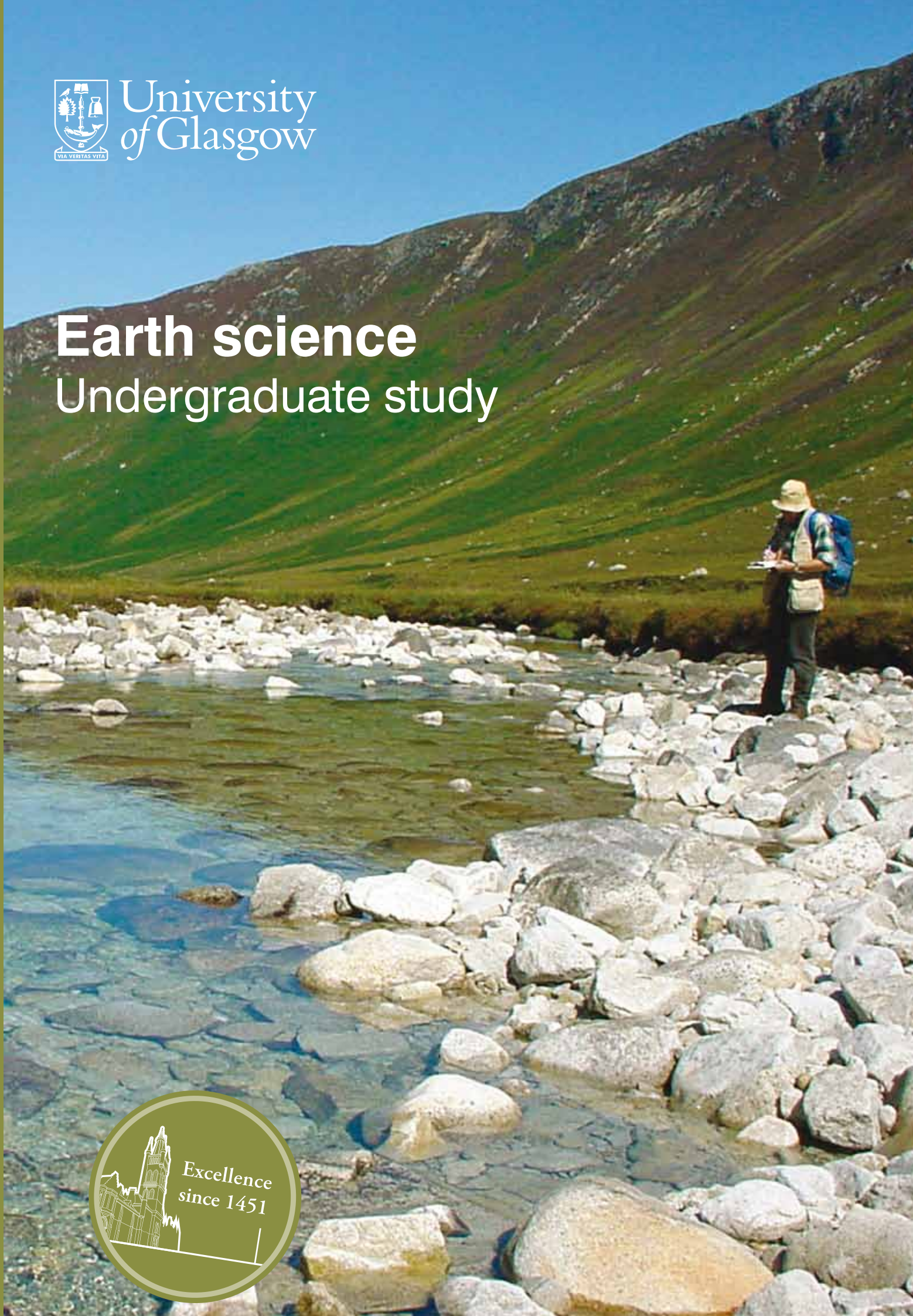
University of Glasgow

Earth science

Undergraduate study



Excellence since 1451

Grand Canyon, USA taken by Karen Jamieson, Level-3 Earth Science student

Introduction

The University of Glasgow is rated as one of the top 100 universities in the world (*Times Higher Education QS World University Rankings)*.

All of our students study for degrees that are recognised and respected by employers throughout the world, but we can guarantee you will receive a lot more besides. Some of the key benefits of student life at Glasgow are

Satisfied students

Our students report high levels of satisfaction with their studies. According to the independent National Student Survey, an impressive 90% of the University's final-year students rated themselves as satisfied with their course in 2009, well above the national average of 81%.

Flexible course choices

We offer more than 900 degree programme combinations and our flexible system allows you to study a broad range of subjects during your time at university and, in many cases, makes it possible to delay choosing specialist subjects until the end of second year.

Teaching based on research

Glasgow is a research-led university, which means that you will be taught by academics at the forefront of knowledge in their subject areas.

A student experience worth having

You will take away more than a degree from Glasgow. Over the last 550 years our students have built up a fantastic array of initiatives to keep you engaged, entertained and energised. The result is a student experience to be proud of. We have

- four award-winning student media teams
- over 100 clubs and societies
- two undergraduate student unions
- sporting facilities for all levels of fitness
- a study abroad and exchange programme that offers opportunities to study across the world as part of your undergraduate degree.

Earth science is a huge and growing subject, covering so many different fields that Earth scientists are among the most broadly educated scientists of all. Earth science is the study of our entire planet:

- its history and evolution
- its natural processes and resources
- how climates and environments have changed in the past
- what will happen in the future.

Faster Route programmes

These might be of interest to you if you: are highly qualified at A-level or Advanced Higher level in relevant subjects; are motivated and keen to pursue a Science and Engineering degree with maximum concentration on the subject; wish to complete your degree faster than the normal time frame. For further information about entry requirements visit www.glasgow.ac.uk/undergraduate/degrees/entryrequirements.

Fieldwork in Antartica

Earth Science

Degree: BSc

Typical offer

Highers	ABBB, preferably with two science subjects
A-levels	ABB, preferably with two science subjects
IB	32 points including three science subjects

For entry requirements visit www.glasgow.ac.uk/undergraduate/degrees/entryrequirements

What can I expect in first year?

In your first year (Level-1) you will take two courses.

Earth science 1X introduces you to a diverse range of core geological disciplines, such as:

- Dynamic Earth (plate tectonics, structure of the Earth, earthquakes, volcanoes)
- Earth materials and minerals
- Earth structures (how Earth materials deform)
- Igneous, metamorphic and sedimentary rocks
- Applied geology (environmental issues, geotechnology, exploration for oil, gas, coal and minerals).

Earth science 1Y will extend your core geological skills by covering such topics as:

- Earth history
- Geological maps
- Life on Earth
- Marine environments and climates
- Terrestrial environments
- Applied geology.

Fieldwork

In Level-1 you will also take part in a field class to a site of geological interest in Scotland.

What can I expect in second year?

In second year (Level-2) there are four compulsory courses, two in each semester.

Earth science 2P provides you with key information about the solid Earth, dealing with:

- Global tectonics
- Igneous processes
- Metamorphic processes
- Minerals
- Geochemistry and isotopes.

Earth science 2R looks at the surface of the Earth in the past and the present-day, including:

- Impact of environmental change
- Palaeozoic and Mesozoic stratigraphy
- Sedimentology.

Earth science 2Q covers palaeobiology. It is about the history of life on Earth and the use of fossils to reconstruct environments and climates in the past.

The course is split into two main sections dealing with:

- Ancient life
- Modern life.

Earth science 2U provides detailed information about Earth structure, geological maps, and Earth exploration, spanning:

- Geological maps
- Geomorphology
- Geophysics
- Remote sensing
- Economic geology
- Structural geology.

Fieldwork

A seven-day fieldwork course, based on the Isle of Arran during the Easter vacation, provides an introduction to key field skills. This is essential for progression to a degree in Earth science. You will also take part in two one-day fieldwork courses during Level-2.

What happens next?

Level-3 and Level-4 contain the Honours degree courses in Earth Science, but there is provision for graduating at the end of Level-3 with a Designated degree.

Each year has a set of core courses that all students take, in which core concepts of Earth science are explored in depth. In addition, you will select a number of options in both Level-3 and Level-4. These come from an extensive list that covers a wide spectrum of Earth science topics, allowing you to tailor your degree to your particular interests.

Currently, the core courses in Level-3 are:

- Geological maps
- Igneous petrology and geochemistry
- Isotope geology
- Tetonic Geomorphology
- Metamorphic petrology
- Sedimentary geology
- Stratigraphy
- Structural geology
- Problem solving
- Information technology.

Fieldwork

Two seven-day residential field classes on advanced field skills, currently to Ardnamurchan, and to Mull and Oban.

Level-3 also includes five day trips to examine the world-famous local geology.

Scotland is the ‘cradle of geology’. Glasgow has on its doorstep fantastic geology which are extensively used in fieldwork. Opportunities range from the outstanding geology of the Scottish Highlands to superb rock exposures on the west coast and ancient volcanoes of the Hebrides.

Level-4 core courses are:

- Geological maps
- Geophysics
- Major Earth processes.

Plus two independent projects (a field-based project and a separate laboratory-based project) incorporated into two portfolios with transferable skills (such as seminars and poster presentations).

At present, the following optional courses are available to both Level-3 and Level-4 Earth science students:

- Economic minerals
- Engineering Earth science
- Environmental biogeochemistry
- Environmental Earth science
- Hydrogeology and human health
- Fluvial environments
- Glacial geology
- Geographic Information Systems (GIS)
- Limnology
- Origins of Passive Margins
- Palaeoclimates
- The Quarternary.

In addition, there are a number of optional courses at Level-4 including:

- Advanced sequence stratigraphy
- Micropalaeontology
- Orogens and basins (including a two-week overseas fieldwork course in Spain)
- Petroleum geology (including a week-long fieldwork course).

Please note that the content of the courses are subject to revision and may change.

Basalt columns in Iceland, taken by Charlotte Gilles, Level-2 Earth Science student

Can I study abroad?

In recent years our students have studied in Australia, Canada, New Zealand and Europe, and have seen spectacular geology when doing so.

Travelling and overseas work are major features of an Earth science career and we encourage our students to take advantage of the University's extensive exchange programmes to study abroad.

At Glasgow you can take advantage of a range of exciting opportunities to study abroad as part of your degree. Courses you take overseas form an integral part of your degree without adding an extra year or semester. The benefits are huge. You will not only be able to gain an entirely new perspective on your academic subject and enhance your employability, you will also find out new things about yourself, increase your independence, develop self-confidence, learn to live and work with people from different backgrounds and cultures and form a large circle of international friends.

Students who have studied abroad describe it as a life-changing experience – 'the best year of my life'.

Studying in Europe

You can study at more than 250 universities all over Europe under the Erasmus programme. Erasmus is an EC exchange programme that enables students in 31 European countries to study for part of their degree in another European country. Exchanges can last from 3-10 months and study credit is transferred to your home university.

Beyond Europe

The International Exchange Programme allows you to spend a year at institutions in Australia, Canada, Central & South America, Hong Kong, Japan, Korea, New Zealand, Singapore and the USA. All the institutions teach in English except Chuo University in Japan and those in Central & South America.

Preparing you for employment

Throughout your degree you will be learning vital techniques that will equip you for life after university, including:

- fieldwork – our extensive programme of excursions allows you to acquire core professional level field skills
- short-term work placements – many of our students obtain summer placements in a variety of industries and the University has strong links with a wide range of employers who contribute extensively to a Level-4 careers course
- professional development – this is stimulated by seminar work, laboratory-based research projects, independent fieldwork and team-building projects to solve real-world problems
- you will also receive specialist IT training and an introduction to essential management skills.

What are my career prospects?

Career prospects in Earth science are excellent and growing, with our graduates in great demand both in the UK and overseas.

- Over 90% of recent graduates have either found employment or continued their education in the field of Earth science.
- Around 30% choose to undertake further education to gain MSc or PhD qualifications in their chosen area of specialisation in the Earth sciences.

You could find yourself employed across the entire spectrum of Earth science careers, and particularly those for which a solid grounding in geology is important. An increasing number of recent graduates have found rewarding and enjoyable employment in environmental and engineering geology and geotechnology. Some work in the oil, gas and minerals industries and many travel extensively as part of their employment.

Where can I find out more?

Our website (www.glasgow.ac.uk/ges) contains extensive information about the Earth Science degree, including information for intending applicants. Our website also has online forms for specific queries to allow you to contact the most appropriate members of staff. You can also sign up for our e-newsletter.

In addition, we have a second website (www.glasgow.ac.uk/gesinfo) written especially for prospective students with major contributions by our students and graduates. There you will get information about university life and career opportunities.

Come and visit us

Open Day

www.glasgow.ac.uk/openday

In June and September we hold an Open Day to allow you, your family and teachers to visit us on campus and see a little of the city.

Open Day allows you to speak to academic staff, find out more about courses, tour the facilities, visit student accommodation and see for yourself what life would be like as a student at Glasgow. If you have a long way to travel you can also stay in one of our student residences.

Alternative visiting arrangements

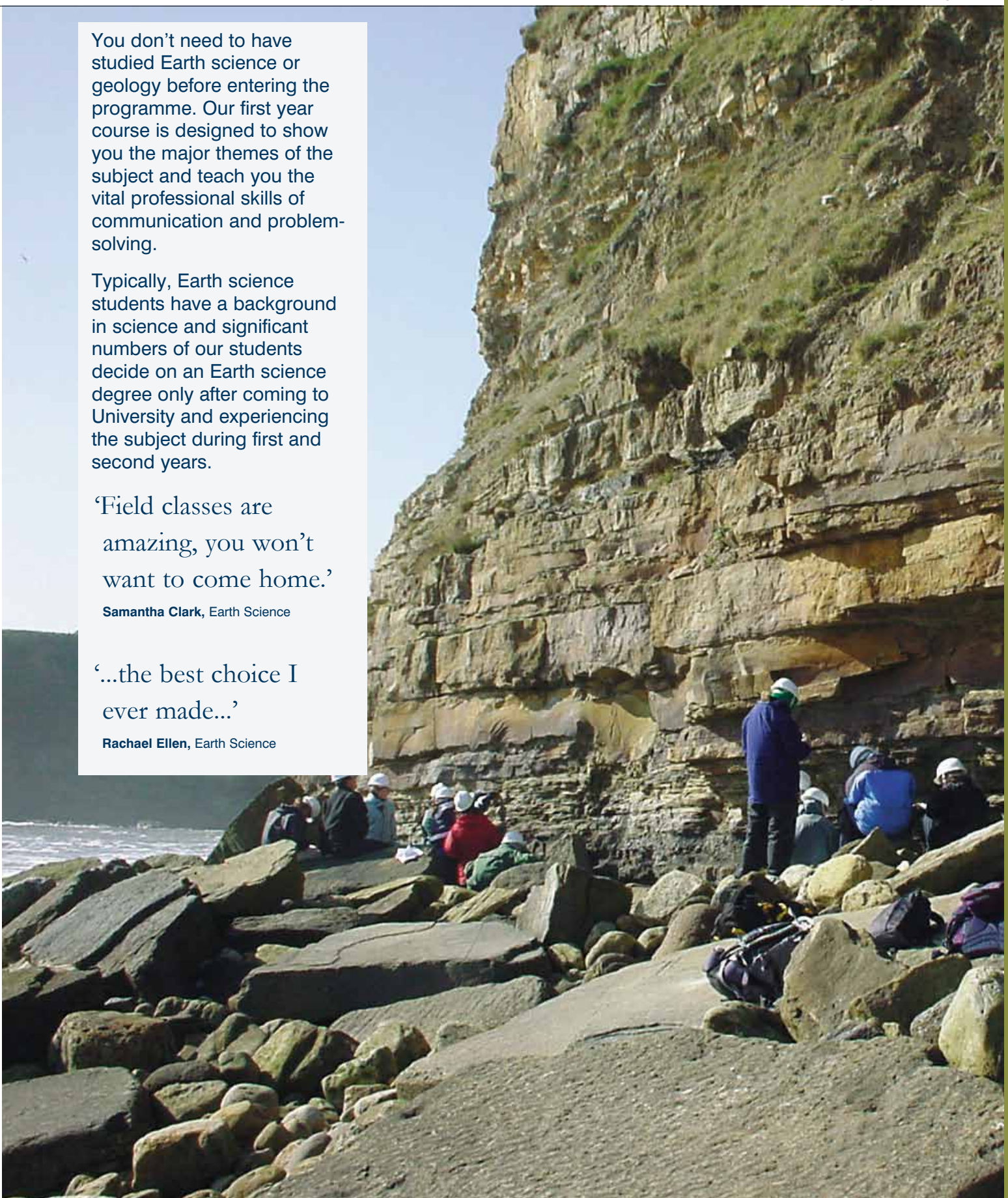
Open Day is the best way for you to get a comprehensive picture of what being a student here would be like. However, if for any reason you can't make it on that date, then we will be able to make alternative arrangements.
To find out more visit:
www.glasgow.ac.uk/afternoonvisits

Applicants' Visit Day

At Glasgow we go the extra mile. If you receive an offer of a place at Glasgow, we will invite you to visit us before making your final decision. Applicants' Visit Day usually takes place in March. Details will be sent to you together with your offer of a place.

The Scottish Alliance for Geoscience, Environment & Society (SAGES) brings together researchers from Glasgow and eight other universities who are involved with the study of the **Earth's environment** and the way **people interact** with it. The SAGES initiative focuses on climate change, soil erosion, floods and greenhouse gases and their impact on such key issues as energy provision, food production and water supply.

www.glasgow.ac.uk/ges



You don't need to have studied Earth science or geology before entering the programme. Our first year course is designed to show you the major themes of the subject and teach you the vital professional skills of communication and problem-solving.

Typically, Earth science students have a background in science and significant numbers of our students decide on an Earth science degree only after coming to University and experiencing the subject during first and second years.

'Field classes are amazing, you won't want to come home.'

Samantha Clark, Earth Science

'...the best choice I ever made...'

Rachael Ellen, Earth Science

‘Scotland at its artsy, riotous, high-octane, good-time best.’

Lonely Planet

City of Glasgow

What is it like living and studying in Glasgow?

Named as one of the world’s top ten cities by independent travel guide *Lonely Planet*, Glasgow attracts the largest student population in Scotland. The city’s reputation for friendliness means that wherever you come from, you’ll soon treat it as your second home.

Music and nightlife

In an average week Glasgow hosts 123 bands, 72 classical composers, 49 choirs, 38 orchestras and 21 jazz bands. Renowned for discovering acts from Franz Ferdinand to Primal Scream, the city has fantastic venues for live music including King Tut’s Wah Wah Hut – voted UK’s best live venue by listeners of Radio 1 three years in a row.

More than 700 bars, pubs and nightclubs mean no two nights in Glasgow are the same. Whether you’re after a record-breaking 100-foot long bar where everyone can be a barfly (the Horseshoe), or a pub with a log fire, stuffed stags’ heads and kilted staff that’s as appealing as it is unpronounceable (Uisge Beatha), Glasgow has a venue to suit. Dance until you drop at the Subclub, or travel back to 1920s America at the Vegas clubnight on the Renfrew Ferry, it’s up to you.

Festivals

At least one festival every month of the year shows Glasgow loves to celebrate. Some of our favourites include Glasgow International Comedy Festival, Celtic Connections folk music festival, Glasgay, Piping Live!, Glasgow Film Festival and Aye Write!, the city’s book festival.

Culture

The city of Glasgow owns one of the richest collections in Europe, displayed in 13 museums and art galleries – and admission is free. You are spoilt for choice, with the city’s famous Burrell collection vying for attention beside Scotland’s most visited attraction, the Kelvingrove Art Gallery & Museum, located next door to the University.

Sport

The city will host the Commonwealth Games in 2014. Across the world people know Glasgow as home of Celtic and Rangers football clubs, but with no fewer than 27 public fitness centres including swimming pools, running tracks, 11-a-side pitches and tennis courts, you’re guaranteed to find something to get involved with, whatever your level of fitness.

Campus culture

Are you craving cosy campus living or do you prefer big city excitement. Whichever is your style, you’ll be impressed by the University’s excellent location in the compact West End. Just two miles from the city centre, with great bus and underground links, the West End has a reputation as the bohemian, trendy and cosmopolitan quarter of Glasgow.

What our students say

‘Glasgow is such a diverse and vibrant city with lots to offer and a great social scene with a fantastic range of bars, clubs and music venues.’

Alexander Hutchison

‘I chose Glasgow because compared to the other cities I visited it just seemed like a much more lively place. I think the high student population makes it a very young city.’

Elizabeth Ritz

‘The campus at Glasgow is unbelievably beautiful. It’s hard to believe sometimes when walking down busy Byres Road and turning into University Avenue, that this Hogwarts is situated right in the heart of the West End.’

Beverley Simpson

‘Glasgow is very vibrant. The West End is like the village within the city.’

Sarah Gibson