Environmental Geoscience MSci

This four-year programme provides an additional year on top of the Environmental Geoscience 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

- Benefit from up to three months of field classes in the UK and continental Europe, and an independent field mapping project, with financial support from the department.
- The programme is fully accredited by the Geological Society of London.
- World-leading research in geophysical hazards, mineral, ice and rock physics and palaeoenvironmental analysis is undertaken in the department and is used in the development of our degrees.
- World-class facilities include hosting the UK’s only NASA Regional Planetary Image Facility, use of the UCL 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).

The programme offers an integrated study of the Earth, encompassing the evolution of the planet and its internal workings, the development of its biosphere and atmosphere, and its surface processes, emphasising natural and man-induced development of the terrestrial environment.

You will gain a scientific training which allows an examination of environmental issues related to the Earth sciences, such as those concerned with natural resources, their use to society, the disposal of wastes and the understanding and minimisation of geohazards.

The first and second years provide 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. The strong emphasis on fieldwork provides a unique opportunity to develop independent and team skills, and problem-solving abilities.

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

YEAR ONE

Core or compulsory module(s)

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

Optional modules

All first year modules are compulsory.

YEAR TWO

Core or compulsory module(s)

- Isotope Geology
- Maps, Images and Structures (including Italy fieldwork)
- Structural Geology and Tectonics
- Surface Processes and Structures (including Pyrenees fieldwork)

Optional modules

You will select 2.0 credits of optional modules from the following:
- Ecological Patterns and Processes
- Environmental Remote Sensing
- Foundations of Physical Geoscience
- Geomorphology
- Global Geophysics
- Hydroclimatology
- Mathematics
- Reconstructing Past Environments
- Vertebrate Palaeontology and Evolution
YEAR THREE
Core or compulsory module(s)
- Geological and Environmental Mapping Project
- Groundwater Science

Optional modules
- You will select 2.5 credits from the following options:
  - Advanced Geochemistry
  - Biodiversity and Macroevolutionary Patterns
  - Crustal Dynamics, Mountain Building and Basin Evolution
  - Earth Resources and Sustainability
  - Field Methods in Active Tectonics (including Abruzzo-Vesuvius fieldwork)
  - Geosciences Report
  - Global Environmental Change
  - Marine Geology

FINAL YEAR
Core or compulsory module(s)
- Earth and Planetary System Science (including fieldwork in Germany)
- Independent MSci Project

Optional modules
- You will select 2.0 credits from the following options:
  - Earth and Planetary Materials
  - Earthquake Seismology and Earthquake Hazards
  - Natural and Anthropogenic Hazards and Vulnerability
  - Palaeoceanography
  - Palaeoclimatology
  - Physical Volcanology and Volcanic Hazard
  - Tectonic Geomorphology
  - Biological Indicators of Environmental Change
  - Non-Biological Indicators of Environmental Change
- 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
You will develop a number of skills, including the ability to gather and evaluate data, assess geo-environmental issues from a scientific standpoint, prepare written reports, lead discussion groups and use computational methods. Fieldwork provides a natural laboratory where you can develop skills such as rock identification, fabric recognition and map-making.

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.


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 UCL 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 2019/20 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 2019/20 entrants for each year of study on the programme, unless otherwise indicated below.

// UK & EU: £9,250 (2019/20)
// Overseas: £26,740 (2019/20)

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