

# MSc GeoEnergy

Postgraduate  
Opportunities 2018

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THE UNIVERSITY *of* EDINBURGH  
School of GeoSciences

## Using the subsurface for future energy provision

GeoEnergy encompasses the realm of energy technologies and sources that interact with the geological subsurface. These include the storage of natural gas, CO<sub>2</sub> or radioactive waste, geothermal energy production, traditional and unconventional oil and gas extraction. This MSc is aimed at students who wish to pursue a subsurface-related career in the future energy sector, as it transitions from fossil fuels to low carbon energy.

This MSc programme builds on the strength and reputation of the School of GeoSciences research groups focusing on subsurface injection: Carbon Capture and Storage (CCS), radioactive waste disposal, energy storage; and extraction: unconventional and conventional hydrocarbons, wet and dry geothermal heat, rare and noble gases. The MSc programme uses subsurface (geological) knowledge but is not directed towards a career in the hydrocarbon industry, providing a pathway into an environmentally responsible career, that still involves core geoscience skills.

We aim to educate a cohort of graduates that will engineer and oversee the coming decades of GeoEnergy dependence. It is widely acknowledged that despite a move towards renewable energy for electricity there will still be a reliance on fossil fuels and geothermal energy for decades to come, particularly in industrial and domestic heating. Much of this fossil fuel will come from non-traditional sources and the impacts on the environment of such processes will need to be regulated. Additionally, the legacy waste issues from nuclear energy and on-going CO<sub>2</sub> emissions from fossil fuel use in industrial processes will necessitate a well-educated workforce to safely deal with these by-products.

### Studying MSc GeoEnergy (2018 entry)

This MSc has seven compulsory courses, which make up 90 credits, with a further 20 credits of required courses dependent on your experience in GeoSciences.

### Compulsory courses

Future GeoEnergy Resources; Applied Hydrogeology & Near surface Geophysics; Hydrogeology 2; Environmental Geochemistry ; Project Design and Literature Analysis; Carbon Storage and Monitoring; Dissertation in Applied Geoscience (GeoEnergy)

### Additional Compulsory course for those with GeoScience background

Subsurface Reservoir Quality

### Additional Compulsory courses for those without a GeoScience background

Geology for Earth Resources; Hydrocarbons

### Recommended elective courses

Ore Mineralogy, Petrology & Geochemistry; Seismic Reflection Interpretation; Carbon Capture and Transport; Environmental Problems and Issues; Nuclear Waste Management: Principles, Policies & Practice

Please note all courses are offered subject to timetabling and availability and may not run every year

### Programme Delivery and Duration

This programme is delivered on-campus full time over 12 months or part-time over 24 or 36 months.

### Careers

We anticipate that graduates will be employable in the broad field of energy including generation, storage, management or within NGO's or energy regulators. They will be equipped for further education including PhD or other MSc; and teaching, as well as careers in energy-related project management and business. Graduates will also be trained in the geological storage of nuclear waste (Radwaste) and the environmental monitoring and tracing of fluids in the subsurface e.g. associated with geothermal energy provision.

### Entry requirements

A UK 2:1 honours degree, or its international equivalent, in the natural

or earth sciences or other relevant subject areas.

### 2018/19 Tuition fees will be in the region of

Home/EU - £10,800

Overseas/International -£23,700

Please note that fees typically rise around 5% each year. 2017 fees quoted.

### Scholarships

Students applying for this programme may be eligible to apply for funding. Details of current opportunities may be found on our website. Deadlines apply so early application is encouraged.

### English Language Requirements

IELTS 7.0 (with no score lower than 6.0 in each section)

TOEFL-iBT: Total 100 (with no score lower than 20 in each section). A degree from an English speaking university may be accepted in some circumstances.

### How to Apply

For more information and to apply for this programme online, please visit:

<https://www.ed.ac.uk/geosciences/postgraduate/taught-masters/msc-applied-geoscience-geoenergy>

### Contact us

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