Geology MSci

This four-year programme offers an additional year on top of the Geology BSc, in which students extend their knowledge and understanding through advanced study and undertake an independent research project. The programme is fully accredited by the Geological Society of London.

Key information

Programme starts
September 2019

Location
London, Bloomsbury

Degree benefits

- Approximately three months of field classes in the UK and continental Europe and independent field mapping projects in Scotland, southern France and Spain, with financial support from the department.
- The programme is fully accredited by the Geological Society of London.
- World-leading research in mineral, ice and rock physics, and in geophysical hazards, and paleoenvironmental analysis is undertaken in the department and is used in the development of our modules.
- World-class facilities include hosting the UK’s only NASA Regional Planetary Image Facility, use of the UCL (formerly University of London) Observatory, and collaboration with the Natural History Museum.

Accreditation

This programme is accredited by the Geological Society. Undergraduate students may join the Geological Society as a Candidate Fellow and can become a Fellow of the Society upon graduation. A Fellow of the Society with relevant postgraduate experience in the practice of geology has the opportunity to apply for Chartered Geologist (CGeol) status.

Degree structure

In each year of your degree you will take a number of individual modules, normally valued at 15 or 30 credits, adding up to a total of 120 credits for the year. Modules are assessed in the academic year in which they are taken. The balance of compulsory and optional modules varies from programme to programme and year to year. A 30-credit module is considered equivalent to 15 credits in the European Credit Transfer System (ECTS).

Together with subject-specific skills, the Geology MSci also provides a strong intellectual and practical platform for those who wish to pursue non-geological careers as it integrates a wide range of ideas from many different scientific disciplines, including chemistry, physics and biology, and provides training in the application of scientific methods and knowledge to complex problems.

The programme includes: studies of the nature of rocks and minerals, their mode of origin and environment of formation; the study of past life and palaeoenvironments; the physics and chemistry of the Earth; major Earth processes such as plate tectonics and mountain building (tectonics).

The first and second years develop core skills and knowledge in the subject. The third year provides opportunities for specialisation and diversification, with an emphasis on individual initiative and problem-based learning. During fieldwork students learn to apply and develop independent and team skills and problem-solving abilities which complement and build upon lectures and laboratory-based coursework, whilst being exposed to the true complexity of natural geological problems.

The first three years of the MSci programmes are identical to the BSc programmes. However, the additional fourth year of the MSci allows for an individual research project and advanced optional modules, providing extra depth and breadth of knowledge.

YEAR ONE

Core or compulsory module(s)

- Dynamic Earth
- Earth Materials
- From Petrology to Petrogenesis (including Cornwall fieldwork)
- Geochemistry
- History of Life
- Surface Processes (including Dorset/Devon fieldwork)
- The Earth

Optional modules

You will select 0.5 credits from the following:

- Foundations of Physical Geoscience
- Mathematics
- Science Communication and Public Engagement
- Revealing Science

YEAR TWO

Core or compulsory module(s)

- Global Geophysics
- Igneous Petrology
- Isotope Geology
- Maps, Images and Structures (including Italy fieldwork)
- Metamorphism
- Structural Geology and Tectonics
- Surface Processes and Structures (including Pyrenees fieldwork)
- Vertebrate Palaeontology and Evolution

Optional modules

All second year modules are compulsory.
YEAR THREE

Core or compulsory module(s)

- Crustal Dynamics, Mountain Building and Basin Evolution (including Betics fieldwork)
- Earth Resources and Sustainability
- Geodynamics and Global Tectonics
- Geological or Environmental Mapping Project

Optional modules

- You may select up to 1.0 credit from the following options:
  - Advanced Geochemistry
  - Biodiversity and Macroevolutionary Patterns
  - Geosciences Report
  - Groundwater Science
  - Marine Geology
  - Ocean Physics and Climate Change
  - Seismology

FINAL YEAR

Core or compulsory module(s)

- Earth and Planetary System Science
- Independent MSci Project

Optional modules

- You may select up to 2.0 credits from the following options:
  - Deep Earth and Planetary Modelling
  - Earth and Planetary Materials
  - Earthquake Seismology and Earthquake Hazards
  - Melting and Volcanism
  - Natural and Anthropogenic Hazards and Vulnerability
  - Palaeoceanography
  - Palaeoclimatology
  - Physical Volcanology and Volcanic Hazard
  - Tectonic Geomorphology
  - You may take up to 1.0 credit outside the department.

Your learning

We use a mixture of lectures, practical classes, field courses, directed reading, problem-orientated learning, private study and tutorials to enable you to gain the theoretical knowledge and practical skills demanded by the programme, as well as to develop key transferable skills such as critical analysis, report writing, team working and organisational skills.

Assessment

You will be assessed by a combination of written examinations, practical examinations, coursework, independent project reports and sometimes an oral examination.

Your career

The programme provides a broad education in geology, integrating field and laboratory skills with theoretical studies. The strong emphasis on fieldwork provides a unique opportunity to develop independent and team skills, problem-solving abilities and specific skills such as rock identification, fabric recognition, map-making and the geometrical solving of complex three-dimensional structures.

All our students are encouraged and helped towards making informed career choices. We have excellent relationships with many employers in diverse aspects of the Earth and planetary sciences, and students are actively guided towards achieving their potential at UCL in preparation for their future careers.

First destinations of recent graduates (2013-2015) of this programme at UCL include:

- Full-time student, MSc in Environmental Systems Engineering at UCL
- Operations Management Graduate, Tarmac Trading Ltd
- Junior Environmental Consultant, Digby Wells Environmental
- Full-time student, PhD in Geophysics, UCL

Your application

Application for admission should be made through UCAS (the Universities and Colleges Admissions Service). Applicants currently at school or college will be provided with advice on the process; however, applicants who have left school or who are based outside the United Kingdom may obtain information directly from UCAS.

We will assess your application on the basis of your performance, or predicted performance academically, but we will also be looking for an indication of how your interest in natural and Earth sciences has developed, what aspects particularly appeal to you, and whether you have undertaken any research or reading to find out about the subject matter you wish to study.

We normally reach a decision on making an offer on the basis of the application alone. If you are resident in the UK and have been made an offer you will be invited to a Post Offer Open Day. This visit will include introductory talks on Earth sciences and our degree programmes, a tour of the department and UCL and a question and answer session.
Entry requirements

A LEVELS
Standard Offer: AAB. Two sciences preferred.
Contextual Offer: BBB. Two sciences preferred.

GCSE
English Language and Mathematics at grade C or 5. For UK-based students, a grade C or 5 or equivalent in a foreign language (other than Ancient Greek, Biblical Hebrew or Latin) is required. UCL provides opportunities to meet the foreign language requirement following enrolment, further details at: www.ucl.ac.uk/ug-reqs

IB DIPLOMA
Standard Offer: 36. A score of 17 points in three higher level subjects to preferably include two sciences, with no score lower than 5.
Contextual Offer: 32. A score of 15 points in three higher level subjects to preferably include two sciences, with no score lower than 5.

CONTEXTUAL OFFERS – ACCESS UCL SCHEME
As part of our commitment to increasing participation from underrepresented groups, students may be eligible for a contextual offer as part of the Access UCL scheme. For more information see www.ucl.ac.uk/prospectus

OTHER QUALIFICATIONS
UCL considers a wide range of UK and international qualifications for entry into its undergraduate programmes. Full details are given at: www.ucl.ac.uk/otherquals

UNDERGRADUATE PREPARATORY CERTIFICATES (International foundation courses)
UCL Undergraduate Preparatory Certificates (UPCs) are intensive one-year foundation courses for international students of high academic potential who are aiming to gain access to undergraduate degree programmes at UCL and other top UK universities.

Typical UPC students will be high achievers in a 12-year school system which does not meet the standard required for direct entry to UCL.

For more information see: www.ucl.ac.uk/upc.

TUITION FEES
The fees indicated are for undergraduate entry in the 2018/19 academic year. The UK/EU fees shown are for the first year of the programme at UCL only. Fees for future years may be subject to an inflationary increase. The Overseas fees shown are the fees that will be charged to 2018/19 entrants for each year of study on the programme, unless otherwise indicated below.

// UK & EU: £9,250 (2018/19)
// Overseas: £25,960 (2018/19)

Overseas fees for the 2019/20 academic year are expected to be available in July 2018. Undergraduate UK/EU fees are capped by the UK Government and are expected to be available in October 2018. Full details of UCL’s tuition fees, tuition fee policy and potential increases to fees can be found on the UCL Students website.

Additional costs
Students will be required to pay for transportation to overseas field trips and food. (The department covers accommodation and transport costs in the UK.)

FUNDING
Various funding options are available, including student loans, scholarships and bursaries. UK students whose household income falls below a certain level may also be eligible for a non-repayable bursary or for certain scholarships. Please see the Fees and funding pages for more details.

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EU referendum
For up-to-date information relating to specific key questions following the UK’s decision to leave the EU, please refer to: www.ucl.ac.uk/ucl-and-europe

Disclaimer
This information is for guidance only. It should not be construed as advice nor relied upon and does not form part of any contract. For more information on UCL’s degree programmes please see the UCL Undergraduate Prospectus at www.ucl.ac.uk/prospectus