ENVIRONMENTAL GEOSCIENCE
MSci /
UCAS CODE: F645
2018 ENTRY

www.ucl.ac.uk/prospectus/earthsci
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 2018

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.

Research Excellence Framework (REF) 2014

The Research Excellence Framework, or REF, is the system for assessing the quality of research in UK higher education institutions. The 2014 REF was carried out by the UK's higher education funding bodies, and the results used to allocate research funding from 2015/16.

// 92% rated 4* ('world-leading') or 3* ('internationally excellent')

Learn more about the scope of UCL's research, and browse case studies, on our Research Impact website.

Accreditation

This programme is accredited by The Geological Society. Undergraduate students may join The Geology 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 0.5 or 1.0 credits, adding up to a total of 4.0 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 1.0 credit 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

- You will select 2.0 credits of optional modules from the following:
  - Ecological Patterns and Processes
  - Environmental Remote Sensing
  - Geomorphology
  - Global Geophysics
  - Hydroclimatology
  - Mathematics
  - Reconstructing Past Environments
  - Vertebrate Palaeontology and Evolution

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
  - Geomorphology
  - Global Geophysics
  - Hydroclimatology
  - Mathematics
  - Reconstructing Past Environments
  - Vertebrate Palaeontology and Evolution
Data taken from the 'Destinations of Leavers from Higher Education' survey undertaken by HESA looking at the destinations of UK and EU students in the 2013-2015 graduating cohorts six months after graduation.

**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

**YEAR THREE**

**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.


- Chief Operating Office Assistant, Sinopec Group
- Environmental Consultant, Environ
- Full-time student, MSc in Palaeobiology at the University of Bristol
- Innovations Analyst, The Carbon Trust

**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 an applicant 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
Grades
AAA-ABB

Subjects
Two sciences preferred.

GCSE
English Language and Mathematics at grade C. For UK-based students, a grade C 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
Points
34-36 overall.

Subjects
A score of 16-18 points in three higher level subjects, preferably to include two sciences, with no score lower than 5.

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)
The 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 2017/18 academic year and are for the first year of the programme at UCL only. Fees for 2018 entry will appear here as soon as they are available.

// UK & EU: £9,250 (2017/18 - see below)
// Overseas: £23,710 (2017/18)

The UK/EU fee quoted above may be subject to increase for the 2018/19 academic year and for each year of study thereafter and UCL reserves the right to increase its fees in line with UK government policy (including on an annual basis for each year of study during a programme). Fees for overseas students may be subject to an annual increase in subsequent years of study by up to 5%.

Please see the full details of UCL’s fees and possible changes on the UCL Current 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.

CONTACT
Dr Pieter Vermeesch
Email: earthsci@ucl.ac.uk
Telephone: +44 (0)20 7679 2428
Department: Earth Sciences

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/eu-referendum

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