Our programmes

We offer a choice of two degree courses; one in Earth and Planetary Science and one in Environmental Science.

All of our students take the same modules in a common First Year. This gives you time to explore the degree course and pathway that interests you most.

Within each degree course, there are several different pathways through the subject. You will take core and a choice of optional units directly relevant to your choice of pathway.

Both degrees can be extended to four years to give you significant research or vocational experiences that will make you more attractive to future employers in both academia and industry.

You may switch (grades permitting) between the three and four year variants of our degrees after starting your degree.

You will graduate with a degree in either Earth and Planetary Science or in Environmental Science, with your chosen pathway named in brackets after this title e.g., Earth and Planetary Science (Geology with Physical Geography).
Our programmes

Environmental Science

BSc Environmental Science [3 years]
MEnvSci Environmental Science [4 years]
MEnvSci Environmental Science with Industrial Experience [4 years]
MEnvSci Environmental Science with International Study [4 years]
MEnvSci Environmental Science with a Research Placement [4 years]

Earth and Planetary Science

BSc Earth and Planetary Sciences [3 years]
MEarthSci Earth and Planetary Sciences [4 years]
MEarthSci Earth and Planetary Sciences with Industrial Experience [4 years]
MEarthSci Earth and Planetary Sciences with International Study [4 years]
MEarthSci Earth and Planetary Sciences with a Research Placement [4 years]

The Common First Year

All new undergraduates in the Department take the same first year modules. These span the breadth of the natural sciences and allow you to change between our two degree courses up until the end of your first year. At the end of the first year, you will select your Pathway. You can read more about the content of the first year through our blog post ‘Meet your lecturers’ and by following the links to module descriptions below. The first year modules are:

Understanding the Earth

The Natural Scientist’s Toolkit

Practical and Professional Skills Development
Earth and Planetary Science Pathways

Geology / Energy and Resources, p.5
Geochemistry, p. 6
Planetary Science, p. 7
Geology with Physical Geography, p. 8
Palaeobiology, p. 9

Environmental Science Pathways

Pollution and Environmental Processes, p. 10
Atmospheric and Climate Science, p. 11
Ecology, Evolution and Conservation Biology, p. 12

MEarthSci programme structure, p. 13
MEnvSci programme structure, p. 14

A note on modules

• Some units subject to prerequisites
• The availability of options is subject to timetabling
• Options are subject to change
• Field course locations in this brochure are the places we currently go– these change from time to time, but will go to equally fantastic locations!

University College for Interdisciplinary Learning (UCIL)

Students have the opportunity to choose up to 20 credits from the UCIL portfolio in place of optional units during their course. UCIL offers rigorous, credit-bearing units that take students beyond their disciplinary boundaries, introducing them to new ways of thinking around key questions facing the 21st century world.
### Year 2 (all core)

- EART29200  Professional Development and Project Preparation
- EART22200  Igneous Minerals and Processes
- EART26000  Energy and Resources
- EART24200  Metamorphic Minerals and Processes
- EART24001  British Stratigraphy and Geological Maps
- EART26201  Principles of Geochemistry
- EART27201  Sedimentary Rocks and Fossils
- EART28102  Field Course: Introduction to Geological Mapping
- EART23202  Interpreting the Stratigraphic Record: From Surface to Subsurface
- EART25102  Advanced Geological Field Techniques
- EART28202  Structural Geology
- EART29102  Geospatial Techniques

### Year 3

- EART35000†  Independent Project in Energy and Resources (30 credits)*
- EART37000  Independent Project in Geological Field Mapping (40 credits)*
- EART32301  Tectonics in Earth’s Oceans and Continents
- EART31302  Sedimentary Basins and the Source to Sink System
- EART39302  Field Course (Italy)

Options (5 or 6 of the following depending on whether the project is 40 or 30 credits)

- EART33001  Analytical Techniques in Earth and Environmental Sciences
- EART35201  Quantitative Sedimentology: An Experimental Perspective
- EART34102†  Geoenergy
- EART34201  Chemical Evolution of the Earth’s Interior
- EART35102†  Hydrogeology and Geomechanics
- EART33302†  Chemical Fluid-Rock Interactions
- EART34001  Dinosaur Palaeobiology
- EART34302†  Volcanology
- EART36101†  Geophysical Techniques
- EART37002†  Diagenesis of Sedimentary Systems
- EART38202†  Resource Projects: Life Cycles, Risk Analysis, Decision Making and Case Studies

10 credits  One EART or UCIL unit

* Either/Or
† Taking EART35000, EART38202 and at least 4 of the 5 remaining highlighted options is needed for “Earth & Planetary Sciences (Energy and Resources)” pathway
Year 2

EART29200 Professional Development and Project Preparation
EART22200 Igneous Minerals and Processes
EART24200 Metamorphic Minerals and Processes
EART26201 Principles of Geochemistry
EART27001 Environmental Chemistry I: Water-Solid-Air Interactions
EART27201 Sedimentary Rocks and Fossils
EART28102 Field Course: Introduction to Geological Mapping
EART28002 Environmental Chemistry 2: Biogeochemical Cycles
EART28202 Structural Geology

Options (3 of the following; one in Semester 1, two in Semester 2):

EART26000 Energy and Resources
EART22001 Environmental Modelling
EART23001 Exploring the Solar System
EART23202 Interpreting the Stratigraphic Record: From Surface to Subsurface
EART25202 Meteorites and Planetary Materials
EART29002 Environmental Enterprise
EART2502 Advanced Geological Field Techniques* 
EART2702 Field Course: Environmental Science*

Year 3

EART31000 Communicating Science
EART36000 Independent Project in Geochemistry
EART33001 Analytical Techniques in Earth and Environmental Sciences
EART35002 Field Course: Integration of Environmental Investigations, Tenerife*
EART39002 Field Course (Italy)*

Options (6 of the following)

EART31101 Environmental Challenges: Arctic Climate Warming
EART34102 Geoenergy
EART34201 Chemical Evolution of the Earth’s Interior
EART35001 Atmospheric Composition
EART35202† Planetary Evolution
EART39001 Environmental Challenges: Air Pollution in Major Cities
EART3202 Environmental Challenges: Arsenic Contamination in Asia
EART32201 Origin of the Solar System
EART33102 Environmental Challenges: Waste Disposal
EART33302 Chemical Fluid-Rock Interactions
EART34302 Volcanology
EART37002 Diagenesis of Sedimentary Systems

10 credits One EART or UCIL unit

* Either/Or
† If chosen, students should also choose EART32201 Origin of the Solar System
Year 2
EART2200  Professional Development and Project Preparation
EART22200  Igneous Minerals and Processes
EART24200  Metamorphic Minerals and Processes
EART23101  Exploring the Solar System
EART26201  Principles of Geochemistry
EART28102  Field Course: Introduction to Geological Mapping
EART25202  Meteorites and Planetary Materials
EART29102  Geospatial Techniques

Options (4 of the following; one or two options in Semester 1, two or three options in Semester 2):
EART22001  Environmental Modelling
EART23001  Atmospheric Physics and Weather
EART24001  British Stratigraphy and Geological Maps
EART27201  Sedimentary Rocks and Fossils
PHYS10191  Introduction to Astrophysics
EART23202  Interpreting the Stratigraphic Record: From Surface to Subsurface
EART25102  Advanced Geological Field Techniques*
EART28002  Environmental Chemistry 2: Biogeochemical Cycles
EART28202  Structural Geology
10 credits  One EART or UCIL unit

*If chosen, students should also choose EART27201 Sedimentary Rocks & Fossils and EART28202 Structural Geology

Year 3
EART30000  Communicating Science
EART3100  Independent Project in Planetary Science
EART35202  Planetary Evolution
EART32201  Origin of the Solar System
EART36302  Planetary Field Course: Ries Impact Crater, Germany

Options (5 of the following) Any EART unit given prerequisites and timetabling, examples include but are not limited to:
EART33001  Analytical Techniques in Earth and Environmental Sciences
EART32501  Tectonics in Earth’s Oceans and Continents
EART32201  Quantitative Sedimentology: An Experimental Perspective
EART34102  Geoenergy
EART34201  Chemical Evolution of the Earth’s Interior
EART35102  Hydrogeology and Geomechanics
EART37202  Remote Sensing of Atmospheres
EART33302  Sedimentary Basins and the Source to Sink System
EART34302  Volcanology
EART36101  Geophysical Techniques
EART33302  Chemical Fluid-Rock Interactions
10 credits  One EART or UCIL unit
Year 2

EART29200  Professional Development and Project Preparation
EART27201  Sedimentary Rocks and Fossils
GEOG20072  Research Design and Overseas Field course

Options (4 of following; at least two in Semester 1):
EART22200  Igneous Minerals and Processes
EART24200  Metamorphic Minerals and Processes
EART22101  Evolution and Palaeobiology
EART24001  British Stratigraphy and Geological Maps
EART27001  Environmental Chemistry I: Water-Solid-Air Interactions
EART23202  Interpreting the Stratigraphic Record: From Surface to Subsurface
EART28202  Structural Geology

Options (2 of following; one option in each semester)
GEOG21431  Quaternary Climates and Landscapes
GEOG20771  Biogeography
GEOG20402  Hydrology and Catchment Systems
GEOG20502  Spatial Thinking with GIS: Constructing and Exploring Virtual Worlds
GEOG21512  Geomorphology

Year 3

EART38000  Independent Project in Geology with Physical Geography

Options (2 or 3 of the following):
GEOG31041  Green Planet: Plant Ecology and Global Change
GEOG30231  Peatlands
GEOG30132  Mediterranean Quaternary Landscapes
GEOG30222  Our Frozen Planet
GEOG32012  Interpreting the Stratigraphic Record: From Surface to Subsurface
GEOG32022  Structural Geology

Options (5 or 5 of the following):
EART31101  Environmental Challenges: Arctic Climate Warming
EART32301  Tectonics in Earth’s Oceans and Continents
EART33201  Quantitative Sedimentology: An Experimental Perspective
EART34201  Chemical Evolution of the Earth’s Interior
EART31502  Sedimentary Basins and the Source to Sink System
EART32102  Environmental Challenges: Arsenic Contamination in Asia
EART33102  Environmental Challenges: Waste Disposal
EART34302  Volcanology
EART36101  Geophysical Techniques
EART37002  Diagenesis of Sedimentary Systems
EART35302  Field Course: Integration of Environmental Investigations, Tenerife*
EART38302  Field Course: Vertebrate Palaeontology, Isle of Wight*
EART39302  Field Course (Italy)*

20 credits Two EART or UCIL unit

* Only one field course
Year 2

EART29200  Professional Development and Project Preparation
EART22101  Evolution and Palaeobiology
EART25001  Ecology and Conservation
EART27201  Sedimentary Rocks and Fossils
EART28102  Field Course: Introduction to Geological Mapping
BIOL21221  Animal Diversity
EART23202  Interpreting the Stratigraphic Record: From Surface to Subsurface

Options (5 of the following: one in Semester 1, four in Semester 2):
EART22200  Igneous Minerals and Processes
EART24001  British Stratigraphy and Geological Maps
EART26201  Principles of Geochemistry
EART21102  Environmental Microbiology
EART28002  Environmental Chemistry 2: Biogeochemical Cycles
EART28202  Structural Geology
EART29102  Geospatial Techniques
BIOL21172  Principles of Developmental Biology
10 credits  Any EART, BIOL or UCIL unit if times do not clash (including those above, max 2 non-EART)

Year 3

EART31000  Communicating Science
EART39000  Independent Project in Palaeobiology
EART35001  Analytical Techniques in Earth and Environmental Sciences
EART36202  Primate Evolution and Human Origins
EART34001  Dinosaur Palaeobiology
EART38302  Field Course: Vertebrate Palaeontology, Isle of Wight

Options (4 of the following, max 3 non-EART units):
EART32001  Advanced Topics in Ecology and Evolution
BIOL31511  Biotic Interactions
BIOL31541  Living with Climate Change
BIOL31551  Human Impacts on the Biosphere
EART31302  Sedimentary Basins and the Source to Sink System
EART37002  Diagenesis of Sedimentary Systems
EART34302  Volcanology
EART36002  Climate and Energy: Past Present & Future
BIOL31482  Conservation Biology
BIOL31392  Evolution of Genes, Genomes, and Systems
10 credits  One EART or UCIL unit
Year 2

- **EART29200**  Professional Development and Project Preparation
- **EART22001**  Environmental Modelling
- **EART23001**  Atmospheric Physics and weather
- **EART25001**  Ecology and Conservation
- **EART27001**  Environmental Chemistry 1: Water-Solid-Air Interactions
- **EART2102**  Environmental Microbiology
- **EART28002**  Environmental Chemistry 2: Biogeochemical Cycles
- **EART29002**  Environmental Enterprise
- **EART29102**  Geospatial Techniques
- **EART27102**  Field Course: Environmental Science

Options (2 of the following; one option in each semester):

- **EART26000**  Energy and Resources
- **EART22101**  Evolution and Palaeobiology
- **EART27201**  Sedimentary Rocks and Fossils
- **EART21202**  Global Climate Change
- **BIOL21202**  Plants for the Future
- **EART23202**  Interpreting the Stratigraphic Record: From Surface to Subsurface*

10 credits  One UCIL unit

*If chosen, students should also choose EART27201 Sedimentary Rocks and Fossils.

Year 3

- **EART34000**  Pollution or Environmental Processes Research Project
- **EART31000**  Communicating Science
- **EART39001**  Environmental Challenges: Air Pollution in Major Cities
- **EART31101**  Environmental Challenges: Arctic Climate Warming
- **EART33102**  Environmental Challenges: Waste Disposal
- **EART32102**  Environmental Challenges: Arsenic Contamination in Asia
- **EART35302**  Field Course: Integration of Environmental Investigations, Tenerife

Options (3 of the following; max 1 option in semester 2):

- **EART38202**  Resource Projects: Life Cycles, Risk Analysis, Decision Making and Case Studies
- **EART35001**  Analytical Techniques in Earth and Environmental Sciences
- **EART37202**  Remote Sensing of Atmospheres
- **EART31201**  Meteorology and Forecasting
- **EART35001**  Atmospheric Composition
- **EART34102**  Geoenergy
- **EART36002**  Climate and Energy: Past, Present and Future
- **BIOL31551**  Human Impacts on the Biosphere
- **BIOL31541**  Living with Climate Change

10 credits  One UCIL unit
Year 2
EART29200 Professional Development and Project Preparation
EART22001 Environmental Modelling
EART23001 Atmospheric Physics and weather
EART27001 Environmental Chemistry 1: Water-Solid-Air Interactions
EART27102 Field Course: Environmental Science
EART28002 Environmental Chemistry 2: Biogeochemical Cycles
EART29102 Geospatial Techniques
EART29002 Environmental Enterprise
EART21202 Global Climate Change

Options (3 of the following; two in semester 1, one in semester 2):
EART22101 Evolution and Palaeobiology
EART23101 Exploring the Solar System
EART25001 Ecology and Conservation
EART27201 Sedimentary Rocks and Fossils
EART21102 Environmental Microbiology
EART28202 Structural Geology
BIOL21202 Plants for the Future
EART23202 Interpreting the Stratigraphic Record: From Surface to Subsurface*
10 credits One UCIL unit

*If chosen, students should also choose EART27201 Sedimentary Rocks and Fossils.

Year 3
EART3000 Communicating Science
EART35302 Field Course: Integration of Environmental Investigations, Tenerife
EART32000 Atmospheric Science Research Project
EART37202 Remote sensing of Atmospheres
EART35001 Atmospheric Composition
EART36002 Climate and Energy: Past, Present and Future
EART31201 Meteorology and Atmospheric Physics

Options (3 of the following; max 1 option in semester 2):
EART38202 Resource Projects: Life Cycles, Risk Analysis, Decision Making and Case Studies
EART35001 Analytical Techniques in Earth and Environmental Sciences
EART34102 Geoenvironmental Science
EART39001 Environmental Challenges: Air Pollution in Major Cities
EART31101 Environmental Challenges: Arctic Climate Warming
EART35102 Environmental Challenges: Waste Disposal
EART32102 Environmental Challenges: Arsenic Contamination in Asia
BIOL31551 Human Impacts on the Biosphere
BIOL31541 Living with Climate Change
EART39102 Meteorology and Atmospheric Physics**
10 credits One UCIL unit

** With suitable pre-requisites (by special discussion)
Year 2

EART29200 Professional Development and Project Preparation
EART22001 Environmental Modelling
EART22101 Evolution and Paleobiology
EART25001 Ecology and Conservation
EART21102 Environmental Microbiology
EART27102 Field Course: Environmental Science
EART29002 Environmental Enterprise
BIOL20872 Urban Biodiversity and conservation*
BIOL21422 Alpine Biodiversity and forest ecology*

* Only one of these field courses; BIOL21422 carries a cost implication and allocation of places is dependent on overall year 1 results

Options (4 of the following; 2 in each semester; max 2 non-EART units):
EART23001 Atmospheric Physics and weather
EART27001 Environmental Chemistry 1: Water-Solid-Air Interactions
EART27201 Sedimentary Rocks and Fossils
BIOL21221 Animal Diversity
BIOL21202 Plants for the future
BIOL21281 Animal Physiology
EART29102 Geospatial Techniques
EART28002 Environmental Chemistry 2: Biogeochemical Cycles
BIOL21172 Principles of Development Biology
BIOL21432 Animal behaviour
EART23202 Interpreting the Stratigraphic Record: From Surface to Subsurface*
10 credits  One UCIL unit

*If taken, students must also choose EART27201 Sedimentary Rocks and Fossils.

Year 3

EART31000 Communicating Science
EART33002 Field Course: Integration of Environmental Investigations, Tenerife
EART32001 Advanced Topics in Ecology and Evolution
BIOL31482 Conservation Biology
EART33000 Ecology, evolution or conservation research project

Options (5 of the following; max 2 options in semester 2; Max 2 non-EART units):
EART33001 Analytical Techniques in Earth and Environmental Sciences
BIOL31551 Human Impacts on the Biosphere
BIOL31541 Living with Climate Change
EART39001 Environmental Challenges: Air Pollution in Major Cities
EART31101 Environmental Challenges: Arctic Climate Warming
EART33102 Environmental Challenges: Waste Disposal
EART32102 Environmental Challenges: Arsenic Contamination in Asia
EART36002 Climate and Energy: Past, Present and Future
EART36202 Primate Evolution and Human Origins
BIOL31511 Biotic interactions
BIOL31592 Evolution of Genes, Genomes, and Systems
BIOL31471 Advanced Behavioural and Evolutionary Ecology
10 credits One UCIL unit
Integrated Master's in Earth and Planetary Science

**MEarthSci (All pathways)**
2nd and 3rd year: Same as regular BSc programmes

**MEarthSci 4th year:**
Research Project
Student-led Field Course
Communicating Earth and Environmental Sciences
Topics in Applied Earth Science

**MEarthSci with Industrial Experience***
2nd year: Same as regular BSc programmes

3rd year:
Core Earth and Planetary Science
Placement in industry

4th year: Same as regular MEarthSci programme

**MEarthSci with International Study**#
2nd year: Same as regular BSc programmes

3rd year:
Study at University Abroad

4th year: Same as regular MEarthSci programme

**MEarthSci with a Research Placement**#
2nd year: Same as regular BSc programmes

3rd Year:
Core Earth and Planetary Science
Year in Research

4th year: Same as regular MEarthSci programme

*Available to all except those taking EART37000 Independent Project in Geological Field Mapping (on Geology pathway) and those on Planetary Science or Palaeobiology pathways;

# Available to all except those taking EART37000 Independent Project in Geological Field Mapping (on Geology pathway)
Integrated Master’s in Environmental Science

**MEnvSci (All pathways)**
2nd and 3rd year: Same as regular BSc programmes

**MEnvSci 4th year:**
- Research Project
- Student-led Field Course
- Communicating Earth and Environmental Sciences
- Topics in Environmental Science

**MEnvSci (All pathways) with Industrial Experience**
2nd year: Same as regular BSc programmes

3rd year:
- Core Environmental Science
- Placement in industry

4th year: Same as regular MEarthSci programme

**MEnvSci (All pathways) with International Study**
2nd year: Same as regular BSc programmes

3rd year:
- Study at University Abroad

4th year: Same as regular MEnvSci programme

**MEnvSci (All pathways) with a Research Placement**
2nd year: Same as regular BSc programmes

3rd year:
- Core Environmental Science
- Year in Research

4th year: Same as regular MEnvSci programme
Keep in touch

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