Welcome message

I warmly welcome your interest and am pleased to provide you with some background to your Geoscience degree at Manchester.

Our School is home to over 70 academic staff, with a wide range of interdisciplinary skills. They are world leaders in the areas of environmental science and geoscience, ecology, solid earth geoscience, geomicrobiology, molecular geochemistry, mineralogy, atmospheric climate processes and air quality, isotope geochemistry, cosmochemistry, palaeontology, and petroleum geoscience.

Our students value close contact with our staff, who provide a supportive and stimulating learning experience. Should you choose to join us in Manchester, you can expect a degree that offers you excellent practical and theoretical training in all aspects of the discipline. This will provide a structured approach to understanding scientific concepts, building upon core skills to independently analyse challenging problems.

As a geoscientist and environmental scientist myself, I can certainly say that knowledge of how the whole Earth system works and the development of key analytical skills are vital to analyse and interpret complex natural systems, and to address many of the current challenges in the world at the present time. These skills are very much in demand by employers and our close interaction with a wide range of industries has helped us to develop our courses to meet their future needs, providing excellent employment opportunities, whilst also providing you with skills you need to address globally important current and future research challenges.

We look forward to you applying to Manchester to become part of a stimulating learning environment in a leading University. We are lucky to be located in the centre of an exciting international city and I feel sure you will find Manchester a vibrant, multicultural place to study and live.
Geoscience is the study of the composition, behaviour and history of the Earth and other planets. It is an immensely practical science, studying many of the phenomena that affect our daily lives. It integrates and applies different scientific disciplines to studying problems including the cause of natural hazards, such as earthquake and volcanic activity, landslides and flooding. Geoscience also involves investigating the formation and composition of the Earth, the reasons for ice ages, climate change and the origin and evolution of life. It is central to the search for new resources, such as oil, gas and metals, as well as to understand how to exploit them sustainably.

What is Geoscience?

Geosciences are involved in maintaining quality water supplies, the disposal of domestic, industrial and nuclear waste, and the geotechnical and engineering work that is fundamental to construction of road and rail infrastructure, reservoirs and buildings. A degree in geoscience leads to many career opportunities in the oil and gas sector, mining, water and environmental fields. Students also gain an array of transferrable skills, which are essential for graduate training schemes in many careers, such as management and accountancy, as well as for a career in teaching.

Teaching and learning

All our degrees prepare our graduates for a professional career as a geoscientist, as well as providing the transferrable skills essential to other career paths. A degree from our School will set you up well for your future - and equip you to help meet the geoenvironmental challenges we face.

Practical work is an integral part of all our degrees, in addition to lectures and tutorials.

A degree in Geology offers a balanced geoscience degree. Options in subjects such as energy resources, hydrogeology, geomechanics and mining geology allow students to gain an insight into various professional pathways. Or they can find out more about new areas such as geomicrobiology, while continuing to enhance their knowledge in sedimentary basin evolution, lithospheric and surface processes, volcanology, and palaeobiology.

A degree in Geochemistry allows some specialisation, with core units in subjects such as hydrogeochemistry, geochronology, and isotope geochemistry. More about new areas such as biogeochemistry, while continuing to enhance their knowledge in sedimentary basin evolution, lithospheric and surface processes, volcanology, and palaeobiology.

An undergraduate degree from Manchester is a qualification that the world will recognise

Geoscience, and is ideal for those interested in exploration for earth resources and the environmental impact of their extraction, along with the safe disposal of any waste products. Students undertake a research topic as part of their independent project, which can range from studying mineralisation of an area to the environmental impacts of mining.

The Planetary Science degree pathway combines geology with the study of the origin and evolution of the Solar System and has an overall balance of approximately two-thirds core topics in geology, and one-third topics in planetary science. Students also have the option of taking courses from the School of Physics and Astronomy.

• 3 year BSc and 4 year MEarthSci degrees
• Specialisation possible in Geochemistry, Environmental and Resource Geology, or Planetary Science
• Subsidised field programme
Field work is an essential part of all our courses and provides a unique learning experience. Venues vary from classic areas of the British Isles to overseas locations in Spain, Germany and France. Field work locations can vary according to your degree pathway.

For example, Planetary Science students investigate an impact crater in the third year, while Geochemistry students visit a site of acid mine drainage.

Field work allows the application of knowledge learnt in lectures and practical classes to real settings, allowing students to develop skills of observing, collecting, recording and interpreting a range of data.

You will undertake an independent field investigation, with fellow students, often overseas, where you will spend 6 weeks acquiring field observations and data to answer a key research question regarding the geological history or evolution of the area. Most field courses are residential, allowing you to socialise with staff and your fellow in an informal setting. As a School, we subsidise the cost of taught field courses.

The majority of our geoscience degrees are accredited by the Geological Society of London, providing added assurance to prospective students that a department’s teaching is of the highest quality, and has been approved by an independent body of academics and industrialists. An accredited degree will reduce the amount of experience required for applications for Chartered Geologist and Chartered Scientist.

Combining lectures with significant time in the labs doing hands-on work with specimens and maps has really enhanced my learning. Combined with in-course projects, the degree has developed me into a resourceful problem solver, and given me the tools to analyse large amounts of data and produce concise, critical reports. I was fortunate enough to demonstrate the abilities and skills acquired on the BSc Geology degree, and secure a graduate job whilst in my final year.

Malcolm Thomas BSc Geology
Geoscientists have been gradually unravelling the complex history of the Earth over its 4.5 billion year existence through the study of rocks, minerals and fossils. Using this knowledge, they are constantly exploring the Earth for energy reserves, mineral wealth and for new water resources. To do this while understanding how to manage the environment and how to control environmental pollution is a key skill of this joint discipline, as we learn about environmental change and human impact. We learn about the management of fragile ecosystems by comparing them with the evolution of ecosystems over the last 600 million years. We can think about climate change whilst putting it into the perspective of a geological timescale, which helps us to predict future changes as we come out of the present Ice Age. This varied course focuses on the natural processes that occur on the Earth’s surface. If you are fascinated by rivers and seas, want to understand about climate change and how it has impacted on landscapes, ecosystems and people, or just have a strong interest in physical geography, then this joint degree in Geography and Geology is for you.

**Teaching and learning**

The Geography and Geology degree at Manchester combines the core modules from the Geoscience degree, (taught in SEES) with a wide range of Physical Geography modules (taught in SEED). You will be taught by specialists from both Schools who have made a special effort to integrate the two disciplines. For example, while you are studying the geomorphology of rivers in Geography, you will also be learning about sediment transport and sedimentary rocks in Geoscience. You will learn techniques that enable you to interpret both the ancient history of our planet over hundreds of millions of years, along with the ways in which we study the more recent history of the Quaternary Period since humans first walked on the Earth. Armed with a combination of these skills our graduates are best placed to manage the delicate future of this planet.

**Field studies**

We offer a wide choice of field courses from both schools. Field courses vary from daytrips to the local Mersey Basin and Peak District, to residential field trips to Scotland in Year 1, and a choice between Morocco and Iceland, the Pyrenees and Crete in Year 2. In 2016 we introduced a final year field course for Geography and Geology joint honours students favourably by employers and could give you that extra ‘something’ on your CV. During your year abroad you will study geographical and geological topics at one of our partner universities, where you will follow course units that complement those available here at Manchester. During this time you will write a reflective journal in which you will document the insights you have gained from both your period of study and from engagement with citizens of the host country.

A four year course is offered with a year abroad, which is taken between years 2 and 3. Having worked in an overseas environment is looked on favourably by employers and could give you that extra ‘something’ on your CV. During your year abroad you will study geographical and geological topics at one of our partner universities, where you will follow course units that complement those available here at Manchester. During this time you will write a reflective journal in which you will document the insights you have gained from both your period of study and from engagement with citizens of the host country.

Your ability to pass the year will be determined by the exams that you take at your host university, as well as a reflective log and a seminar presented to Year 2 students back in Manchester. During this time you will write a reflective journal in which you will document the insights you have gained from both your period of study and from engagement with citizens of the host country.

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• 3 year BSc and 4 year BSc degrees with an option of a year abroad
• Options to focus on geology or physical geography, depending on your personal interests
• Subsidised field programme

There’s a lovely atmosphere at Manchester and it’s a great place to study. Manchester is also a really great city to live in, work in, play in, and have fun in.

Elliot Brookes
BSc Geography and Geology
We offer 3 year BSc degrees and 4 year MEarthSci degrees, both allowing some specialization in Geochemistry, Environmental and Resource Geology, or Planetary Science.

You will study Earth processes on all scales, from looking at minerals down a microscope to mountain building, global climate and even solar system evolution.

The first two years of the degrees cover the core material required by a geoscientist and then a range of options in the third year allow students to continue with a balanced geoscience degree or to follow a pathway in various specialized areas. Options in subjects such as energy resources, geomechanics and mining geology, and hydrogeology allow students to gain an insight into various professional pathways.

The course is split 50:50 between SEES and SEED, with a choice of options in the second and third year, allowing you to explore more specific career paths and also providing an ideal foundation for a postgraduate degree or entry into graduate employment.

We offer a wide choice of courses from both schools and have options to focus more on geology or physical geography, depending on your personal interests.

A Geography and Geology degree at Manchester will give you a new understanding of the world around you and insights appropriate to a global citizen of the 21st century.

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The field trips involved a lot of work, but the friendships will last forever.

The degree course combined my love of science, mountains, and maps. I most enjoyed crystallography and the mineralogy.

The field trips were always great, actually seeing the rocks in a natural environment can re-affirm what you learnt in a lecture. It’s a great way to learn.

As an undergraduate student in SEES, you will have access to a whole range of support services. We have an undergraduate resource room that is run by staff to help facilitate students’ learning; this includes mentoring schemes and drop-in classes. We also provide all students with a personal tutor throughout their degree. We have one of the best careers services in higher education. We work closely with employers and help them to recruit the best students through a wide range of events, including careers seminars and school careers events that attract regional, national and international companies.

We offer a wide range of Scholarships and bursary schemes to help you join us.

Several industrial scholarships are also available once you have started your course.

Further details available from: http://man.ac.uk/mKAmO1

Don’t be overwhelmed by the decision you have to make. If you have any questions about the course please do not hesitate to get in touch.

Our typical A-level offer is AAB/ABB, which must include one science subject. Please visit our Apply page to find out how to apply: http://man.ac.uk/dj9XWm

The School is one of the best-equipped Geoscience departments in Britain. We teach our practical sessions in custom-designed, well-equipped laboratories with enough space for you to have your own microscope and work comfortably on your own or in a group.

Our facilities include state-of-the-art analytical geochemical, remote sensing and imaging facilities equipment as well as specialist laboratories in Isotope Geochemistry and Cosmochemistry, Rock Deformation, Experimental Petrology, Nuclear Environmental Research and Geomicrobiology. This provides students with the opportunity in their third and fourth years to work in state of the art facilities alongside our postgraduate research students and academics.
Manchester is one of the UK’s most targeted universities by employers, thanks to courses and a careers service with your employability in mind. Our School has excellent links with a wide range of industries.

Careers are embedded in our degrees from year 1, encouraging you to enhance your job prospects by engaging in activities to enhance your academic record, such as volunteering, acting as a mentor to students in lower years and undertaking work experience and internships during the summer vacations.

All of our courses are structured to give you a breadth of knowledge and transferable skills that make up the essential basis for academic and professional careers in the Earth and Environmental Sciences.

Our Geoscience degrees adopt a problem-based approach to learning that inspires you to think critically, creatively and independently, and to gain a range of transferrable skills, which are valued in many different careers. A Geology and Geography degree allows you to keep your options open between a career following a geoscience pathway in exploration, and one following a geographical pathway in the environment.

There are a wide range of careers that you could choose from after gaining a Geoscience or Geography and Geology degree at Manchester. For instance, you could work as a geologist prospecting for diamonds, as a petroleum geologist involved in the discovery and recovery of the world’s oil and gas supplies, work for a geotechnical or geo-environmental company investigating contaminated land and deciding how best it can be remediated, or as a soil scientist investigating crop growth.

The vast spectrum of jobs our graduates enter includes exploration (hydrocarbons and mineral wealth), environmental management, hydrogeology and water resources, hazard prediction and mitigation, soil analysis, and teaching, amongst many others.

Shaun Adams  MEarthSci Earth Sciences  Geologist at Exploration Alliance Ltd

I project manage a diamond drill campaign in the Surinamese Interior, 250km’s from civilisation. Working in the jungle is an amazing experience. You get to meet and work with a variety of cultures and experience things that you could not on holiday.

Dawn Buchanan  BSc Geology

The standard of the academic teaching in Manchester is fantastic, it equipped me to be on track to graduate with a first-class degree. The structure of the course ensured that we learned time management skills whilst encouraging group work and presentation skills. The careers service within the university is very impressive, arranging mock interviews and assessment days enabling us to be as prepared as possible for our first career steps.
This leaflet was printed on June 2017 for the purposes of the 2018 intake. It has therefore been printed in advance of course starting dates. For this reason, information contained within this publication for example, about campus life, may be amended prior to you applying for a place on a course of study. Course entry requirements are listed for the purposes of the 2018 intake only.

Prospective students are therefore reminded that they are responsible for ensuring, prior to applying to study on a course of study at the University of Manchester, that they review up-to-date course information including checking entry requirements, which is available by visiting www.manchester.ac.uk/study/undergraduate/courses and searching for the relevant course.

Further information describing the teaching, examination, assessment and other educational services, offered by the University of Manchester is available from: www.manchester.ac.uk/study/undergraduate