

Geologist

Geologists study the origin, composition and structure of the earth. This could be to locate and help extract materials, to identify geological hazards or to assess ground conditions for development projects. Other terms used include engineering geologist, production geologist, geoscientist, geophysicist and hydrogeologist.

The Work

You could be:

- using seismic survey equipment to record reflections from underground layers and locate coal, oil, gas, gravel, fossils, crystals, sediments and useful minerals
- locating areas for storing dangerous material such as radioactive waste
- locating sources of geothermal energy
- locating and analysing underground and surface water movement, behaviour and quality, such as checking for pollution (hydrogeology)
- locating firm bedrock where roads, dams and tunnels can be built without risk of landslides
- supervising drilling teams
- studying the movement of plates in the earth's crust, to forecast earthquakes and volcanic eruptions
- taking samples from sites being investigated and testing them in a laboratory
- writing reports, drawing up geological maps, computer models and databases.

You would usually specialise in one industry or area of geology, such as environmental, hydrogeology or energy.

Pay

The figures below are only a guide. Actual pay rates may vary, depending on:

- where you work
- the size of company or organisation you work for
- the demand for the job.

Starting salaries for qualified geologists in the UK tend to be in the range £24,000 to £30,000 a year. With sufficient experience, this can rise up to £50,000 a year or more, and, depending on the specialism or industry, senior geologists can earn more than £75,000 a year.

Conditions

- Your normal office hours would be 9.00am to 5.00pm, but you would have to do a lot of fieldwork and these hours could be long and irregular.
- Some industries such as oil or mining may require shift work.
- You may have to travel a lot, staying away from home and spending periods abroad.
- The work can involve physical activity in conditions ranging from the very cold to the very hot.
- You might wear protective clothing such as boots, hard hat and gloves.
- You would also spend time working in an office or laboratory.

Getting In

- You need a degree (SCQF Levels 9-11) in one of the geosciences, such as geology, geophysics, petroleum geology or exploration geology.
- The universities of Aberdeen, Edinburgh and St Andrews offer degree courses that are accredited by the Geological Society. An accredited degree allows you to apply for Chartered Geologist Status one year earlier than those with an unaccredited degree.
- Entry requirements for these courses are 4-5 Highers including 2-3 maths or science subjects.
- A postgraduate qualification (SCQF Level 11) in a specialised geological subject such as hydrogeology or petroleum geology is increasingly required.
- You should be fit and healthy, as there can be a lot of active fieldwork, often in difficult conditions.
- You usually need good colour vision, to analyse rock samples and read geological maps.
- It is useful to have a foreign language if you want to work abroad.
- A driving licence is useful for travelling between sites.

Jobs are in mining, quarrying, engineering, the oil and gas industry, hydrogeology, universities, the British Geological Survey or other research institutes, or in conservation and museum work.

What Does It Take

You need to be:

- observant
- accurate, careful and methodical
- practical and resourceful, especially when doing fieldwork
- able to work to deadlines
- willing to travel and be away from home for periods of time
- adaptable, to take advantage of new developments
- able to work alone and as part of a team
- able to explain complex ideas and data in simpler terms.

You need to have:

- an enquiring mind
- maths skills to work with statistics and graphs
- good IT skills to analyse data, produce geological models and write reports
- a scientific and logical approach to problem solving
- good project management skills.

Training

- After gaining your initial qualifications, training is mainly on the job, supervised by an experienced colleague.
- You can attend short courses in specific topics such as technical report writing. The Geological Society lists relevant courses on its website.

- You may study part time for a postgraduate qualification, if you do not already have one. Most research and museum posts require a PhD or postgraduate qualification.
- You can become a Chartered Geologist or Chartered Scientist through the Geological Society while you are working. The Society also runs a Continuing Professional Development (CPD) scheme.

Getting On

- With experience, you may be able to move on to a senior or managerial job.
- You might become a university lecturer or researcher.
- You might set up your own business as a contractor or consultant.
- There can be good opportunities overseas for well qualified geologists.

More Information

Around a quarter of Geology graduates choose to do further study. Most choose to do vocational MScs such as Petroleum Engineering, Engineering Geology or Geochemistry while others go on to do PhDs.

The Subsurface Task Force have produced a useful guide for those interested considering studying geology and earth science, covering Higher through to Postgraduate level. [Energy Geoscience - Career Pathways](#)

Contacts

Geological Society

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SPE Aberdeen

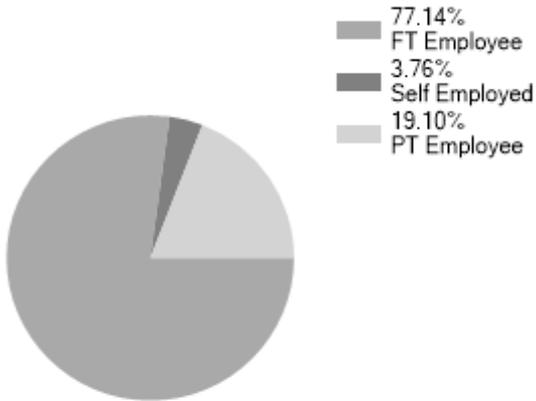
Tel: 01651 873 791

Email: info@spe-uk.org

Website: www.spe-aberdeen.org

Statistics

Employment Status UK %



Past Unemployment - Scotland

No Claimant statistics available for Scotland.

LMI data powered by [LMI for All](#)

Predicted Employment Statistics : Not available this career.