learning (often directed but many opportunities to discover and explore resources)
- Various digital resources including extended reality materials (digital/virtual field courses, lab work etc.)

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.

Assessments are developed to enhance the learning experience and provide the opportunity for you to demonstrate how you can apply knowledge and skills. Many of the assessments are employment focussed and where possible you can bring on-job experience to these authentic tasks.

7. Teaching Staff

The staff teaching this course have a broad range of experience and expertise in the geosciences. Our staff are nationally and internationally recognised in academia and industry. Our staff are innovative and committed educators, several are award winning, and others have additional teaching qualifications and are professionally recognised by the UK Higher Education Academy.

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?

This degree apprenticeship programme is equivalent in scale and learning content to a standard three-year BSc honours degree in but has been spread over a longer period to incorporate the additional on-the-job training apprentices receive from their employer. The learning content delivery structure also differs, with the degree apprenticeship programme having been designed around typically one block period of on-site learning activities per semester followed by distance learning components that include independent asynchronous study (e.g. pre-recorded lecture materials and set reading) and live remote workshops (e.g. via Teams). The degree is organised into modules, with each being a self-contained unit of study. Most modules are set within a particular semester, but some run across both semesters of the year. Modules have been designed with natural breaks in the learning so apprentices can go on holiday (or similar) and have time to catch up. 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, and **Optional modules** - these allow you some choice of what to study from a pool of modules.

For further information on the content of modules currently offered, including the list of elective modules, please visit: <https://www.keele.ac.uk/recordsandexams/modulecatalogue/>

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

Year	Compulsory	Optional	
		Min	Max
Level 4	120	0	0
Level 5	120	0	0
Level 6	60	60	60

Module Lists

Level 4

Compulsory modules	Module Code	Credits	Period
Earth Systems	ESC-10098	30	Semester 1
Academic and Field Skills + Business Environmental Practices	ESC-10080	30	Semester 1-2
Earth history, evolution and stratigraphy	ESC-10099	30	Semester 2
Geoscience Data Analysis	ESC-10100	30	Semester 2

Level 5

Compulsory modules	Module Code	Credits	Period
Geoethics and Environmental Justice	ESC-20134	30	Semester 1
Environmental Impact Assessment	ESC-20116	30	Semester 1-2
Applied Geophysics	ESC-20138	30	Semester 1-2
Advanced Geoscience Methods	ESC-20136	30	Semester 2

Level 6

Compulsory modules	Module Code	Credits	Period
Geoscience End Point Assessment	ESC-30130	40	Semester 1-2
Research Project Proposal and Portfolio	ESC-30132	20	Semester 1-2

Optional modules	Module Code	Credits	Period
Geological Resources, Energy and Critical Earth Materials	ESC-30126	30	Semester 1
GIS and Remote Sensing	ESC-30128	30	Semester 1
Engineering and Applied Geology	ESC-30122	30	Semester 2
Structures, Sub-Surface Processes and Programming	ESC-30124	30	Semester 2

Level 6 Module Rules

School rule for the optional modules: these modules will only run should a sufficient number of learners select to take them. Any decision to not run a module in a particular year will be undertaken in full transparency and collaboration with learners and employers.

9. Final and intermediate awards

In undertaking apprenticeship training, the employer and apprentice are committing to undertaking the whole apprenticeship, comprising the degree and the independent End Point Assessment.

The End Point Assessment must be passed in order to gain the final award title of BSc (Hons) Geoscience. Where intermediate awards are made, this would result in non-completion of the apprenticeship.

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

Honours Degree BSc (Hons) Geoscience	360 credits	You will require at least 120 credits at levels 4, 5 and 6
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

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:

- Reports - Reports are a common assessment type on the programme, there is a range of report types and these will relate to different styles of data generation, analysis, interpretation and dissemination.
- Presentations - a variety of presentations are included in assessments, this includes slide decks (e.g. PowerPoint), posters and oral presentations.
- Projects - elements of projects might be assessed via reports or presentations, but the multidisciplinary nature of geosciences means projects will also include a range of digital and non-digital elements evidencing data collection, analysis and interpretation.

Please see individual modules for more information on assessments. We ensure that all assessments on the programme are "authentic assessments" wherever possible - this effectively means that the various stages of assessment are designed to simulate professional, realistic and developmental activities. Our assessments are generally specific to each task, a report in one module may be quite different to a report in another module. This approach means that as learners you can demonstrate subject specific and transferable skills and knowledge in all assessments, and that completing assessments acts as part of the learning experience.

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.

End-Point Assessment

As well as containing in-programme training and assessment, the apprenticeship has an end-point assessment (EPA). All apprentices must undertake this independent assessment, which is a synoptic assessment of the knowledge, skills and behaviours that have been learnt throughout the apprenticeship. The purpose of the assessment is to make sure the apprentice meets the standard set by employers and are fully competent in the occupation. It is taken by apprentices at the very end of the on-programme phase of training when their employer (and in some cases their training provider) is satisfied that they have met the "gateway" criteria. The University will confirm at an Award Board which students have met the gateway criteria.

Links to Apprenticeship Standard: <https://www.instituteforapprenticeships.org/apprenticeship-standards/st1356-v1-1>

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 learner effort at each level.

As part of their apprenticeship agreement, employers must provide apprentices with 20% of their time "off the job" to support their apprenticeship.

Activity

	Scheduled learning and teaching activities	Guided independent Study	Placements
Year 1 (Level 4)	21.9%	78.1%	0%
Year 2 (Level 5)	18.1%	81.9%	0%
Year 3 (Level 6)	11.5%	88.5%	0%

12. Accreditation

This programme does not have accreditation from an external body, but we are working with The Geological Society of London to pursue this.

13. University Regulations

The University Regulations form the framework for learning, teaching and assessment and other aspects of the student experience. Further information about the University Regulations can be found at:

<http://www.keele.ac.uk/student-agreement/>

If this programme has any exemptions, variations or additions to the University Regulations these will be detailed in an Annex at the end of this document titled 'Programme-specific regulations'.

14. Additional Costs

Activity	Estimated Cost
Residential Field courses (one in level 4 and one in level 5), plus several day-long field courses will be an additional cost to employers.	£1,000-1,500
Appropriate field gear will be required for both on campus "bootcamps" and field courses. This includes boots with ankle support, waterproof and warm clothing and a suitable rucksack (or similar). Should apprentices have this equipment supplied as part of on-job roles, this will not be a necessary addition.	£200
Total estimated additional costs	£1,200-1,700

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%.

Tuition fees are your paid by employer but you may incur costs not covered by the mandatory components of the apprenticeship e.g. library fines, print costs and costs associated with graduation.

Certification for non-mandatory awards may require students to pay a fee. We do not anticipate any further costs for this programme.

Version History

This document

Date Approved: 14 March 2025

Previous documents

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