



THE UNIVERSITY
of EDINBURGH

GeoSciences

Postgraduate Opportunities 2019



Influencing the world since 1583

“Edinburgh isn’t so much a city, more a way of life . . . I doubt I’ll ever tire of exploring Edinburgh, on foot or in print.”

Ian Rankin
Best-selling author and alumnus

- 02** Introduction
- 04** Taught masters programmes
- 18** Research at the School of GeoSciences
- 19** Our research collaborations
- 20** Research opportunities
- 24** About the School of GeoSciences
- 25** Facilities and resources
- 26** Community
- 27** Employability and graduate attributes
- 28** Applications and fees
- 30** Funding
- 32** Campus map
- 33** Get in touch



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14 Nov 2018
Postgraduate Open Day

[www.ed.ac.uk/
postgraduate-open-day](http://www.ed.ac.uk/postgraduate-open-day)

For more than 400 years the University of Edinburgh has been changing the world. Our staff and students have explored space, won Nobel Prizes and revolutionised surgery. They've published era-defining books, run the country, made life-saving breakthroughs and laid the foundations to solve the mysteries of the universe.

Our distinguished alumni include NASA astronaut Piers Sellers, former MI5 Director-General Dame Stella Rimington, Olympians Sir Chris Hoy and Katherine Grainger and historical greats such as philosopher David Hume, suffragist Chrystal Macmillan, who founded the Women's International League for Peace and Freedom, and physicist and mathematician James Clerk Maxwell.

International collaboration

An internationally renowned centre for academic excellence, we forge world-class collaborations with partners such as the California Institute of Technology (Caltech), Stanford University, the University of Melbourne, Peking University, the University of Delhi and the University of KwaZulu-Natal. As a member of the League of European Research Universities and the Coimbra Group, we link up with leading institutions across Europe.

Linking research and commerce

We were one of the first UK universities to develop commercial links with industry, government and the professions. Edinburgh Innovations promotes and commercialises our research excellence and can assist you in taking the first step to market, through collaborative research, licensing technology or consultancy.

Enhancing your career

We are committed to embedding employability in your University experience and have an impressive track record for graduate employment. From volunteering schemes to our sector-leading careers service, we provide you with opportunities to develop your skills, knowledge and experience, giving you an edge in the competitive job market.

TOP 50

We're consistently ranked one of the top 50 universities in the world. We're 18th in the 2019 QS World University Rankings.

4TH

We're ranked fourth in the UK for research power, based on the 2014 Research Excellence Framework.*

83%

The majority of our research – 83 per cent – is considered world leading or internationally excellent.*

TOP 100

We are ranked in the top 10 in the UK and in the top 100 in the world for the employability of our graduates.[†]

£373m

In 2016/17 we won £373 million in competitive research grants.

24

We are associated with 24 Nobel Prize winners.

13TH

We're ranked 13th in the world's most international universities.[‡] Since 2010, we have taught students from 82 per cent of the world's countries.



Taught masters programmes

As the largest grouping of geoscientists in the UK, we are uniquely placed to offer 19 innovative taught masters programmes and certificates spanning a wide spectrum of the geosciences field.

The range of master of science (MSc) programmes we offer seeks to address societal needs and the global challenges facing the world today. We pay close attention to changes in markets and in public policy, as well as within science and technology, ensuring our offering is up to date and that our programmes are designed with the ever-changing needs of our students at the forefront of our minds. We have recently launched MSc programmes in Applied Geoscience (Geoenergy), Sustainable Plant Health, and Energy, Society & Sustainability, as well as an online learning opportunity in Carbon Management. Our MSc programmes benefit from a wide-range of research activities being undertaken within the School that are clustered around development and sustainability, climate and energy, food and water security, equality and vulnerability, health, natural disasters and living with environmental change. Our growing range of taught postgraduate programmes allows you to benefit from cutting-edge research knowledge and skills training in your selected subject and beyond.

Flexibility

While each programme has compulsory courses which provide its framework, the School offers a wide range of option courses from which you can complete the credits required for your MSc. The Programme Director will proactively assist you in making the most of your course selection. Recommended options are included in each programme entry in this prospectus to allow you to see the scope for focus on areas which particularly interest you.

We are committed to supporting those already in employment or with family commitments and most of our MSc programmes can be studied part-time across two or three years.

See also...

You may also be interested in taught postgraduate programmes offered by other Schools within the University, particularly the University of Edinburgh Business School and the School of Engineering.

www.ed.ac.uk/studying/prospectus-request

Applied Geoscience (Geoenergy)

MSc 1 yr FT (2 or 3 yrs PT available for UK/EU students)

Programme description

This new programme is aimed at students who would like to pursue a geosciences-related career in the future energy sector, as it transitions from dependence on fossil fuels to low carbon alternatives. Our aim is to offer a programme that capitalises on subsurface (geological) knowledge to assist in this transition, opening a diverse range of career pathways in future geoenergy technologies, the disposal of energy-related wastes and the evolving hydrocarbon industry.

The programme builds on the strength and reputation of the research groups within the School of GeoSciences, which specialise in the use of the subsurface for geoenergy applications. These include: carbon capture and storage (CCS); radioactive waste disposal; energy storage and extraction; unconventional and conventional hydrocarbons; wet and dry geothermal heat; and subsurface fluid tracing using noble gases and stable isotopes.

Programme structure

The programme comprises a series of taught courses and a dissertation.

COMPULSORY COURSES PROPOSED INCLUDE:

Future Geoenergy Resources; Applied Hydrogeology and Near-surface Geophysics; Hydrogeology 2; Environmental Geochemistry; Project Design and Literature Analysis; Carbon Storage and Monitoring; Dissertation in Applied Geoscience (Geoenergy); plus, depending on your background, either: Subsurface Reservoir Quality; or Geology for Earth Resources and Hydrocarbons.

RECOMMENDED OPTION COURSES

In consultation with the Programme Director, you will choose from a range of option courses: *Ore Mineralogy, Petrology & Geochemistry; Seismic Reflection Interpretation; Environmental Problems and Issues; Nuclear Waste Management: Principles, Policies & Practice.*

Career opportunities

This programme will train you in the use of subsurface geological knowledge for future geoenergy applications. This will open a diverse range of career pathways in geoenergy technologies and the disposal of energy-related wastes. These include radioactive waste disposal; carbon capture and storage; geothermal energy; and subsurface energy storage including compressed air energy and hydrogen storage. Other pathways include the monitoring of environmental and regulatory aspects of geoenergy and the prevention of pollution to ground water resources through the tracking of subsurface fluids.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry), in a science or engineering subject. We will also take any relevant professional experience into account where appropriate. Evidence of mathematical ability is required.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Dr Mark Wilkinson

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Carbon Innovation



PgCert 1 yr PT

Programme description

Based upon our highly successful on-campus MSc Carbon Management, this online programme uses a blend of interactive content, videos, virtual case studies and weekly online discussions to explore the economics and policy of climate change management. You will gain a detailed understanding of the economics of climate change, carbon footprinting, ecosystem valuation, energy systems and energy policy through the interdisciplinary nature of the programme.

This programme is designed for graduates with a passion for tackling climate change and who require the flexibility that online learning provides. The programme is affiliated with the University's Global Environment & Society Academy (GESA): www.ed.ac.uk/global-environment-society

Programme structure

This certificate may be studied as a standalone qualification. Alternatively, it may form one third of the online MSc Carbon Management, or half of the new online diploma in Carbon Management.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Carbon Economics; Climate Change Measurement; Energy & Climate.

Studying online

As a student of one of our online programmes, you will:

- have the flexibility to study when most convenient for you;
- be able to study from anywhere with an internet connection;
- have access to all University services and relevant academics;
- become part of a rich and varied online community of people; and
- learn the latest developments from people working at the leading edge in your field.

To try our Virtual Learning Environment, please visit our demo:

<http://demo.climate.ed.ac.uk>

Career opportunities

Through our existing MSc Carbon Management programme we boast excellent relationships with sector-relevant employers, as well as a great alumni network covering more than 25 countries. This provides unrivalled opportunities to collaborate on research projects and find new positions in the field of carbon management. The main employment opportunities for our graduates are in climate change consultancy, renewable energy and carbon management project development, or as government or non-governmental organisation (NGO) climate change advisors. Several of our graduates are now studying for climate change focused PhDs.

Entry requirements

A UK 2.1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry) in any subject. We will also take any professional experience into account.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Professor David Reay

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[Carbon Management](http://www.ed.ac.uk/pg/412)

MSc 1 yr FT (2-3 yrs PT available for UK/EU students)

Programme description

This MSc is a landmark collaboration between the University's world-renowned Schools of GeoSciences and Economics and the Business School. It provides you with the expertise, knowledge and skills in the business, economics and science of carbon management. Carbon management is now at the heart of tackling climate change and has rapidly become a central part of the global business environment. Edinburgh has emerged as one of the most important global centres in this new discipline. This innovative programme, taught by world leading experts in key fields of climate change and carbon management, is for graduates who want an advanced academic qualification to launch careers in carbon and climate change management in business or government.

Programme structure

This programme includes two semesters of taught courses, balancing lectures, seminars, workshops and visits, and dissertation project work.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Climate Change Impacts and Adaptation; Business and Climate Change; Carbon Economics; Climate Change Management; Applied Carbon Methods; Dissertation.

RECOMMENDED OPTION COURSES

In consultation with the Programme Director, you will choose from a range of option courses. We have previously offered: *Global Strategic Management: Issues and Perspectives; Baseline-and-Credit Methods and Applications; Corporate Responsibility & Governance in a Global Context; Low Carbon and Green Investment; Applications in Ecological Economics; Environmental Impact Assessment; Forests and Environment; Water Resource Management; Waste Reduction and Recycling; Energy & Society; EU and National Climate Change Law; Interrelationships in Food Systems; Novel Strategies for Carbon Storage in Soil; Marine Infrastructure and Environmental Change; Innovation in Sustainable Food Systems.*

Career opportunities

A key strength of this MSc is the employability of our graduates. The programme, which won the PricewaterhouseCoopers award for 'Teaching Employable Skills', provides the opportunity to conduct business carbon audits and dissertation research as part of work-based projects with a range of external collaborators. The 2015 Paris Agreement gave rise to a huge demand for those who can combine scientific, technical, economic and social understanding and skills in the areas of carbon management and climate change. It is that ability to combine technical and socioeconomic understanding and knowledge which this MSc cultivates. Our graduates enjoy roles from government employees and NGO researchers, to renewable energy project developers and commercial carbon management consultants. The MSc also provides a grounding for postgraduate research, such as a PhD. To see where some of our alumni are working, visit: www.ed.ac.uk/geosciences/msc-carbon-management

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry), in economics, management, social sciences, physical sciences, geology, geography, environmental sciences, astronomy, biology, health sciences, chemistry, earth sciences, physics, engineering, business administration, or accounting and finance.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Dr Simon Shackley
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Online learning

[Carbon Management](http://www.ed.ac.uk/pg/899)

MSc 3 yrs PT (2 yrs accelerated study)
PgDip 2 yrs PT (1 yr accelerated study)

Programme description

Our online MSc Carbon Management is a groundbreaking development of the award-winning campus-based MSc Carbon Management programme. Building on the proven success and content of the established residential programme, this new online programme provides you with high-level knowledge, skills and training in the business, economics and science of carbon management. The programme is designed for graduates who want an advanced academic qualification in tackling climate change management by business, industry, NGOs and government, with the flexibility that online learning provides. The programme is affiliated with the University's Global Environment & Society Academy (GESA): www.ed.ac.uk/global-environment-society

Programme structure

The programme is organised into three component certificates:

- PgCert Climate Change Management
- PgCert Carbon Innovation
- Applied Carbon Methods (you must successfully complete both other certificates before taking this final component)

You will graduate with the postgraduate diploma if you take only the first two components.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Climate Change Impacts and Adaptation; Climate Change Mitigation; Climate Change & Corporate Responsibility; Carbon Economics; Climate Change Measurement; Energy & Climate; Applied Carbon Methods; Dissertation.

Studying online

As a student of one of our online programmes, you will:

- have the flexibility to study when most convenient for you;
- be able to study from anywhere with an internet connection;
- have access to all University services and relevant academics;
- become part of a rich and varied online community; and
- learn the latest developments from people working at the leading edge in your field.

To try our Virtual Learning Environment, please visit our demo:
<http://demo.climate.ed.ac.uk>

Career opportunities

Through our existing MSc Carbon Management programme we boast excellent relationships with sector-relevant employers, as well as a great alumni network covering more than 25 countries. This provides unrivalled opportunities to collaborate on research projects and find new positions in the field of carbon management. The main employment opportunities for our graduates are in climate change consultancy, renewable energy and carbon management project development, or as government or non-governmental organisation (NGO) climate change advisors. Several of our graduates are now studying for climate change focused PhDs.

Entry requirements

A UK 2.1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry) in any subject. We will also take any professional experience into account.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Professor David Reay
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www.ed.ac.uk/pg/875

Climate Change Management



PgCert 1 yr PT

Programme description

Based upon our highly successful on-campus MSc Carbon Management (see page 6), this online programme utilises a blend of interactive content, videos, virtual case studies and online discussions to explore the science and business responses to climate change. We examine the leading ways in which this global challenge can be addressed, covering adaptation and mitigation solutions across a wide range of sectors and regions. The programme is designed for those who have a passion for tackling climate change and who require the flexibility that online learning provides.

This programme is affiliated with the University's Global Environment & Society Academy (GESA): www.ed.ac.uk/global-environment-society

Programme structure

The programme comprises three compulsory courses that move from the science of climate change and its impacts, through the key adaptation and mitigation solutions, to examination of the business response to climate change, and the risks and opportunities it presents.

This certificate may be studied as a standalone qualification. Alternatively it may form one third of the online MSc Carbon Management, or half of the new online diploma in Carbon Management.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Climate Change Impacts & Adaptation; Climate Change Mitigation; Climate Change & Corporate Responsibility.

Studying online

As a student of one of our online programmes, you will:

- have the flexibility to study when most convenient for you;
- be able to study from anywhere with an internet connection;
- have access to all University services and relevant academics;
- become part of a rich and varied online community; and
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Career opportunities

Through our existing MSc Carbon Management programme we boast excellent relationships with sector-relevant employers, as well as a great alumni network covering more than 25 countries. This provides unrivalled opportunities to collaborate on research projects and find new positions in the field of carbon management. The main employment opportunities for our graduates are in climate change consultancy, renewable energy and carbon management project development, or as government or non-governmental organisation (NGO) climate change advisors. Several of our graduates are now studying for climate change focused PhDs.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry), in any subject. We will also take any professional experience into account.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Professor David Reay

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www.ed.ac.uk/pg/874

Earth Observation & Geoinformation Management

MSc 1 yr FT (2 yrs or 3 yrs PT available for UK/EU students)

Programme description

This interdisciplinary programme will equip you with the analytical and communication skills to work in this important and growing field. It will suit students with a background in environmental or geographical sciences who have already come across remote sensing, or those with a background in physics, computer science or engineering looking for a career in an applied area. Graduates from the programme will be well prepared to pursue subsequent research or find relevant employment. This programme builds on our successful Geographical Information Science (GIS) programme, which was the first of its type in the world and has a heritage of almost 30 years.

Programme structure

This programme comprises taught courses and an individual dissertation.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Active Remote Sensing: Radar and Lidar; Passive Earth Observation: New Platforms, Sensors, and Analytical Methods; Spatial Modelling and Analysis; Research Practice and Project Planning; Dissertation.

RECOMMENDED OPTION COURSES

In consultation with the Programme Director, you will choose from a range of option courses. We have previously offered: *Advanced Spatial Database Methods; Atmospheric Quality and Global Change; Business Geographics; Case Studies in Sustainable Development; Data Integration and Exchange; Ecosystems Services 1: Ecosystems and Global Change; Ecosystems Services 2: Ecosystem Values and Management; Environmental Impact Assessment; Introduction to Environmental Modelling; Introduction to Three Dimensional Climate Modelling; Marine Systems and Policies; Object Orientated Software Engineering; Spatial Algorithms; Participation in Policy and Planning; Principles and Practice of Remote Sensing; Principles of Geographical Information Science; Technological Infrastructures for GIS; Technologies for Sustainable Energy; Visual Analytics; Water Resource Management.*

Field trip

This programme includes a residential project management and field skills weekend in the Scottish Highlands.

Career opportunities

Graduates will benefit from our proven track record in helping students progress to roles with a diverse range of employers in the public, private and third sectors. Our graduates have entered employment with well known organisations such as Amey Infrastructure Services, British Airways, ESRI, General Electric, Google, Hewlett-Packard, Intergraph, Microsoft, Oracle, The Royal Bank of Scotland, Scottish Water, Sopra Group, SLR Consulting, Food and Agricultural Organisation of the United Nations, and the World Bank, as well as continuing in academia.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry).

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Noel Gourmelen

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www.ed.ac.uk/pg/29

Ecological Economics

MSc 1 yr FT (2 yrs or 3 yrs PT available for UK/EU students)

Programme description

This programme is run in collaboration with Scotland's Rural College. It focuses on how to make sustainability and environmental management work in practice by applying economic principles. Graduates with this postgraduate training are in greater demand than ever before.

Programme structure

You will learn through lectures, group work, applied data collection/analysis, informal group discussion, games and individual study, as well as the spring study tour. After two semesters of taught courses, you will begin work on your individual dissertations. You will be able to choose from a wide selection of option courses to suit individual interests and career goals.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Foundations in Ecological Economics; Applications in Ecological Economics; Environmental Valuation; Ecological Economics Field Methods in Research and Practice; Dissertation.

RECOMMENDED OPTION COURSES

In consultation with the Programme Director, you will choose from a range of option courses. We have previously offered:

Semester 1: *Ecosystems and Global Change; Principles of Environmental Sustainability; Marine Systems and Policies; Atmospheric Quality and Global Change; Encountering Cities; Introduction To Spatial Analysis; Principles of GIS; Frameworks to Assess Food Security; Distributed GIS.*

Semester 2: *Environmental Governance; Forests and Environment; Marine Infrastructure and Environmental Change; Participation in Policy and Planning; Waste Reduction and Recycling; Environmental Impact Assessment; Water Resource Management; Political Ecology; Energy and Society; Case Studies in Sustainable Development; Sustainability of Food Production; Understanding Environment and Development.*

Field trip

To experience the application of ecological economics principles, concepts, and methods first hand, we offer a unique 8-10 day trip, usually overseas and usually to eastern or southern Africa (previous destinations have included Kenya, Tanzania and South Africa).

Career opportunities

Identifying ecological economic problems, and applying economic principles and methods to solve them, is increasingly in demand. Our graduates work in various sectors such as environmental consultancies; international and governmental agencies; NGOs; financial institutions; multinationals; environmental education and research. Recent graduates are now in roles such as environmental analyst, researcher, landscape consultant, agricultural economic modeller and resource economist, for employers such as DEFRA, Carbon360, Conservation International, Scottish Water and ADAS. It is also possible for graduates to progress to doctoral research.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry). We may also consider a UK 2:2 honours degree, or its international equivalent, with appropriate work experience.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Corinne Baulcomb
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www.ed.ac.uk/pg/934

Energy, Society & Sustainability

MSc 1 yr FT (2 yrs or 3 yrs PT available for UK/EU students)

Programme description

The world faces an energy trilemma – how to achieve energy security, energy equity and environmental sustainability. This MSc will equip you with an understanding of low carbon technologies, policies and markets, focused on analysis of social, societal and environmental dimensions of energy transitions. You will examine how citizens are involved in and are affected by changes in energy systems, relate supply-side issues to geopolitics and political economy, study energy demand in relation to broader challenges of sustainable consumption, and explore smart ICT's potential to affect consumption and inform sustainable living. Scotland is a world leader in renewable electricity generation (wind and marine) but is economically dependent on declining North Sea oil and gas, with high energy poverty. This offers case studies on links between global and local issues, best practice and sustainable energy management.

Programme structure

You will develop transdisciplinary perspectives on the energy trilemma and integrative qualitative and quantitative analytical skills.

COMPULSORY COURSES PROPOSED INCLUDE:

Energy & Society I: Key themes and issues; Energy in the Global South; Energy & Society II: Methods and applications; Energy Policy and Politics; Dissertation.

RECOMMENDED OPTION COURSES

Options are in six thematic areas: public policy; low carbon technology and economics; environmental sustainability; development and poverty alleviation; social studies of technology; and environmental politics. We previously offered: *Technologies for Sustainable Energy AND Energy and Environmental Economics; Applications in Ecological Economics; Global Environment: Key issues; Global Environmental Politics; Resource Politics and Development; Governance, Development and Poverty in Africa; Principles of Sustainable Development; Climate Change Management; Case Studies in Sustainable Development; Science, Knowledge and Expertise; Development, Science and Technology; Human Dimensions of Environmental Sustainability; Controversies in Science and Technology; Economic Issues in Public Policy; Political Issues in Public Policy.*

Career opportunities

UK research councils cite a major skills gap in the energy sector, one of the biggest growth sectors in our economy in recent years. Demand is high for sound evidence on behavioural change, public engagement with energy issues, and public support for community and commercial investments in low carbon energy generation. You will translate complex science into effective policies and business opportunities. We are committed to helping you meet prospective employers and network within the field. Our links with government departments, energy relevant NGOs and key industry players who want to make use of these skills, allow us to organise careers events and dissertations conducted with external partner organisations.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry). We may also consider a UK 2:2 honours degree, or its international equivalent, with relevant work experience, a strong personal statement and supportive reference; please contact us to check before you apply.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Directors Dr Dan van der Horst (GeoSciences) and Dr Jamie Cross (Social & Political Sciences)
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www.ed.ac.uk/pg/30

Environment & Development

MSc 1 yr FT (2 yrs or 3 yrs PT available for UK/EU students)

Programme description

This is an exciting postgraduate programme that explores the interdependencies between pressing environmental concerns and development pressures and themes related to these global agendas from an informed theoretical perspective, with an abiding concern for social justice claims and praxis. This interdisciplinary programme draws on expertise from across the University, especially from development geography, social and political sciences and environmental studies, providing a unique critical perspective.

The programme challenges you to cultivate research thinking that is cross-cutting and globally relevant, but also theoretically grounded, through focusing on particular issues, places or systems, and providing insights to real-world applications.

The programme is affiliated with the University's Global Development Academy: www.ed.ac.uk/global-development

Programme structure

This MSc comprises two compulsory and four option courses, balancing lectures, seminars, workshops and visits, followed by a dissertation.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Understanding Environment and Development; Development: Principles and Practices; Research and Practice: Fieldwork; Dissertation.

RECOMMENDED OPTION COURSES

In consultation with your Personal Tutor, you will choose from a range of option courses. We have previously offered: *Atmospheric Quality and Global Change; Development, Science and Technology; Displacement and Development; Economic Issues in Public Policy; Ecosystem Services 1: Ecosystems and Global Change; Energy & Society 1: Key Themes and Issues; Environmental Valuation; Forests and Environment; Frameworks to Assess Food Security; Principles of Environmental Sustainability; Anthropology and Environment; Anthropology of Global Health; Case Studies in Sustainable Development; Corporate Social Responsibility and the Law; Critical Perspectives on Mental Health and Wellbeing in the Global South; Energy Policy and Politics; Environmental Impact Assessment; Gender and Development; Global Environmental Politics; Human Dimensions of Environmental Change and Sustainability; International Political Economy; International Security; Interpreting Development: Institutions and Practices; Participation in Policy and Planning; Political Ecology; Sustainability of Food Production; The International Politics of Money; Waste Reduction and Recycling; Water Resource Management.*

Career opportunities

This programme is suitable for students seeking roles within international and national development agencies, think tanks, NGOs, environmental consultancies or the private sector, or those going on to PhD research. Recent graduates have found roles as ecologists and environmentalists and in sustainable agriculture and aquaculture.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry). We may also consider a UK 2:2 honours degree, or its international equivalent, with relevant work experience, a strong personal statement and supportive reference.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Dr Kanchana N Ruwanpura

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www.ed.ac.uk/pg/395

Environment, Culture & Society

MSc 1 yr FT (2 yrs PT available for UK/EU students)

Programme description

This exciting MSc gives you the breadth and background to bridge disciplinary divides and tackle the environmental issues that face us all. It provides up-to-date knowledge of the contemporary issues and debates on the relationships between the environment, nature, culture and society. This interdisciplinary programme draws on expertise from across the University, especially from geography, philosophy, theology, science and technology studies, and development studies, providing a unique critical perspective. You will develop the research skills and abilities to assess the importance and implications of geographical, philosophical and other theoretical debates which shape environmental policy and practice. Our graduates are equipped to think critically, to generate new knowledge related to the environment, and to use this knowledge effectively to address urgent environmental challenges.

Programme structure

This programme consists of six taught courses, including option courses, studied over two semesters. In addition, you will undertake a dissertation.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Values and the Environment; Political Ecology; Dissertation.

RECOMMENDED OPTION COURSES

In consultation with the Programme Director, you will choose from a range of option courses. We have previously offered: *Animals and Society; Archives: History, Geography, Politics; Atmospheric Quality and Global Change; Case Studies in Sustainable Development; Climate Change and Corporate Strategy; Climate Change, Justice and Responsibility; Encountering Cities; Environmental Impact Assessment; Forests and Environment; Global Environment and Society; Global Environment: Key Issues; Global Environmental Politics; Green Thoughts: Landscape, Environment and Literature; Human Dimensions of Environmental Change and Sustainability; Humans and Other Species; Innovations in Sustainable Food Systems; Interpreting Development: Institutions and Practices; Key Concepts in Global Social Change; Marine Systems and Policies; Methodological Debates in Human Geography; Research Design in Human Geography; Soil Protection and Management; Sustainability of Food Production; Time, Place, Belonging: Understanding Time in Society; Topics in the Environmental Humanities; Understanding Environment and Development.*

Career opportunities

Graduates have pursued careers in environmental policy, conservation, animal welfare, NGOs (environmental charities and development organisations), public consultation and PhD research. Recent graduates are now working for employers such as Conservation International, the National Forestry Commission and UNESCO.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry). We may also consider a UK 2:2 honours degree, or its international equivalent, with relevant industry experience.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Dr Nina Morris

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www.ed.ac.uk/pg/31

Environmental Protection & Management

MSc 1 yr FT (2 or 3 yrs PT available for UK/EU students)

Programme description

This programme is run in collaboration with Scotland's Rural College (SRUC). Human activities are recognised as having an increasingly significant effect on the Earth's biosphere. Our use of natural resources, deforestation, soil erosion, the release of potentially toxic compounds and pathogens, and the increase in greenhouse gases are all examples of pressures that have potentially serious consequences for humanity and other life on Earth. This programme will give you a fundamental understanding of the issues affecting the Earth, enabling you to play a vital role in devising and enacting strategies to protect and conserve the environment, both in Europe and beyond.

Programme structure

This programme involves taught courses plus a research dissertation.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Atmospheric Quality and Global Change; Land Use/Environmental Interactions; Professional and Research Skills in Practice; Dissertation.

RECOMMENDED OPTION COURSES

In consultation with the Programme Director, you will choose from a range of option courses. We have previously offered: *Environmental Impact Assessment; Soil Protection and Management; Waste Reduction and Recycling; Marine Systems and Policies; Introduction to Environmental Modelling; Carbon Capture and Transport; Encountering Cities; Environmental Geochemistry; Foundations in Ecological Economics; Human Dimensions of Environmental Change and Sustainability; Principles of Environmental Sustainability; Understanding Environment and Development; Values and the Environment; Sustainability of Food Production; Participation in Policy and Planning; Forests and Environment; Climate Change and Corporate Strategy; Principles and Practice of Remote Sensing; Political Ecology; Ecosystems and Global Change; Soil Science Concepts and Application; Water Resource Management.*

Field trip

An integral, week-long study tour lets you refresh skills learned on the programme and develop new tools and techniques, useful during your dissertation and future career. The tour is currently held in Imlil, in the Atlas Mountains in Morocco. In addition to the formal taught component, there are opportunities to experience the local culture in Marrakech and Imlil. There may also be a short tour during induction week, to allow you to get to know your fellow students and visit the Highlands of Scotland.

Career opportunities

Our graduates often find employment in the environmental sector or choose further study with a PhD. Recent graduates are working in roles such as environmental protection officer, coral reef fieldwork leader and planning consultant for employers such as SEPA, Talisman Energy and the Archipelagos Institute of Marine Conservation. There are consultancy opportunities with environmental regulators, government and NGOs.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry), in biological science, environmental science, physical science, geography, engineering, economics or other relevant subject. We may also consider a UK 2:2 honours degree, or its international equivalent, with relevant industry experience.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Dr Alistair Hamilton

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www.ed.ac.uk/pg/32

Environmental Sustainability

MSc 1 yr FT (2 yrs or 3 yrs PT available for UK/EU students)

Programme description

Ensuring the environmental sustainability of society is one of the major challenges facing humanity in the 21st century. How can the needs of the world's growing population be met without threatening the ecological processes that support human wellbeing? How can the economy and energy systems be restructured to combat climate change? What policies foster sustainability? How can the necessary changes in the behaviour of organisations and individuals be promoted? This programme explores these amongst other related, topical questions. In this programme, you will be encouraged to think across different disciplines to blend scientific, socio-economic and policy perspectives for a stronger understanding of sustainability and how it can be achieved. This integrated and holistic understanding is attractive to organisations which promote sustainable development or seek to reduce humanity's effect on the environment. Edinburgh is attractive to organisations seeking to inform or influence environmental sustainability debates offering you access to interesting case studies and networking.

Programme structure

This programme comprises six taught courses and a dissertation.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Principles of Environmental Sustainability; Case Studies in Sustainable Development; Dissertation.

RECOMMENDED OPTION COURSES

In consultation with your Personal Tutor, you will choose from a range of option courses. We have previously offered: *Atmospheric Quality and Global Change; Climate Change and Corporate Strategy; Development: Principles and Practices; Ecosystems and Global Change; Energy and Society; Environmental Impact Assessment; Environmental Valuation; Forests and Environment; Foundations in Ecological Economics; Human Dimensions of Environmental Change and Sustainability; Participation in Policy and Planning; Political Ecology; Sustainability of Food Production; Understanding Environment and Development; Waste Reduction and Recycling; Water Resource Management.*

Career opportunities

You will be prepared for roles within environmental consultancy, national and local government, non-profit organisations, education or research. Your choice of option courses and dissertation project can be used to tailor your studies to support your intended career path. Recent graduates are employed in sustainability-related roles by organisations such as AMEC, Carnegie Wave Energy, E.ON, ERM, FAO, Friends of the Earth, German Council for Sustainable Development, Global Justice Now, Institute for European Environmental Policy, International Energy Agency, London Borough of Camden, Marine Conservation Society, Northumbrian Water Group, OECD, Ofgem, PwC UK, John Muir Trust, The Scottish Government, Transport for London, UNFCCC secretariat, World Resources Institute and Zero Waste Scotland.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry), in a biological, environmental or physical science, geography, or a social science. Due to the focus of this programme, business-related degrees are not suitable.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Dr Simon Allen

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www.ed.ac.uk/pg/668

Food Security

MSc 1 yr FT (2 or 3 yrs PT available for UK/EU students)

Programme description

This programme is run in collaboration with Scotland's Rural College. Food security has become a critically important issue for societies around the globe. Interactions between demographics, changes in diet, trade liberalisation, an increased focus on conservation, technological innovations including GM crops, the impact of climate change and new responses to climate change resource limitations (particularly in terms of energy, water and nutrients) all affect food security. With such a rapid growth in this area, there is an increasing demand for qualified experts to contribute to policy creation and legislation in food production and the supply chain. This programme offers you the scope and multidisciplinary approach to address all of these issues, as well as an understanding of the technical, agronomic, environmental, economic and socio-political factors that influence food security. You will be equipped with the analytical and communication skills to contribute to humanity's efforts to achieve and sustain food security during the 21st century.

Programme structure

The programme comprises six taught courses and a dissertation.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Frameworks to Assess Food Security; Sustainability of Food Production; Interrelationships in Food Systems; Professional and Research Skills in Practice; Dissertation.

RECOMMENDED OPTION COURSES

In consultation with the Programme Director, you will choose from a range of option courses. We have previously offered: *Atmospheric Quality and Global Change; Ecosystem Services 1: Ecosystems and Global Change; Foundations in Ecological Economics; Human Dimensions of Environmental Change and Sustainability; Principles of Environmental Sustainability; Soil Protection and Management; Understanding Environment and Development; Marine Systems and Policies; Applications in Ecological Economics; Climate Change and Corporate Strategy; Interrelationships in Food Systems; Land Use/Environmental Interactions; Case Studies in Sustainable Development; Ecosystem Services 2: Environmental Governance; Environmental Impact Assessment; Soil Science Concepts and Application.*

Field trip

The field trip is an opportunity to apply some of the principles of food security to real world scenarios. The field trip is typically to Rome, where International organisations such as FAO and WFP have their headquarters.

Career opportunities

Graduates of this programme typically go on to work in government and non-governmental agencies as well as international bodies and businesses where they can utilise the invaluable, and highly prized, skills they have acquired on the programme, such as food security assessment.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry), in an agricultural, ecological, biological or environmental science, engineering, social science, economics, politics or other relevant subject. We may also consider a UK 2:2 honours degree, or its international equivalent, with relevant work experience. This programme is not suitable for applicants pursuing a career in food safety/hygiene or related areas.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Dr Montse Costa Font

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www.ed.ac.uk/pg/74

Geographical Information Science

MSc 1 yr FT (2 yrs or 3 yrs PT available for UK/EU students)

Programme description

This successful geographical information science (GIS) programme was the first of its type in the world and has a heritage of almost 30 years. The course is continually refreshed to keep abreast of latest technological changes and industry trends. Accredited by the Royal Institute of Chartered Surveyors, it offers expert understanding of the latest developments in geographical information science (GIS). It mixes practical training, theory and an ability to apply learned skills in any software environment, and offers hands-on experience in geographical problem solving.

Programme structure

This programme comprises two semesters of taught courses, delivered through lectures and seminars, and a dissertation.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Spatial Modelling and Analysis; Research Practice and Project Planning; Technological Infrastructures for GIS; Dissertation.

RECOMMENDED OPTION COURSES

In consultation with the Programme Director, you will choose from a range of option courses. We have previously offered: *Active Remote Sensing: Radar and Lidar; Advanced Spatial Database Methods; Atmospheric Quality and Global Change; Business Geographics; Case Studies in Sustainable Development; Ecosystem Services 1: Ecosystems and Global Change; Ecosystem Services 2: Environmental Governance; Environmental Impact Assessment; Introduction to Environmental Modelling; Marine Systems and Policies; Passive Earth Observation: New Platforms, Sensors, and Analytical Methods; Principles and Practice of Remote Sensing; Principles of Geographical Information Science; Technologies for Sustainable Energy; Water Resource Management.*

Field trip

There is a field trip to Highland Perthshire in October, focusing on project management and techniques for capturing geospatial information.

Career opportunities

Demand for GIS expertise is growing at an unprecedented rate and our internationally recognised programme is held in high regard by employers. Recent graduates are now working in a variety of GIS roles worldwide in public and private sector organisations, for employers such as Microsoft, Google, General Electric Aerospace, The World Bank, British Antarctic Survey, The World Conservation Monitoring Centre, Deloitte, Total, British Airways, the Forestry Commission, DEFRA, Clean Earth Energy, ARUP, Scottish Water, Green Highland Renewable and Historic Scotland.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry). We may also consider a UK 2:2 honours degree, or its international equivalent, with relevant industry experience.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Dr Neil Stuart

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www.ed.ac.uk/pg/795

Geographical Information Science & Archaeology

MSc 1yr FT (2 or 3yrs PT available for UK/EU students)

Programme description

This programme offers you the chance to develop a detailed understanding of the application of geographical information science (GIS) and related technologies within the field of archaeology. The programme has a distinctive Scottish flavour, and you will benefit from the guidance of internationally-recognised staff. The programme combines the pedigree of Edinburgh's GIS expertise with a long-established reputation in archaeological teaching and research. You will gain a broad understanding of the use of GIS in archaeological surveying, recording and research and will be equipped with the analytical and communication skills necessary to work in this vibrant area. Demand for the application of GIS within archaeology is growing at an unprecedented rate, including searching for new archaeological sites, determining the societal context of existing sites and examining the interplay between successive occupations of a site. The proven ability of our GIS graduates in employment means our programme is held in high regard by a wide range of employers.

Programme structure

The programme is organised into two semesters of taught courses, delivered through lectures and seminars, after which you will work towards your individual dissertation.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

GIS and Spatial Analysis for Archaeologists; Research Practice and Project Planning; Spatial Modelling and Analysis; Dissertation.

RECOMMENDED OPTION COURSES

In consultation with the Programme Director, you will choose from a range of option courses. We have previously offered: *Active Remote Sensing: Radar and Lidar; Business Geographics; Exploring the Past with Data Science; Passive Earth Observation: New Platforms, Sensors, and Analytical Methods; Principles and Practice of Remote Sensing; Principles of Geographical Information Science; Quantitative Methods and Reasoning in Archaeology; Space, Place and Time: the Archaeology of Built Environments; Technological Infrastructures for GIS; The Scottish Lowlands: Archaeology and Landscape before the Normans; Visual Analytics.*

Field trip

There is a field trip to Highland Perthshire in October, focusing on project management and techniques for capturing geospatial information.

Career opportunities

Graduates will be able to continue to study or to pursue a career in surveying, illustration and 3D visualisation, digital archiving, heritage management, terrain modelling, database management, geomatics or consultancy. Our GIS graduates have worked in both public and private sector organisations, including Historic Scotland, English Heritage, the Royal Commission on the Ancient and Historical Monuments of Scotland, thinkWhere (formerly Forth Valley GIS) and CFA Archaeology.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry). We may also consider a UK 2:2 honours degree, or its international equivalent, with relevant industrial or business experience.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Dr Neil Stuart

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www.ed.ac.uk/pg/798

Global Environment Challenges



Online learning

PgCert 9 mths or 1 yr FT (2 yrs PT)

Programme description

Human activity is changing the natural environment at an unprecedented rate. As a result, humanity faces a range of complex and interrelated challenges: global warming, ecosystem disruption, biodiversity loss, and, for many, increasing difficulty in meeting the basic human needs for energy, food, water and shelter. This part-time, online learning programme takes a multidisciplinary approach to understanding these contemporary environmental issues and will develop your capacity to address these issues in your professional life. Drawing from the University's unique breadth of expertise, you will develop an in-depth appreciation of how human activity drives environmental change.

The programme draws multidisciplinary expertise from the University and beyond, through the Global Environment & Society Academy, a network of experts developing innovative solutions for the world's most challenging problems: www.ed.ac.uk/global-environment-society.

Programme structure

The certificate is split into three taught courses, which are delivered through an exciting mixture of online modes, including video lectures, study guides, self-directed and guided reading as well as a range of interactive online reflection and discursive activities. Due to the highly flexible nature of this certificate, it is ideal if you want to gain a further qualification with minimum interruption to your work or family commitments. By introducing you to a virtual learning environment, you will develop your IT skills and make contact with fellow students from across the world.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Global Environment Challenges; Climate Change Mitigation; Ecosystems Values and Management; Environmental Governance.

MSC GLOBAL CHALLENGES

This PgCert may form one third of an MSc in Global Challenges, with Global Health Challenges and Global Development Challenges making up the other two thirds. More information: www.ed.ac.uk/pg/923

Career opportunities

This certificate will equip you with the knowledge and skills needed for work with governments, NGOs, international aid organisations, United Nations agencies, the private sector, universities and other research institutions.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry), in any subject. We will also take any professional experience into account.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Dr Peter Alexander

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www.ed.ac.uk/pg/872

Marine Systems & Policies

MSc 1 yr FT (2 yrs or 3 yrs PT available for UK/EU students)

Programme description

Rapid climate change and the global expansion of human activities threaten the world's oceans. This unique programme embraces an integrated approach to understanding the science, policies, and practice of achieving sustainable ocean development. It will equip you with a fully interdisciplinary understanding and the skills needed to develop science, policy, and in-practice solutions to the challenge of changing oceans. The programme spans three spheres of marine systems:

- **Marine ecosystems** – exploring marine ecosystems, their socioeconomic importance, and their conservation across marine biomes, habitats and species, spanning islands, coasts, estuaries, continental shelves, polar seas and the deep and High Seas.
- **Marine policy** – examining different systems of ocean governance through formal international to regional policies, laws and area-based management tools to informal customs and traditional knowledge.
- **Marine built systems** – exploring how the 'blue economy' including ocean resource exploitation and infrastructure development affects marine ecosystems, and the practical management frameworks aiming for sustainable ocean development including marine spatial planning.

Programme structure

This programme involves two semesters of taught courses, field trips and a dissertation-style research project.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Marine Systems and Policies; Corals in a Changing Ocean; Marine Infrastructure and Environmental Change; Marine Field Methods in Research and Practice; Research Project in Marine Systems and Policies.

RECOMMENDED OPTION COURSES

In consultation with the Programme Director, you will choose from a range of option courses. We have previously offered: *International Law of the Marine Environment; Human Dimensions of Environmental Change and Sustainability; Ecology of Ecosystem Services; Ecosystem Values; Analysing the Environment; Environmental Valuation; Foundations in Ecological Economics; Applications in Ecological Economics; Water Resource Management; Principles of Geographic Information Science; Principles and Practice of Remote Sensing.*

Field trips

An international field trip to a tropical marine setting is part of this programme's research methods compulsory course. The field trip will take place in early January. It has previously been to the Maldives.

Career opportunities

This MSc provides a strong foundation for work with international agencies, academic research, marine sectors of government bodies, industry, marine-focused think-tanks, and NGOs. These are employers that seek candidates with an integrated understanding of marine ecosystems, marine planning, regional to international policies, and practice on the ground.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry), in natural sciences or social sciences, but with clear evidence of experience and interest in marine topics.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Dr Lea-Anne Henry

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www.ed.ac.uk/pg/781

Soils & Sustainability

MSc 1 yr FT (2 yrs or 3 yrs PT available for UK/EU students)

Programme description

This programme is run in collaboration with Scotland's Rural College. Soils form the basis of all agricultural production, but they also store water, mediate the impact of pollutants, provide biological habitats, have an impact on the accumulation of greenhouse gases in our atmosphere, are involved in dealing with society's waste, are a source of extractable minerals and provide the foundations for the housing and roads on which society depends. As such, sustainable use and management are crucial to protect this natural resource for the future. This programme introduces you to concepts and analytical techniques of soil science for the 21st century and is suitable if you wish to pursue a career in land-based management or environmental protection.

Programme structure

You will complete two semesters of taught courses and a dissertation.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Soil Protection and Management; Soil Science Concepts and Application; Soil Ecology and Taxonomy; Professional and Research Skills in Practice; Dissertation.

RECOMMENDED OPTION COURSES

In consultation with the Programme Director, you will choose from a range of option courses. We have previously offered: *Spatial Modelling; Geodiversity Conservation and Interpretation; Culture, Ethics & Environment; Analysing the Environment; Analysing the Environment Study Tour; Ecosystems and Global Change; Human Dimensions of Environmental Change and Sustainability; Development: Principles and Practices; Principles of Environmental Sustainability; Principles of GIS; Project Appraisal; Atmospheric Quality and Global Change; Frameworks to Assess Food Security; Environmental Governance; Environmental Impact Assessment; Land Use/Environmental Interactions; Participation in Policy and Planning; Sustainability of Food Production; Interrelationships in Food Systems.*

Field trip

An integral, week-long study tour lets you refresh skills learned on the programme and develop new tools and techniques, useful during the dissertation process. The tour is currently held in Imlil, Morocco. In addition to the formal taught component, we provide visits to Medina in Marrakesh, and to a kasbah for tea. There may also be a short tour during induction week, to allow you to get to know your fellow students.

Career opportunities

The British Society of Soil Science has identified soil science as an area with a shortage of critical skills, placing graduates in high demand. Soil scientists work in a broad range of vocations including environmental consultancy, research, overseas development, environmental impact assessment and analysis, site reclamation and remediation, and conservation as well as advising on government policy, archaeological excavations and laboratory analyses, forensics and landscape design.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry). We may also consider a UK 2:2 honours degree, or its international equivalent, with relevant experience. Please contact us to check before you apply.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Sarah Buckingham

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www.ed.ac.uk/pg/903

Sustainable Plant Health

MSc 1 yr FT (2 yrs or 3 yrs PT available for UK/EU students)

Programme description

This programme is run in collaboration with Scotland's Rural College. Food production has tripled in the past forty years, but one billion people still go hungry every year. On average 30 per cent of all food produced is wasted in the pathway from 'field to fork'. With the global human population set to rise from seven to nine billion by 2050, we urgently need sustainable solutions that will allow us to increase the global food supply while preserving the integrity of agricultural and non-agricultural ecosystems. Our trees and forests face new plant health risks that threaten areas of great natural beauty and diversity and affect both rural and urban landscapes. You will have the opportunity to develop your understanding of the vital role of plant health, applying your skills in laboratory and field studies.

Programme structure

You will take two semesters of lectures and practicals and a dissertation.

COMPULSORY COURSES PREVIOUSLY OFFERED INCLUDE:

Fundamentals of Plant Health; Forensic Plant Health; Plant Health in a Global Context; Professional and Research Skills in Practice; Dissertation.

RECOMMENDED OPTION COURSES

In consultation with the Programme Director, you will choose from a range of option courses. We have previously offered: *Applications in Ecological Economics; Atmospheric Quality and Global Change; Case Studies in Sustainable Development; Ecosystem Services 1: Ecosystems and Global Change; Ecosystem Services 2: Environmental Governance; Environmental Impact Assessment; Frameworks to Assess Food Security; Human Dimensions of Environmental Change and Sustainability; Interrelationships in Food Systems; Land Use/Environmental Interactions; Principles of Environmental Sustainability; Soil Ecology and Taxonomy; Soil Protection and Management; Soil Science Concepts and Application; Sustainability of Food Production; Understanding Environment and Development.*

Field trip

A week-long study tour provides an opportunity to see principles of sustainable plant health applied in a real world setting. The study tour is currently held in Poland. A short field trip takes place during induction and compulsory courses include field visits.

Career opportunities

You will gain valuable skills from our unique approach looking at impacts across ecosystems. Plant health scientists are employed in environmental consultancy, research, overseas development, agriculture, horticulture, forestry, urban planning, policy development, plant inspection and management. Agricultural scientists continue to be needed to balance increased output with protection and preservation of ecosystems.

Entry requirements

A UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry), in a related subject. We may also consider a UK 2:2 honours degree, or its international equivalent, with relevant experience in plant or crop protection.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme Director Dr Mark Hocart

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“The programme has helped me get a deeper understanding of economics, anthropology, gender issues and policies. It also created a platform for me to perfect my leadership skills through forums such as The Skoll World Forum and receiving the Edinburgh Award on Transformative Leadership.”

Anita Owiti, MasterCard Foundation Scholar, MSc Environment & Development

Research at the School of GeoSciences

As the largest grouping of geoscientists in the UK, we offer an extensive range of research opportunities for postgraduates.

The University of Edinburgh has an unbroken record of teaching and research in the earth sciences going back to 1770, when Robert Ramsay became the first Professor of Natural History.

James Hutton and Arthur Holmes were prominent among those who set an academic tradition in Edinburgh that continues today through the University's earth sciences and environmental sciences (including geography) teaching and research.

Home of leading research

Our interactive and interdisciplinary research environment allows us to tackle difficult research questions, from causes of past glaciations to interactions of earth, climate and society. The ambition and quality of our research was reflected in the Research Excellence Framework (REF) 2014, when 78 per cent of our research in earth systems and environmental sciences was rated 4* world leading or 3* internationally excellent on the overall quality profile.

Backed by industry

The School receives strong backing from industry, particularly in areas such as hydrocarbons and carbon capture and storage. We receive support from the EU and from major UK research councils, including the Natural Environment Research Council, Engineering and Physical Sciences Research Council and the Economic and Social Research Council.

Research community

Postgraduate research at the School of GeoSciences is represented by the following three research institutes:

Geography and the Lived Environment

This institute generates agenda-setting research that improves understanding of the relationships between people, society and the environment. Researchers seek to investigate key areas of contemporary and historical societal concern, including the energy transition, development, climate change, inequalities, land-use change, ecosystem services, social justice, health and wellbeing and urbanisation. The lived environment refers to those

aspects of the Earth system that are experienced by people – not as it is purely conceptualised or theorised, but as it is lived. It is a multidisciplinary concept that brings together environmental science, geography, economics, policy, social science and computer science.

Global Change

This institute seeks to improve the scientific understanding of past, present and future changes in the Earth system through measurements, theory and computational modelling. Better understanding of the Earth system allows us to inform policymakers and to develop effective mitigation strategies, which, if implemented, would minimise the economic and humanitarian implications of changes in climate and the Earth system.

Our aim incorporates some of the most compelling scientific challenges of the 21st century. To address these questions we nurture an interdisciplinary research and teaching environment, integrating expertise across the institute, the School of GeoSciences and, more broadly, throughout the University and beyond.

Earth and Planetary Sciences

This institute undertakes research that informs the solutions to address global challenges relating to resources, natural hazards and the environment. Our researchers seek better understanding of chemical and physical properties of materials, the origin and history of pore fluids, minerals, rock assemblages, and magmas, and their interactions at all scales within the Earth. We develop new seismological, electromagnetic, gravitational, magnetic and industrial seismic methods to interrogate the Earth remotely for such information.

Dynamic leaders

The School has many high-profile academics who are leaders in their field.

Stuart Haszeldine is the world's first Professor of Carbon Capture and Storage. He co-leads Scottish Carbon Capture and Storage, the UK's largest such group (a collaboration between the University of Edinburgh, Heriot-Watt University and the British Geological Survey). He is a member of the CCS Advisory Group to the UK Department of Business, Energy and Industrial Strategy, and works with the

Scottish Government energy directorate. Gabriele Hegerl FRS is Professor of Climate System Science. She studies the causes of observed changes in climate, and seeks to detect the emerging signal of greenhouse gas increases in temperature data. She also studies the causes of change in climate variability and extremes as well as change over the past millennium. Professor Hegerl is involved in the Intergovernmental Panel on Climate Change. She was a member of the Summary for Policymakers writing team in the Fourth Assessment Report, and a member of the Synthesis Report writing team in the Fifth Report.

Simon Kelley is the Head of the School of GeoSciences and Professor of Isotope Geochemistry. One of his main research interests is measuring the rates and timescales of geological processes. Simon has worked on dating large igneous provinces, ultra-high pressure metamorphism in subduction zones, and the provenance of individual grains in ancient silts and sands. Simon's research also extends to online teaching where he led a project to develop the virtual microscope for Earth science, an open educational resource: www.virtualmicroscope.org

International collaborations

A commitment to international partnerships is intrinsic to the School's research ethos. We have established research links on every continent.

Some projects are global in scope, such as the calculation of surface temperatures across oceans, determining the rate at which cosmic rays bombard the Earth's surface at different latitudes, or human transnational processes such as migration and globalisation.

Other projects focus on specific regions and communities, for example addressing issues of gender and social equality for community forest projects in South Asia, or examining archaeological evidence to evaluate the role of climate in environmental and cultural change.

Examples of our research partnerships can be found on the following page.

Our research collaborations

We work with a wide range of research institutes, centres and universities around the world. Here is a selection of our partnerships.



Centre for Research on Environment, Society and Health

CRESH fosters collaborations between scientists whose research is focused on exploring how physical and social environments can influence health: <http://cresh.org.uk>

Centre for Science at Extreme Conditions

The aim of the CSEC is to promote the study of materials at extremes of pressure and temperature and in electromagnetic fields: www.csec.ed.ac.uk

Edinburgh Materials and Micro-Analysis Centre

We provide integrated and interdisciplinary facilities for the application of microbeam analytical techniques to material analysis: www.ed.ac.uk/geosciences/EMMAC

Edinburgh Research Partnership in Engineering and Mathematics

ERPEm, a consortium involving the University of Edinburgh, Heriot-Watt University and Edinburgh Napier University, is organised into six Joint Research Institutes dedicated to world-class research, innovation and education in engineering and mathematical science: www.erp.ac.uk

Edinburgh Seismic Research

We are a federation of research groups forming the UK's largest group of scientists involved in exploration geophysics: www.geos.ed.ac.uk/seismic

International Centre for Carbonate Reservoirs

ICCR is a strategic alliance between Edinburgh and Heriot-Watt universities investigating the recovery of hydrocarbons from carbonate reservoirs: www.iccr.org.uk

National Centre for Earth Observation

The NCEO is a partnership of scientists and institutions that are using data from Earth observation satellites to monitor global and regional changes in the environment: www.nceo.ac.uk

Scottish Carbon Capture and Storage

Led by the School of GeoSciences, this is the largest such grouping in the UK, with world-class expertise in hydrocarbon geoscience, industrial-scale chemical engineering, carbon capture and innovative CO₂ use and power plant design: www.sccs.org.uk

Scottish Universities Environmental Research Centre

This is a collaborative facility operated by the Universities of Edinburgh and Glasgow, providing world-class analytical facilities. It hosts several national Natural Environment Research Council facilities: www.gla.ac.uk/research/az/suerc

UK Geotraces

UK Geotraces is part of an international consortium founded to understand the oceanic cycles of key trace elements and isotopes: www.ukgeotraces.com

 For more information about our research centres, please visit: www.ed.ac.uk/geosciences/research

Research opportunities

We offer a range of research programmes: MSc by Research, MPhil and PhD. You can commit to anything from one year of full-time study for the MSc to six years' part-time study for a doctorate.

MSc by Research

The master of science by research programme offers you the opportunity to acquire research skills by undertaking a single year (if studying full time) of independent study within the School's research interests.

Master of Philosophy

An MPhil resembles a PhD but only requires a minimum of two years' study (full time), including an extended piece of supervised research. This does not carry the same requirement for original contribution to knowledge as a PhD. You'll pursue your individual research project under supervision and submit a thesis.

Doctor of Philosophy

As a PhD student you will undertake an original research project under individual supervision. Your studies will take at least three years, and to qualify for your doctorate your thesis must be judged to represent an original contribution to knowledge. In some cases it is also possible to study a 1+3 programme, comprising a year of MSc study leading on to a PhD.

Entry requirements

A UK undergraduate degree, or its international equivalent, in a related subject. We may also consider your application if you have other qualifications or experience. Please check the specific entry requirements for your programme online before applying.

Support

As a research student, you will be affiliated to one of our research institutes, benefiting from an excellent peer-supported network. As groupings of researchers with related interests, the institutes provide a forum for development of ideas, collaboration, and dissemination of results, and an environment for training, development and mentoring of research students and early career researchers.

Career opportunities

Many of our graduates go on to postdoctoral research roles in universities and research institutes internationally. Others are now working as geologists, geophysicists, biogeochemists and environmentalists for companies including BP, the Met Office and the International Seismological Centre.

More information

Enquiries for PhD, MPhil and MSc by Research programmes should be directed to:

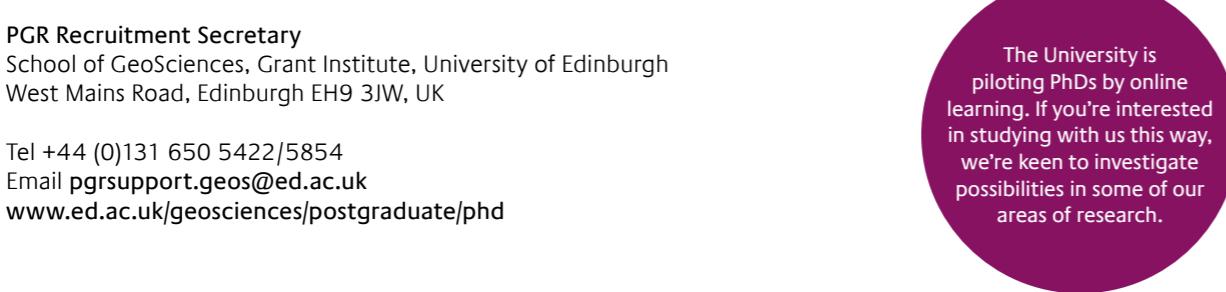
PGR Recruitment Secretary

School of GeoSciences, Grant Institute, University of Edinburgh
West Mains Road, Edinburgh EH9 3JW, UK

Tel +44 (0)131 650 5422/5854

Email pgrsupport.geos@ed.ac.uk

www.ed.ac.uk/geosciences/postgraduate/phd



www.ed.ac.uk/pg/95

Atmospheric & Environmental Sciences

PhD 3 yrs FT (6 yrs PT available for UK/EU students)
MPhil 2 yrs FT (4 yrs PT available for UK/EU students)

Research institutes

We offer this research programme in Atmospheric & Environmental Sciences, which draws on expertise from the research institutes: Global Change and Geography and the Lived Environment.

Research profile

Global Change

Our overarching aim is to improve the scientific understanding of past, present and future changes in the Earth system through measurements, theory and computational modelling. Better understanding of the Earth system allows us to inform policymakers and to develop effective mitigation strategies, which, if implemented, would minimise the economic and humanitarian implications of changes in climate and the Earth system. Our aim incorporates some of the most compelling scientific challenges of the 21st century. To address these questions we nurture a multidisciplinary research and teaching environment, integrating expertise across the Institute, the School and more broadly throughout the University.

Geography and the Lived Environment

We seek to generate agenda-setting research that improves understanding of the relationships between people, society and the environment. Our research investigates key areas of contemporary and historical societal concern, including development, climate change, inequalities, land-use change, ecosystem services, health and wellbeing and urbanisation. The lived environment refers to those aspects of the Earth system that are experienced by people – not as it is purely conceptualised or theorised, but as it is lived. It is a multidisciplinary concept that brings together environmental science, geography, economics, policy, social science and computer science.

English language requirements

See page 28.

Fees and funding

The School receives sizeable studentship quota allocations from research councils and also offers studentships provided by successful consortium bids and research grants. School-funded scholarships are also available.

For fees see page 28 and for funding information see page 30.

Programme contact PGR Recruitment Secretary

Tel +44 (0)131 650 5422/5854

Email pgrsupport.geos@ed.ac.uk

www.ed.ac.uk/pg/69

Geology & Geophysics

PhD 3 yrs FT (6 yrs PT available for UK/EU students)
MPhil 2 yrs FT (4 yrs PT available for UK/EU students)

Research institutes

Our research programmes in Geology & Geophysics draw on expertise from the School's Earth & Planetary Science research institute.

Research profile

The Earth & Planetary Science research institute studies the physical and chemical properties, origin and history of the Earth, and encompasses the major disciplines of geology, geochemistry, geodynamics, meteorology and geophysics. We bring together hitherto separate fields to understand the way in which the Earth's subsurface works – from atoms to plates, and on timescales ranging from seconds to billions of years.

We have special expertise in: mineralogy; igneous, metamorphic and experimental petrology; palaeontology; sandstone and carbonate diagenesis; tectonics; rock physics and chemistry; petroleum geoscience; seismic imaging; and seismic sequence stratigraphy.

Our research is applied to areas as diverse as carbon capture and storage and the examination of diamonds from the lower mantle. The Edinburgh Earth Observatory, part of the Earth & Planetary Science research institute, is a multidisciplinary research unit, providing a strategic focus and support base for the University's expertise in the geosciences. Its main research focus is on understanding the Earth and its environment through the effective exploitation of both in-situ and remote observations. The Earth & Planetary Science research institute, and our associated, new joint Graduate School, established by the Edinburgh Research Partnership in Engineering and Mathematics, now contains Europe's largest grouping of subsurface research geologists and specialist geophysicists in a single city.

Recent graduates are now working for the British Antarctic Survey, as geophysicists, geologists and hydrogeologists for various employers and as postdoctoral researchers for the Moredun Group and for universities worldwide from Cambridge to New Zealand.

English language requirements

See page 28.

Fees and funding

The School receives sizeable studentship quota allocations from research councils and also offers studentships provided by successful consortium bids and research grants. School-funded scholarships are also available.

For fees see page 28 and for funding information see page 30.

Programme contact PGR Recruitment Secretary

Tel +44 (0)131 650 5422/5854

Email pgrsupport.geos@ed.ac.uk



"I have been given the space necessary to explore all the possible angles of my research and decide which to focus on. Both my Supervisor and Programme Director have always been welcoming and encouraging to my suggestions and I found a great balance of freedom to explore and work on my research, but also support when I needed it."

Candela Sanchez-Rodilla Espeso, MSc Human Geography

www.ed.ac.uk/pg/84

GeoSciences Individual Project

MSc by Research 1 yr FT (2 yrs PT available for UK/EU students)

This masters by research programme is an opportunity to carry out a substantial piece of research in any of the major branches of geosciences. The programme allows you to work on research throughout the year, and your work will be assessed primarily on your final dissertation. You can follow taught courses by arrangement with your supervisor, but none are required.

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme contact PGR Recruitment Secretary

Tel +44 (0)131 650 5422/5854

Email pgrsupport.geos@ed.ac.ukwww.ed.ac.uk/pg/86

Human Geography

MSc by Research 1 yr FT (2 yrs PT available for UK/EU students)

This programme's emphasis on independent research allows you to work closely with scholars who are leaders in their field. Research may be in any area of social, urban, environmental, development, political, economic, historical or cultural geography that is supported by the Human Geography Research Group. It is co-delivered with the University's Graduate School of Social Science. We offer a balance between general and specialist research training. The programme is recognised by the Economic and Social Research Council (ESRC) and the Arts and Humanities Research Council. A programme highlight is the postgraduate conference where students present their research to colleagues. The programme can stand alone as a masters, or form the first year of a '1+3' ESRC-backed PhD programme.

COMPULSORY COURSES OFFERED LAST YEAR:

Research Design in Human Geography; Methodological Debates in Human Geography; Core Quantitative Data Analysis 1 and 2; Research Skills in the Social Sciences: Data Collection; Dissertation in Human Geography.

RECOMMENDED OPTION COURSES

In consultation with the Programme Director, you will choose from a range of option courses. We particularly recommend: *Conducting Research Interviews; Contemporary Social Theory; The Documents of Life; Explanation and Understanding in Social and Political Research; Intermediate Inferential Statistics: Testing and Modelling; Listening to Children: Research and Consultation; Political Ecology; Qualitative Methods and Ethnographic Fieldwork; Survey Methods and Data; Values and the Environment.*

English language requirements

See page 28.

Fees and funding

For fees see page 28 and for funding information see page 30.

Programme contact Fraser MacDonald

Tel +44 (0)131 650 2293

Email fraser.macdonald@ed.ac.ukwww.ed.ac.uk/pg/105

Human Geography & Environmental Studies

PhD 3 yrs FT (6 yrs PT available for UK/EU students)
MPhil 2 yrs FT (4 yrs PT available for UK/EU students)**Research group**

Our research programmes in geography draw on expertise from the School's Human Geography Research Group, part of the Geography and the Lived Environment research institute.

Research profile

The Human Geography Research Group is recognised for its leading contribution to research at the forefront of the field. The Group's research efforts provide challenging new insights to core geographical concerns through four research themes:

- **Just Geographies:** Building upon human geography's long-standing concern with the production and consequences of inequality and uneven development.
- **Nature's Geographies:** Focusing on interactions between nature and society, environment and culture.
- **Materialising Geographies:** Examining the relationship between materiality, technology and geography.
- **Lived Geographies:** Concerned with how social, economic, political and cultural processes emerge from and shape people's daily lives at home, work and in public.

We have expertise in a wide range of regions, including the UK and continental Europe, South Asia, Australia, North and South America, Canada, the Caribbean and the Middle East.

We collaborate with colleagues across the University including in the Schools of Education, Health in Social Science (including Counselling Studies) and Edinburgh College of Art, and other areas within the College of Arts, Humanities & Social Sciences.

Training and support

The School is recognised as a provider of the Economic & Social Research Council (ESRC) Research Training (1+3) postgraduate training programme and has the Research Training-recognised MSc by Research in Human Geography, which is co-delivered with the Scottish Graduate School of Social Science. The group is a member of the ESRC-recognised Scottish Human Geography Consortium and the Kindrogan Consortium for Advanced Postgraduate Research Training in Human Geography. It has expertise in qualitative and feminist methodologies, archive use, and GIS-linked analysis of large datasets.

English language requirements

See page 28.

Fees and funding

The group receives a studentship quota allocation from the Arts & Humanities Research Council (AHRC) and the ESRC and also has studentships from successful consortium bids. School-funded scholarships are also available.

For fees see page 28 and for funding information see page 30.

Programme contact PGR Recruitment Secretary

Tel +44 (0)131 650 5422/5854

Email pgrsupport.geos@ed.ac.uk

THE UNIVERSITY of EDINBURGH

Case study: Edinburgh's research with impact

Acidification in the deep seas

Currently of great concern is the question of how climate change will impact deep-sea habitats, such as deep-sea coral reefs that support high biodiversity. These habitats are intrinsically difficult to access and are often out of sight and out of mind for many people.

The School of GeoSciences' Dr Sebastian Hennige and Professor Murray Roberts were appointed to lead a report for the Convention on Biological Diversity (CBD) on the impacts of ocean acidification on marine biodiversity: www.cbd.int/doc/publications/cbd-ts-75-en.pdf

They also produced a background document on acidification in cold-water areas to support the CBD's voluntary specific workplan for countries, on biodiversity in cold-water areas within the CBD's jurisdictional scope.

Project background

Dr Hennige and Professor Roberts' research focuses on the impacts of environmental change on marine life – in particular on tropical and deep sea coral, and how this can integrate into sustainable management.

Recent evidence from their research has highlighted how ocean acidification can cause structural degradation of cold-water reef habitats, potentially leading to less biodiversity support in the future, a key concern highlighted by the CBD.

Project results

Dr Hennige and Professor Roberts' reports and background document on acidification in cold-water areas have directly supported the introduction of the CBD's *Voluntary specific workplan on biodiversity in cold-water areas within the jurisdictional scope of the Convention* which countries within the convention will be able to adopt.

Research focuses on the impacts of environmental change on marine life – in particular on tropical and deep sea coral.

See more online: www.ed.ac.uk/research/impact

About the School of GeoSciences

At the School of GeoSciences we examine the interactions between the Earth's geology, atmosphere, oceans and life, as well as considering our own role and impact on our planet.

The effect of these complex relationships is vitally important to our world's future, which means the skills and knowledge you will develop as a postgraduate student here will put you in an exceptional position to help make that future better. Spanning the entire spectrum of the geosciences field, we offer opportunities that are increasingly interdisciplinary and international in focus.

We are the largest geoscience research group in the UK, with around 400 academics and researchers. The quality of our research is among the best in the UK. We were ranked second for research power in earth systems and environmental sciences (*Research Fortnight* REF 2014) following the Research Excellence Framework (REF) 2014. We had 78 per cent of our research rated 4* world leading or 3* internationally excellent on the overall quality profile. We offer dedicated expertise across our core teaching areas of ecology, environmental sciences, geography, geology, geophysics, meteorology and oceanography.

Illustrious past, exciting future

While we can draw upon a rich geological heritage (James Hutton, the father of modern-day geology, was an Edinburgh alumnus), we don't rest on our laurels. The School of GeoSciences is at the forefront of new developments and thought leadership. Our current staff and research collaborations build upon established prestige and reputation, continuing to break new ground in their understanding and application of the principles of geosciences.

Talented staff

Among our large and experienced academic team are many global leaders in their fields. Two of our academics were lead authors of the Intergovernmental Panel on Climate Change's Fifth Assessment Report, while one was a review editor for the report. We also boast a double winner of the World Meteorological Organization's Norbert Gerbier Prize and the world's first Professor of Carbon Capture and Storage.

Industry links

Our masters programmes will not only extend your knowledge in some of the most exciting areas in geosciences, but will also give you valuable, marketable skills and expertise enabling you to work at the forefront of global resource management. We work closely with industry, through Edinburgh Innovations, the University's commercialisation office, to find practical answers to tomorrow's problems. We also encourage you to undertake work-based projects – in collaboration with an external organisation – which may form the basis of your masters dissertation.

In partnership with the University's Global Environment and Society Academy, we hold the annual 'Environment and Society: Researcher and Practitioner Mixer' event. This forum gives you the chance to pitch your taught masters research ideas to prospective employers and develop collaborative projects to mutually beneficial ends.



Facilities and resources

By joining the School of GeoSciences, you will gain access to outstanding facilities. From our own aircraft to state-of-the-art computing facilities, our exceptional equipment enables our researchers, staff and students to stay at the forefront of their field.

Facilities and partnerships

The Edinburgh Centre for Carbon Innovation (ECCI) is an exemplar of social, economic and environmental sustainability, where students enrolled on relevant programmes can enjoy lectures and access to contemporary study space. ECCI was the first refurbished building in the UK to achieve the industry sustainability 'BREEAM Outstanding' award at the design stage. ECCI is a collaborative project with Edinburgh Napier and Heriot-Watt universities that brings together experts in law, business, technology and policymaking.

As you would expect, we have a wide range of hi-tech apparatus for the analysis of minerals and fluids, for isotope analysis and for measuring the physical properties of materials. Few institutions can boast facilities that need a call sign for Air Traffic Control. In our case the call sign is G-GEOS and the equipment is an Eco Diamond HK36 small aircraft – invaluable for measuring trace gas concentrations up to altitudes of approximately 3,000 metres.

We also offer excellent resources for scientific computing, for instance in geographic information systems, meteorological and climate modelling and geophysics. We place a strong emphasis on field measurement techniques in ecological, atmospheric and earth sciences.

More information:
www.ed.ac.uk/geosciences/research

National facilities

The School hosts and manages a number of national analytical facilities on behalf of the Natural Environment Research Council (NERC). We are home to:

- the NERC Ion Microprobe Facility;
- the Experimental GeoScience Facility (NERC recognised);
- the NERC Geophysical Equipment Facility;
- the NERC Field Spectroscopy Facility;
- the NERC Tephrochronology Service;
- the NERC Chemical Dating Facility;
- Airborne GeoSciences (NERC-recognised).

Collections of the University

The University of Edinburgh has one of the world's great collections, which has been growing ever since its foundation in 1583. Our collections include rare books, archives and manuscripts, art, historical musical instruments and a wide range of museum objects from geological specimens to anatomical models. If laid end to end, we would have almost 60 kilometres of shelving and storage space devoted to our heritage material, from 1st-century Greek papyrus fragments to new works of sculpture. This is curated by specialist staff across 45 sites and used for our teaching and research and by the wider public community.

The Centre for Research Collections in the Main Library is the hub for all our collections, where specialist curators make them available for study, research and pleasure. Postgraduate students are welcome to study original objects and have made many important research discoveries while working on the archives. You will find an incredible range of material in our collections that is available nowhere else in the world.



Postgraduate Open Day
14 November 2018
[www.ed.ac.uk/
postgraduate-open-day](http://www.ed.ac.uk/postgraduate-open-day)

Community

Our supportive academic community provides a dynamic environment in which you can truly thrive. We offer you numerous opportunities to access study support, develop new skills, share knowledge, exchange ideas and socialise with like-minded colleagues.

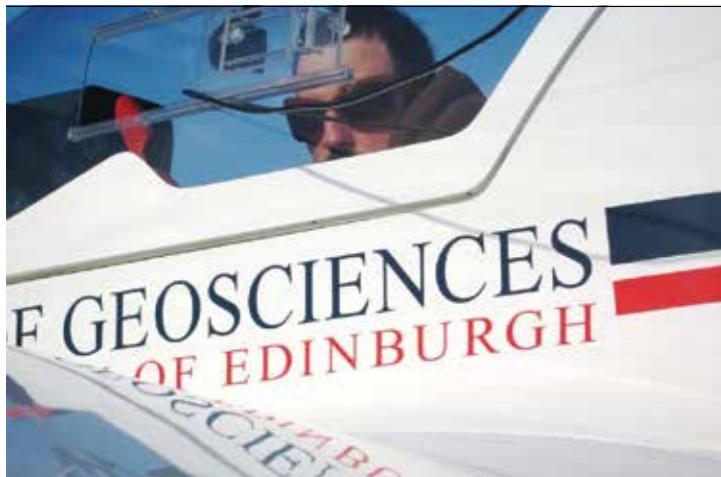
You will join an active and motivated postgraduate student community, for which regular events have included a Research and Practitioner Mixer, Field Training Days, and informal socials such as our Burns Supper and ceilidh. Additionally, staff and visiting experts deliver exciting lectures and seminars which are open to all of our students – there really is something for everyone.

If you enrol as a taught masters student, you'll receive support from our GeoSciences Teaching Organisation, which helps with all aspects of the administration of your studies, while our dedicated programme directors, personal tutors and student support coordinators are responsible for your academic and pastoral care.

If you undertake postgraduate research you will work closely with your supervisor and an academic advisor, and will have access to confidential pastoral support from our Research Training and Development Team.

"This has been a great course – one of the best investments I have made in my life – where I have not only studied in one of Britain's best cities but have pushed a subject to the very limit of our current knowledge. This is not only a career enhancer but has also brought a new aspect to my life as an environmentalist and what I can achieve in the future."

Ben Reid, MSc Ecosystem Services



Employability and graduate attributes

As a GeoSciences graduate you will have excellent academic and career prospects – working with industry, staying in academia or entering government and non-government organisations.

Collaborative culture
All academic research staff and postgraduate students are affiliated to one of our three research institutes:

- Geography and the Lived Environment;
- Global Change;
- Earth & Planetary Sciences.

As groupings of researchers with related interests, the institutes provide a forum for the development of ideas, collaboration and dissemination of results, and an environment for training, development and mentoring of research students and early-career researchers. Each research institute has a very active seminar series drawing distinguished external guests as well as internal speakers, and you will be encouraged to attend and participate.

Peer support
Our postgraduate research team ensures effective delivery of all postgraduate research training, as an integral underpinning of all School research activities. On joining us you will become a member of the student-run GradSchool, an excellent peer-support network that spans each of the School's sites. GradSchool organises social events, lectures and conferences, and maintains crucial links between you and our academic staff.

Each year GradSchool welcomes new research students with a range of events: there is an organised weekend away to the mountains, the GradSchool conference, the regular GradTalk seminars and a spring ceilidh.

Institute for Academic Development
Observing changes in markets and external scientific developments, and incorporating these into our ever-evolving programmes, means we will nurture capabilities that you can apply to acquire business skills after graduation. In addition to developing skills on field trips and during class, you will be encouraged to undertake research-skills training, including time management and academic referencing, and training in qualitative and quantitative skills provided by our academic staff and the Institute for Academic Development.

Our graduates have gone on to work for a huge array of employers across all sectors, including the Department of Business, Energy and Industrial Strategy, the Carbon Trust, the Forestry Commission, British Airways, Hewlett-Packard, Shell, Credit Suisse, Google, and the police.

IAD also provides a comprehensive programme of transferable skills training, resources and support for researchers completing a doctorate. The workshop programme is designed to help you successfully prepare for the various milestones of your PhD, from getting started with your research, to writing up and preparing for the viva, as well as developing personal and professional skills that can be transferred to your future employment. Workshops cover topics such as writing skills, reference management tools, statistics, preparing for conferences, delivering presentations, time and project management, and personal development.

IAD also offers online resources and planning tools to help get your research started, plus support for tutoring and demonstrating, and research public engagement and communication.

Careers Service
All postgraduate students can benefit from our Institute for Academic Development (IAD), which provides information, events and courses to develop the skills you will need throughout your studies and in the future. IAD events also offer the perfect opportunity to meet and network with other postgraduates from across the University.

Further information is available online: www.ed.ac.uk/iad/postgraduates

For taught postgraduates, IAD provides a popular study-related and transferable skills support programme. It is designed to help you settle into postgraduate life, succeed during your studies and move confidently to the next stage of your career. We offer on-campus and online workshops and one-to-one study skills consultations, plus online advice and learning materials.

Workshops and learning resources cover key topics tailored to different academic stages, including: pre-arrival sessions; getting started with your studies; critical reading, writing and thinking; managing your exams; and planning for and writing up your dissertation.

We sustain and continually develop links with employers from all industries and employment sectors, from the world's top recruiters to small enterprises based here in Edinburgh. Our employer team provides a programme of opportunities for you to meet employers on campus and virtually, and advertises a wide range of part-time and graduate jobs.

More information:
www.ed.ac.uk/careers/postgrad

Platform One
Platform One is an online meeting place where members of the University community, past and present, can gather. It aims to provide a supportive environment where students, alumni, staff and volunteers can share knowledge and experiences. Together, we form a single community that meets on Platform One. Join us and find out more about the people and possibilities.

More information:
www.ed.ac.uk/platform-one

Backing bright ideas
LAUNCH.ed is the University's award-winning programme for student entrepreneurs. Each year, LAUNCH.ed works with hundreds of students to assess their ideas and develop their business skills and helps many start their businesses. We have helped Edinburgh students and alumni launch almost 100 new businesses in the last three years, ranging from language tuition to robotics companies.

More information:
www.LAUNCH.ed.ac.uk

Learn to teach
We encourage all of our research students to carry out demonstrating and tutoring work for the School's undergraduate programmes. This work is strongly supported by training and coaching, to ensure you get the most out of the experience and can gain a new skillset from it.



Scotland has an exceptionally rich diversity of geology, and is home to two UNESCO-supported Geoparks.
www.europeangeoparks.org

Applications and fees

We have an online application process for all postgraduate programmes. It's a straightforward system with full instructions, including details of any supporting documentation you need to submit.

When applying, you will set up an account, which lets you save your application and continue at another time.

Full guidance on our application system is available at: www.ed.ac.uk/postgraduate/applying

General requirements

Our usual entrance requirement for postgraduate study is a UK 2:1 honours degree, or its international equivalent (www.ed.ac.uk/international/graduate-entry), in a subject related to your chosen programme. You will also need to meet the University's language requirements (see below).

References

For applications to taught programmes, the normal requirement is one reference, although an additional reference may be requested in individual cases. For applications to research programmes, two references are required. You should check online for exact requirements for your intended programme of study. For general guidance on references, visit: www.ed.ac.uk/postgraduate/references

Deadlines

Masters

Early application is recommended given the high demand for places and in instances where a visa is required. Should you wish to submit a late application, please contact us for guidance. If you are applying for funding, in most cases you will need an offer to study with us before you can make your funding application – and many of our scholarships have deadlines in the spring.

Please note that in most instances a deposit of £1,500 is required to secure your place on a taught masters programme.

PhD

There are no official deadlines for our PhD programmes and applications are welcome throughout the year. However, many of our funding opportunities have deadlines and you may need an offer to study with us before you can make your funding application.

English language requirements

Students whose first language is not English must show evidence of one of the qualifications below.

All MSc, MScR (except GeoSciences Individual Project – see below) and PgCert programmes, and PhD Human Geography & Environmental Studies

- IELTS Academic: total 7.0 (at least 6.0 in each module).
- TOEFL-iBT: total 100 (at least 20 in each module).
- PTE(A): total 67 (at least 56 in each of the Communicative Skills sections; the Enabling Skills sections are not considered).
- CAE and CPE: total 185 (at least 169 in each module).
- Trinity ISE: ISE III (with a pass in all four components).

All MPhil and PhD programmes (except PhD Human Geography & Environmental Studies – see above) and MScR GeoSciences Individual Project

- IELTS Academic: total 6.5 (at least 6.0 in each module).
- TOEFL-iBT: total 92 (at least 20 in each module).
- PTE(A): total 61 (at least 56 in each of the Communicative Skills sections).
- CAE and CPE: total 176 (at least 169 in each module).
- Trinity ISE: ISE II (with distinctions in all four components).

Please note:

- English language requirements can be affected by government policy so please ensure you visit our degree finder to check the latest requirements for your programme: www.ed.ac.uk/postgraduate/degrees
- Your English language certificate must be no more than three years old at the beginning of your programme, unless you are using an English language test such as IELTS in which case it must be no more than two years old.

- We also accept recent degree-level study that was taught and assessed in English in a majority English-speaking country (as defined by UK Visas & Immigration), or at a university in a non-majority English-speaking country which has specifically been approved by the University of Edinburgh's Admissions Qualifications Group. A list of approved universities is published online. The award date must be no more than three years prior to the start date of the programme.
- We do not require you to take an English language test before you apply.

Abbreviations: IELTS – International English Language Testing System; TOEFL-iBT – Test of English as a Foreign Language Internet-Based Test; PTE(A) – Pearson Test of English (Academic); CPE – Certificate of Proficiency in English; CAE – Certificate in Advanced English; Trinity ISE – Integrated Skills in English.

www.ed.ac.uk/english-requirements/pg

Tuition fees

The following table provides an overview of indicative fee levels for programmes commencing in 2019.

Please note:

- International students starting full-time taught programmes of study lasting more than one year will be charged a fixed annual fee.
- All other students on full-time and part-time programmes of study lasting more than one year should be aware that annual tuition fees are subject to revision and are typically increased by approximately five per cent per annum. This annual increase should be taken into account when you are applying for a programme.
- In addition to tuition fees, your programme may be subject to an application fee and additional costs/programme costs may apply. Please check the latest programme information online.

Asylum seeker tuition fee status and scholarship

Information for applicants seeking asylum from within the United Kingdom, who wish to commence a programme of study at the University in 2019, is available online. This includes our tuition fee rates and scholarship opportunities: www.ed.ac.uk/student-funding/asylum

Tuition fees for EU students

EU students enrolling in the 2019/20 academic year will be admitted as Scottish/EU fee status students. Taught masters students will be eligible for the same tuition support as Scottish domiciled students from the Student Awards Agency Scotland (SAAS).

For UK/EU students

	Annual fee
Taught programme 1-year FT	£13,000-£14,700
Taught programme PT	£6,500-£7,350
MSc by Research 1-year FT	£8,300
MSc by Research 2-years PT	£4,150
All other research programmes FT	£4,260*
All other research programmes PT	£2,130*

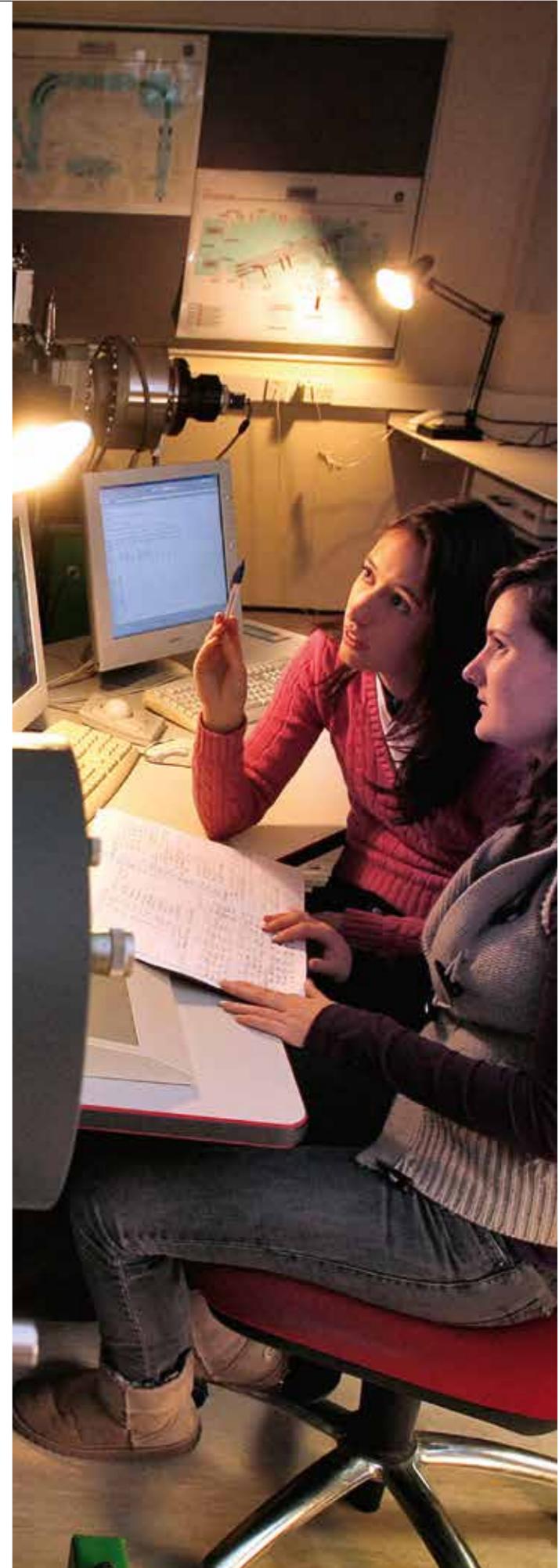
Online Learning

	Annual fee
MSc	£15,500
PgCert	£5,170

For international students

	Annual fee
Taught programme 1-year FT	£25,500-£27,500
MSc by Research 1-year FT	£26,600
All other research programmes FT	£22,200

* Figure shown is the 2018/19 fee level
All other fees quoted are indicative of 2019/20 fee levels. Because these figures are indicative, it is important you check online before you apply and check the up-to-date fee level that will apply to your specific programme: www.ed.ac.uk/student-funding/tuition-fees/postgraduate



Funding

A large number of scholarships, loans and other funding schemes are available for your postgraduate studies. It is only possible to show a small selection in print. To see the full range, please visit: www.ed.ac.uk/student-funding/postgraduate

Awards are offered by the School of GeoSciences, the College of Science & Engineering, the University of Edinburgh, the Scottish, UK and international governments and many funding bodies.

While securing funding is competitive, the School of GeoSciences makes every effort to find funding support for students with proven academic merit, enthusiasm to study with us and a good case for financial backing. Additionally, many students find their own funding from a variety of external sources.

Here we list a selection of potential sources of financial support for postgraduate students applying to the School of GeoSciences. This list was correct at the time of printing but please check the full and up to date range online (see above).

Tuition fee discounts

We offer a 10 per cent discount on postgraduate fees for all alumni who have graduated with an undergraduate degree from the University. We also offer a 10 per cent discount for international graduates who spent at least one semester at the University of Edinburgh as a visiting undergraduate: www.ed.ac.uk/student-funding/discounts

Key

- Taught masters programmes
- Masters by Research programmes
- Research programmes

Scholarships at the University of Edinburgh

• Beit Trust ●

Beit Trust and the University of Edinburgh Scholarships jointly fund postgraduate students from Malawi, Zambia and Zimbabwe to undertake a masters: www.beittrust.org.uk

• China Scholarships Council/University of Edinburgh Scholarships (China) ●

A number of scholarships for PhD study to candidates who are citizens and residents of China. Participating schools to be confirmed: www.ed.ac.uk/student-funding/china-council

• Edinburgh Global Masters Scholarships ●

A number of scholarships are available to international students for masters study: www.ed.ac.uk/student-funding/masters

• Edinburgh Global Research Scholarships ●

These scholarships are designed to attract high-quality international research students to the University: www.ed.ac.uk/student-funding/global-research

• Edinburgh Principal's Career Development Scholarships ●

A number of scholarships, open to UK, EU and international PhD students: www.ed.ac.uk/student-funding/development

• Enlightenment Scholarships ●

The University is currently developing a new style of PhD scholarship to attract the best PhD applicants from around the world. These scholarships will provide funding for up to four years. For the latest information, and for details on which Schools will be participating, please check: www.ed.ac.uk/student-funding/enlightenment

• Highly Skilled Workforce Scholarships ●

A number of scholarships are available to UK nationals permanently domiciled in Scotland, and to EU nationals domiciled either on mainland EU or in Scotland, who have been accepted on an eligible full- or part-time masters programme. The scholarships, which are funded by the Scottish Funding Council and subject to annual confirmation,

cover the UK/EU tuition fee. At the time of printing, we are awaiting confirmation of these scholarships from the Scottish Government: www.ed.ac.uk/student-funding/sfc-hsw

• Julius Nyerere Masters Scholarships (Tanzania) ●

One scholarship is available to citizens of Tanzania who are normally resident in Tanzania who are accepted on a full-time masters programme: www.ed.ac.uk/student-funding/nyerere

• MasterCard Foundation Scholars Programme (Africa) ●

A number of scholarships for applicants who are residents and citizens of a Sub-Saharan African country will be available for eligible masters programmes. The scholarships cover full tuition fees and expenses for accommodation and maintenance for African scholars with few educational opportunities: www.ed.ac.uk/student-funding/mastercardfdn

• School of GeoSciences Studentships ●

A number of part-funded UK/EU and international PhD studentships are offered annually: www.ed.ac.uk/geosciences/postgraduate/funding

Research council awards

Research councils offer awards to masters and PhD students in most of the Schools within the University of Edinburgh. All studentship applications from the research councils must be made through the University, through your School or College office. Awards can be made for both taught and research programmes.

Normally only those UK/EU students who have been resident in the UK for the preceding three years are eligible for a full award. For some awards, candidates who are EU nationals and are resident in the UK may be eligible for a fees-only award. The UK Government has confirmed that EU postgraduate research students commencing their studies in 2019/20 will retain their fee status and eligibility for research council support for the duration of their programme: www.ed.ac.uk/student-funding/research-councils

The University also offers a number of scholarships in partnership with the following overseas government agencies:

• Chile ●●●

National Commission for Scientific and Technological Research (CONICYT): www.conicyt.cl/

• Colombia ●

Administrative Department of Science, Technology and Innovation (Colciencias): www.colciencias.gov.co

• Ecuador ●●●

Secretaria Nacional de Educacion Superior, Ciencia y Tecnologia (SENECYT): www.educacionsuperior.gob.ec

• Iraq ●

Ministry of Higher Education and Scientific Research: www.iraqiculturalattachate.org.uk

• Mexico

National Council of Science and Technology of the United Mexican States (CONACYT): www.conacyt.mx

Banco de Mexico and the Banco de Mexico's FIDERH trust (FIDERH): www.fiderh.org.mx

Fundacion Mexicana para la Educacion, la Tecnologia y la Ciencia (FUNED): www.funedmx.org

• Pakistan ●

Higher Education Commission, Pakistan (HEC): www.hec.gov.pk

Loans available for study at the University of Edinburgh

The University of Edinburgh is a participating institution in the following loans programmes, meaning we certify your student status and can help with the application process.

• The Canada Student Loans Program ●●●

The University is eligible to certify Canadian student loan applications: www.ed.ac.uk/student-funding/canadian-loans

• Erasmus+ ●

The Erasmus+ Master Loan helps masters students with their living and tuition costs when studying in an Erasmus+ country other than where they live or where they took their first degree. For more information:

<https://erasmusplus.org.uk/master-loan>

Other sources of funding

The following are examples of the many scholarships and support schemes available to students from particular countries who meet certain eligibility criteria.

• Chevening Scholarships ●●●

A number of partial and full funding scholarships are available to one-year masters students: www.chevening.org

• Commonwealth Scholarships ●●●

Scholarships available to students who are resident in any Commonwealth country, other than the UK: www.dfid.gov.uk/cscuk

• Marshall Scholarships (USA) ●●●

Scholarships available to outstanding US students wishing to study at any UK university for at least two years: www.marshallscholarship.org

• Scotland's Saltire Scholarships ●●●

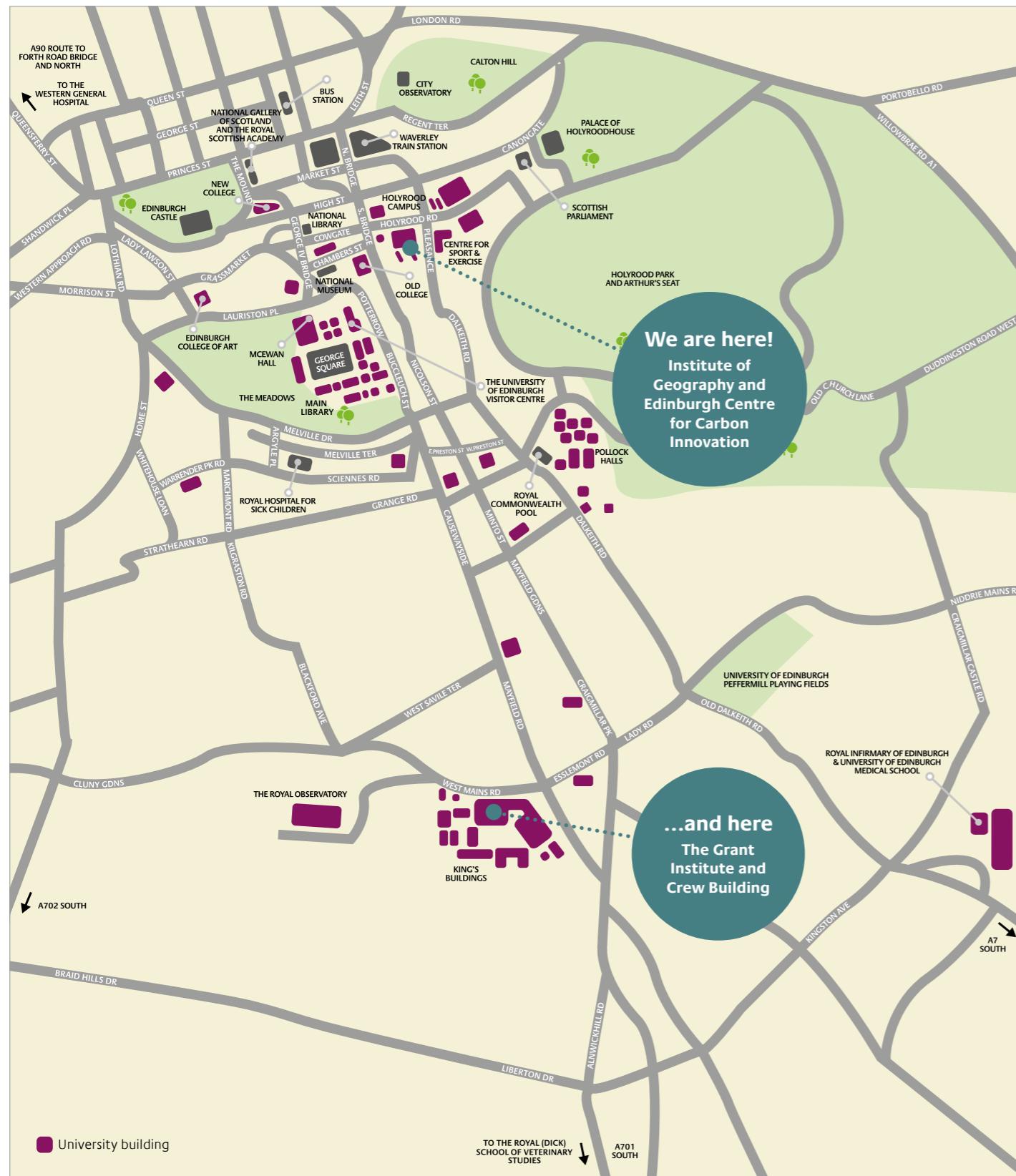
A number of scholarships open to students who are citizens permanently and ordinarily resident in Canada, China, India, Japan, Pakistan and the USA for one year of masters study: www.ed.ac.uk/student-funding/saltire

Funding for online learning

The University offers several scholarships specifically for online, part-time postgraduate programmes, including the Edinburgh Global Online Distance Learning Masters Scholarship, for which students can apply: www.ed.ac.uk/student-funding/e-learning/online-distance

Campus map

The School of GeoSciences is based in several buildings across two University campuses. The Head of School and the main offices are at King's Buildings, about two miles south of the city centre. The Institute of Geography and the Edinburgh Centre for Carbon Innovation are in the historic Old Town of Edinburgh.



Get in touch

Contact us

For more information about taught MSc programmes, contact the relevant programme secretaries:

For Energy, Society and Sustainability, Marine Systems & Policies; and Applied Geoscience (Geoenergy), contact:

Faten Adam

Tel +44 (0)131 651 4657
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For Environment, Culture & Society; Environmental Sustainability; Environment & Development; Global Environment Challenges (PgCert) and Human Geography, contact:

Paula Escobar

Tel +44 (0)131 650 2543
Email geos.postgrad@ed.ac.uk

For Carbon Management (including PgCert Climate Change Management and Carbon Innovation); Geographical Information Science; Geographical Information Science & Archaeology; Earth Observation & Geoinformation Management; and Energy, Society & Sustainability, contact:

Karolina Galera

Tel +44 (0)131 650 2572
Email geos.postgrad@ed.ac.uk

For all collaborative programmes with Scotland's Rural College (SRUC) (Ecological Economics, Environmental Protection & Management, Food Security, Soils & Sustainability, and Sustainable Plant Health), contact:

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For specific GeoSciences taught masters scholarship queries please contact:

Natasha Black

Tel +44 (0) 131 650 7542
Email marketing@geos.ed.ac.uk

For more information about research programmes (PhD, MSc by Research and MPhil), contact:

PGR Recruitment Secretary

Tel +44 (0)131 650 5422/5854
Email pgrsupport.geos@ed.ac.uk

Visit us

Our Postgraduate Open Day is your opportunity to come and meet current staff and students. Our next campus-based Open Day takes place on 14 November 2018. For more information, visit: www.ed.ac.uk/postgraduate-open-day

If you are unable to visit Edinburgh, contact info@geos.ed.ac.uk and we can arrange a video call with your prospective Programme Director or register your interest in a virtual Open Day.

Our visits to you

If you are unable to visit the University, we attend events throughout the year so you can meet and speak to us in person.

UK and Europe: www.ed.ac.uk/postgraduate/uk-eu-events

International: www.ed.ac.uk/international/our-visits-overseas

Chat online

We offer all postgraduate students monthly online information sessions. To find out more and see when the next session will be: www.ed.ac.uk/postgraduate/online-events

For international students, Edinburgh Global runs two online chat sessions each month. These are timed to give students in all timezones a chance to get involved. You can find out more and register online: www.ed.ac.uk/international/chat-to-us-online

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Illustration by:

Katy Wiedemann, MA Illustration

The front cover shows a globe from the School of GeoSciences' historical collections. Globes powerfully symbolise planet Earth – home to humankind and the object of our research and study.

Made in late 19th century Germany, in Gotha, by the leading cartographic firm of Justus Perthes, this globe was gifted to John George Bartholomew of the Scottish map-making firm and, from him, to George Goudie Chisholm, first lecturer in the department of geography at the University of Edinburgh.

#drawntoedinburgh

This publication is available online at www.ed.ac.uk/postgraduate and can be made available in alternative formats on request. Please contact communications.office@ed.ac.uk or call +44 (0)131 650 2252.

Printed on Galerie Satin FSC mix, a Forestry Stewardship Council certified paper stock. It was manufactured to ISO 14001 certified environmental management standards, using an elemental chlorine free process. The inks used for printing are vegetable-based and do not contain any harmful volatile organic chemicals.

We have made every effort to ensure the accuracy of the information in this prospectus before going to print. However please check online for the most up-to-date information: www.ed.ac.uk

On 23 June 2016 the UK electorate voted in a national referendum to leave the European Union. At the time of going to print, there was no immediate, material change known that would impact on applicants for 2019 entry. However we recommend that you check online for the latest information before you apply: www.ed.ac.uk/news/eu

The University's standard terms and conditions will form an essential part of any contract between the University of Edinburgh and any student offered a place here. Our full terms and conditions are available online: www.ed.ac.uk/student-recruitment/terms-conditions

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