Environmental and Earth Sciences

lancaster.ac.uk/env-sci
Welcome To Lancaster

Why Study Environmental and Earth Sciences?

Choosing Lancaster means that you will join a department that has been ranked 6th in the UK* and within the top 100 in the world** for environmental and Earth sciences. Lancaster University is in the top ten in all three major UK league tables and has been named University of the Year by The Times and The Sunday Times Good University Guide 2018.

Our location offers unbeatable surroundings in which to study, we are near coasts and countryside, including Morecambe Bay, the Lake District and the Yorkshire Dales; and just an hour away from the urban centres of Manchester and Liverpool. We are a thriving academic community, of which our students are key members, allowing for high levels of interaction between all staff and students. Our degrees focus on understanding the fascinating fields of environmental and Earth Sciences, whilst providing you with the skills and experience to succeed in your future workplace.

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<th>Flexible and Interdisciplinary</th>
<th>Practical Study</th>
<th>Business and Industrial Links</th>
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<td>You can select from a diverse range of modules from across the University and tailor your degree around your own interests.</td>
<td>We run regular field visits to sites of outstanding natural beauty and scientific interest on our doorstep and overseas.</td>
<td>Work with external organisations throughout your degree, including as part of your dissertation project.</td>
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<th>Student Satisfaction</th>
<th>Great Career Prospects</th>
<th>3rd for World-leading Research</th>
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<td>Our students are amongst the most satisfied in the UK – we are ranked 1st for Geography and Environmental Studies course satisfaction (Guardian University Guide 2018).</td>
<td>We are joint 3rd in the UK for graduate prospects for Geography and Environmental Sciences (Complete University Guide 2018).</td>
<td>Our research enhances our undergraduate teaching and was ranked 3rd in the UK for its real-world impact (REF 2014).</td>
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* The Guardian University Guide 2019  **QS World University Rankings 2018

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Get in Touch

Lancaster Environment Centre
Lancaster University
Farrer Avenue
Lancaster
LA1 4YO

Connect with us
Lancaster Environment Centre Recruitment Co-ordinator
Tel: 01525 510249 or 01524 595014
Email: lec.ug@lancaster.ac.uk
Web: www.lancaster.ac.uk/env-sci
Virtual Tour: www.lancaster.ac.uk/virtualtour
Visit Us: www.lancaster.ac.uk/visitus
Facebook: @LancasterEnvironmentCentre
Instagram: @lancaster_environment
Twitter: @LancsUniLEC
YouTube: Lancaster Environment Centre
Science and the Environment

Awareness and concern about major global challenges, including climate change, water and soil pollution, food production and the management of hazards such as flooding or volcanic eruptions, are mounting. The environmental and the Earth sciences uniquely equip you to address such challenges, by applying your understanding and practical experience from across the geological, geographical, physical, chemical, biological and social sciences. For example, to address risks associated with a pollutant it is necessary to understand the chemical, biological and physical processes that lead to its formation and possible destruction, its transport around the Earth and its biological and human health impacts. Our graduates are strongly positioned to deal with this and other key challenges facing society. Our department offered the first environmental science degree in the country in the 1960s. Since then, our staff have helped to shape this rapidly evolving subject, both within the UK and internationally. Our Environmental and Earth Science degrees combine a long track record of excellence with new teaching approaches and material, delivered by staff who work at the cutting-edge of these fields.

Lancaster Environment Centre

Our Environmental and Earth Science degree programmes are part of Lancaster Environment Centre (LEC), an internationally recognised centre for teaching and research related to the environment. Spanning Environmental Science, Geography, Ecology and Biological Sciences, we provide flexibility and choice to students, with a range of optional modules available to you as part of your degree.

Our Enterprise and Business Partnerships team houses over 20 environment-focused businesses. This offers you direct experience of translating research into practical solutions, for example by working in partnership with a business as part of your dissertation project. The Centre for Ecology and Hydrology, a government-funded research institute, is also located within LEC, providing experience of the links between research and the development of policy and practice related to management of the environment.

All of our degree programmes place a strong emphasis on practical learning. In addition to developing laboratory and IT skills, you will also have opportunities to develop your field skills through regular visits to sites including the Lake District, Yorkshire Dales and Morecambe Bay. We also offer optional field courses further afield, such as examining glaciers in Iceland or studying environmental management in Croatia.

6th in the UK for Physical Geography and Environmental Science
The Guardian University Guide 2019

Joint 3rd in the UK with 97% of graduates who took part in the survey being satisfied overall with the quality of their course
National Student Survey 2017

Our world-leading staff teach:

- Volcanology
- Water quality
- Hydrology and hydrogeology
- Natural resource management
- Atmospheric chemistry
- Oceanography
- Lake and river ecology
- Environmental radioactivity
- Meteorology
- Climatology
- Environmental pollution
- Bioremediation
- Modelling natural and man-made systems
- Ecotoxicology
- Soil science
- Environmental hazards
- Environmental management
- Geochronology
- Tectonics and sedimentation
- Biodiversity conservation
- GIS and remote sensing
- Geophysics
- Glaciology
We are one of the largest collections of environmental researchers in Europe. Our mission is to address today’s key environmental challenges, focusing on research with real impact and that links directly with end-users. This research spans several disciplines including environmental science, Earth science and physical geography. Our staff are leading the international research agenda in several key areas, including understanding volcanic processes and the hazards associated with these processes, tracking the sources and impacts of chemical contaminants in the environment, and understanding the chemistry of the Earth’s atmosphere and future climate scenarios. Our research projects span a variety of geographic areas, from Antarctica to the Tropics and from central London to the deserts of western China. These projects receive funding from the UK Research Councils, DEFRA, the European Union and various other national and international partners.

Teaching, Learning and Support

Teaching and learning

Our degree programmes are highly flexible and adaptable. You have the option of focusing on environmental or Earth science from day one or combining your studies with modules from other subjects, from physics to French. In your first year you can expect around 15 hours of contact time per week, around 7 hours of which will be in lectures. In addition, you will also be taught in smaller tutorial groups and the vast majority of our modules include practical sessions alongside lectures. Practicals can be laboratory classes, computer-modelling sessions or field trips.

You will also take modules that deal with a number of globally-significant environmental challenges, including producing sufficient food for a growing global population, meeting future demands for energy, adapting to floods and droughts and preventing or mitigating pollution of water and soil resources.

Assessment

The assessment process varies across modules, but includes laboratory reports, essays, independent project reports, group presentations, multiple-choice tests and exams. Assessment is an on-going process, rather than being left solely until the end of the degree. This means we are able to offer feedback to you throughout your degree and, equally as importantly, it relieves pressure on you when modules are examined at the end of each year.

Academic support

We are a friendly department and foster a highly supportive learning environment. We also ensure that our students receive the support they need in order to achieve their full academic potential. This includes access to our Student Learning Advisor, who offers workshops and advice on improving your academic skills, and also assigning you an Academic Tutor who you will meet with regularly throughout your degree to discuss your progress, areas in which you might need extra support and any other queries you may want answering.

For further information about our teaching and academic support, please see our website: www.lancaster.ac.uk/env-sci
Facilities

Brand new teaching laboratories

Over £4 million has recently been invested in new teaching laboratories for Lancaster Environment Centre. Spread over two floors in a dedicated building, this new facility is the location for our environmental and Earth sciences laboratory practicums. These practices will provide you with hands-on experience of analysing soil, water and biological samples in an analytical laboratory. You can also use this laboratory facility during your dissertation project, for example undertaking controlled experiments or processing field samples before analysis.

LEC’s own meteorological station

Lancaster Environment Centre runs the Hazelrigg Meteorological Station, a unique field site and weather station located just one kilometre from the University campus. Hazelrigg is the UK Meteorological Office’s Climatological Station Number 7236, and measurements help the Met Office validate weather forecasts and climate models. Students visit the station on their Atmospheric Science modules, and can volunteer as observers to make the 0900 GMT measurements that contribute to the official record for the Met Office, providing a unique opportunity to learn new, hands-on skills.

Research-level field and laboratory facilities

Each of our undergraduates complete a dissertation project in years 2 and 3 of their degrees. This project provides the opportunity to work alongside research projects within the department, often providing our students with direct experience of research-level field and laboratory equipment. For example, LEC houses a wide range of research laboratories containing equipment used to analyse water, soil or biological samples. Our students have the opportunity to gain hands-on experience with cutting-edge analytical equipment, including mass spectrometers and ion chromatographs to analyse the chemical composition of water or soil samples, in-situ fluorimeters to analyse algae living in streams and rivers, or gas chromatographs to analyse greenhouse gases released to the atmosphere.

Visualising flooding using augmented reality

Lancaster Environment Centre has invested in augmented reality tools that help students understand how our mountains control the downslope accumulation of runoff to produce river floods. For example, our augmented reality system enables mountains, rivers and flood detention ponds to be moulded in sand and to be augmented in real-time with rainfall and runoff events simulated on the 3D surfaces. This facility is directly linked to our hydrology teaching and research on flooding. It can show where floods are likely to occur and how we can add detention ponds on farms or in streams to reduce the likelihood of flooding in downstream communities.

For further information about our facilities, please see our website: www.lancaster.ac.uk/lecfacilities/
Including sediment transport, biodiversity, landslide activity and altitudinal variations in soils and vegetation. You will study a number of environmental challenges to the tundra peaks of the Sierra Nevada. You will work in small groups, in doing so gaining experience of designing, implementing and critically evaluating research projects that investigate diverse problems. Investigating Mediterranean Environments, Spain

We visit an area in Spain of steep environmental gradients, ranging from semi-arid conditions along the Mediterranean coast up to the tundra peaks of the Sierra Nevada. You will work in small groups, in doing so gaining experience of designing, implementing and critically evaluating research projects that investigate diverse problems. You will study a number of environmental challenges including sediment transport, biodiversity, landslide activity and altitudinal variations in soils and vegetation.

Geological Mapping, Isle of Mull

Earth and Environmental science students may study geologic and geomorphologic processes, and Earth science field skills, during our field trip to the Isle of Mull. During this field course you will learn how to collect field data in order to make a geologic map. In addition to becoming familiar with this particular field area, you will also visit some of the oldest rock formations in the UK, which formed during the opening of the Atlantic Ocean, and as such you will be able to understand a wide range of geologic terrains. As part of the module, you will gain excellent practical skills including mapping techniques, how to plot structural data and be able to recall aspects of British geological history.

Investigating Mediterranean Environments, Spain

Learn about the challenges of managing the environment, particularly water resources, in the Istrian Peninsula. Based in Croatia, you will study a unique environment which is strongly governed by its position as a transitional zone between humid temperate and desert climates, which makes it particularly sensitive to global climate changes.

Glacier Landscape Interactions, Iceland

Experience glacial processes first-hand and their impacts on the dynamic tectonic landscape of Iceland. You will be based in Southern Iceland, where glaciers interact with the volcanic environments of this mid-ocean ridge island, and learn how glaciers interact with the surrounding landscapes. As well as developing your practical field skills, such as observation and recording, mapping geomorphological features and logging of snowpack properties, you will observe the stunning Icelandic scenery and understand how glaciers fit into the broader study of the physical environment.

Hydrological Processes, Slapton Ley

Our week long trip to Slapton Ley in Devon offers a unique opportunity to study an important environmental issue, eutrophication, through field work and laboratory analysis. Based at the Slapton Ley Field Studies Centre, you will study the hydrological processes which govern eutrophication of a coastal freshwater lake of ecological significance. This field course is co-taught by staff from Natural England, who will lead a field visit on ‘catchment sensitive farming’, which will expand your knowledge of remediation measures focussed on nitrate from agriculture.

Volcanic Processes, Mount Etna

Earth and Environmental Science students have the opportunity to visit Europe’s largest active volcano, Mount Etna, and study the complex processes that take place both on the surface and beneath volcanoes. During this intensive week-long field course, you will explore a number of the physical volcanic processes that take place, including lava flow emplacement, explosive events and the evolution of a basaltic volcano. In addition, you will evaluate methods of managing volcanic hazards on heavily populated active volcanoes.

Alpine Environmental Processes

This intensive week-long residential field trip to south west Switzerland is a new collaborative third year module, jointly offered by the University of Lausanne and Lancaster University. This is a unique intercultural exchange in knowledge, with Lancaster and Lausanne students working together. The module provides students with training in the design and implementation of research to understand alpine environments. Students will collect significant amounts of field data and focus on one of six interconnected study themes, spanning alpine climate and hydrology; glacial processes; alpine rivers; streams; soils, and ecosystems. The module will provide students with an in-depth understanding of a particular thematic focus of alpine environments.
Careers

Our flexible degree programmes are designed to provide you with both the core knowledge required by employers in the environmental and Earth science fields, and the literacy, numeracy, IT, and problem solving skills desired by almost every profession. You can tailor your degree to suit an environment-orientated career if you wish to pursue one, whilst also gaining the transferable skills necessary for a career completely outside the environment sector.

With increasing environmental regulation, most employers whose activities have environmental implications employ specialist environmental advisors. The international nature of many environmental issues means that your degree is of relevance worldwide. For example, our graduates have moved into careers that include:

- Air quality assessor, international environmental consultancies
- Weather forecaster, The Met Office
- Analytical chemist, analytical laboratory sector
- Graduate management scheme, Scottish Water
- Environmental risk prediction, insurance industry
- Field operations team, The Environment Agency
- Environmental advisor, Local Government

Networking opportunities

From question and answer panel events to careers fairs, we provide you with many opportunities to network with alumni and employers. This includes an annual STEM careers fair, attended by over 60 employers ranging from small and medium enterprises to national organisations.

Work experience

Students have the opportunity to undertake work experience through our Science and Technology Internship Programme. Internships offer you the opportunity to apply your academic knowledge in real-world situations whilst developing a range of transferable skills, such as working as part of a team or managing your time.

Additionally, you could also combine your dissertation project with a work placement. Our in-house Enterprise and Business Partnerships team engages with hundreds of different businesses and organisations and this gives you a fantastic opportunity to research environmental solutions to real-world problems.

Further study

There is a wide range of Masters-level programmes available to you once you graduate. Our Graduate School for the Environment combines our world-class expertise, resources and connections with those of Rothamsted Research and the Centre for Ecology & Hydrology to provide a diverse range of opportunities to continue your studies, or begin your career in academic research. For more information about our Graduate School for the Environment visit: www.lancaster.ac.uk/gse

100% of our 2013-2016 graduates were in employment or further graduate-level study within six months

Personal Development

We place a great deal of emphasis on developing your career aspirations and preparing you for life after Lancaster.

This is achieved by:

- Providing tutorials and workshops on careers planning and preparation as integral parts of each degree
- Encouraging all of our students to attend a range of degree-specific careers events hosted by Beyond LEC, our department’s careers team
- Providing you with the opportunity to plan and develop your career aspirations with experts from the careers team, plus the opportunity to receive practical advice from Lancaster graduates and industry experts
- Encouraging all students to register for the Lancaster Award, to reward voluntary work and work experience
- Ensuring you are kept fully up to date on opportunities for employment and further study

Transferable Skills

- Numerical
  - Data recording
  - Statistical analysis
  - Presentation of data
- Communication and IT
  - Word processing - Spreadsheets, statistics software
  - Citation and referencing
  - Poster presentation
  - Written scientific reporting
  - Oral presentations
- Interpersonal
  - Negotiation skills
  - Appreciation of personal and collective goals/responsibilities
  - Group working
- Intellectual
  - Application of subject knowledge
  - Hypothesis generation and testing
  - Information collation and synthesis
  - Scientific understanding
- Practical
  - Fieldwork skills
  - Health and safety awareness
  - Experimental design
  - Use of laboratory equipment
- Professional Development
  - Project planning and management
  - Organisational skills - self-reflection
  - Time management
  - Independent working
- Higher education
  - Critical thinking
  - Application of subject knowledge
Our Degree Programmes

Our undergraduate degree programmes offer a complete range of subjects relating to the environmental and Earth sciences, covering both three and four-year options. So, whatever your specific interests, there is a degree programme suitable for you.

Even within the individual degrees, optional modules provide a great deal of flexibility in subject content.

Lancaster Environment Centre offers two main environment-focused degrees:

- **BSc/MSci Environmental Science**
- **BSc/MSci Earth & Environmental Science**

Both of our degrees are also offered with the option to study abroad, where the second year is spent in a partner university in America, Australasia or Iceland (depending on the degree you choose). Importantly, these international options are still three-year (BSc) or four-year (MSci) programmes, with grades from the year abroad counting towards your final degree – so this is not an additional year, but one which offers exciting academic and cultural opportunities within both three-year and four-year schemes. We also offer four-year Master of Science (MSci) programmes, which are extended versions of the BSc programmes that allow Masters-level study of your chosen topics.

Apply only once

If we’re unable to offer you a place on our Study Abroad or MSci degree programmes, we will automatically consider you for our BSc degree programmes. Therefore, if you apply for our Study Abroad or MSci degrees, there is no need to include an application for our BSc degree separately on your UCAS application.

BSc/MSci Degree structure

- **Core modules**
- **Optional modules**
- **Skills modules**
- **Study abroad options**
- **Independent project (dissertation)**
- **Core and optional modules**
- **Specialist core and optional modules**
- **Research dissertation**
- **Masters-level modules**

**Year one**

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**Year two**

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<td>Independent project (dissertation)</td>
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<tr>
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<tr>
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<tr>
<td>Research dissertation</td>
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<tr>
<td>Masters-level modules</td>
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**Year three**

**Year four**

**Study abroad**

Our three-year BSc and four-year MSci programmes are available with a study abroad option. The year abroad is not an add-on to your degree; it is fully integrated so that you can complete your BSc in just three years or your MSci in four. Students on the study abroad scheme spend their first year in Lancaster, their second at one of our partner universities overseas, and then return to Lancaster for the third and final year of the degree. More than 80% of our exchange students achieve an upper second or first class degree so, in addition to broadening your academic horizons, developing your personal and social skills and providing you with an understanding of another culture and society, the experience may also enhance your job prospects.

**Where can you go?**

The majority of our partner universities are in North America, located across the United States and Canada. You could spend your second year in Florida, North Carolina, Oregon, Ottawa or Toronto. Alternatively, you also have the opportunity of studying in Australia or New Zealand, including Canberra, Melbourne, Sydney or Wellington. Additionally, if you take either our BSc or MSci Earth and Environmental Science scheme you may also have the opportunity to study in Reykjavik. The choice of destinations and number of places can vary from year-to-year, so although we cannot guarantee that you will be able to go to your first choice, we are sure that wherever you go it will be an experience to remember.

**Can I afford it?**

Whilst there are clear financial implications with living abroad for a year (and many students take the opportunity to do other travelling while they are abroad), the study abroad scheme does not cost as much as you might think. There is also financial help available in the form of (i) reduced fees to Lancaster University; you will pay just 15%* of the usual tuition fee during the year abroad and there are no fees payable to the overseas institution, (ii) an enhanced student loan, and (iii) a means-tested Government Travel Grant, which usually covers the cost of two return flights plus insurance.

**For further information about opportunities to study abroad, including shorter placements in Europe, please see our website:** [www.lancaster.ac.uk/env-sci/study-abroad](http://www.lancaster.ac.uk/env-sci/study-abroad)

* At the time of publication, 2018, this figure remains to be confirmed for the academic year 2019/20 and may be subject to change.
Environmental Science

Our Environmental Science degree is the longest running programme of its kind in the UK. The programme draws from a wide range of scientific disciplines and covers both natural and man-made environments with the aims of understanding:

• how the environment has evolved to its current state
• the main factors and processes controlling today’s environment
• how environmental conditions may change in the future

You also learn how to apply this knowledge to practical problems, for example in pollution control and hazard mitigation. In common with all our degrees, you will be trained in communication skills, information technology, data handling and environmental sampling and analysis. Considerable weight is placed upon these transferable skills by potential employers.

The Environmental Science degree is suitable for students with a wide range of backgrounds, but at least one A Level science subject is required. We run a range of maths and chemistry skills modules in the first year to ensure that students without these subjects beyond GCSE have a solid foundation for the rest of the degree. These are user-friendly modules and cover topics on a need-to-know basis.

The degree offers choice and flexibility allowing you to take a wide range of modules or to specialise in a particular area of environmental science that interests you. This specialisation can be advantageous if you want to undertake postgraduate study or are interested in a specific career path. Students taking the four-year MSci option conduct a research dissertation in environmental science that interests you. This specialisation can be advantageous if you want to undertake postgraduate study.

Key topics that you will cover:

• Global climate change: past and future environments: natural and man-made factors affecting climate change: the Greenhouse Effect
• Earth’s surface: the effect of wind, rain, rivers, ice and man on the landscape
• Biogeochemistry: how chemical and biological processes govern the flow of matter, energy and chemical elements through the different compartments of the Earth system
• The atmosphere: atmospheric circulation and weather: dispersion of industrial and volcanic plumes into the atmosphere: the ozone hole: El Niño
• Predicting the future: introducing the concepts of dynamic modelling of environmental systems such as river catchments at risk from flooding and contamination by pollutants
• Effects of environmental pollution: the behaviour of heavy metals, pesticides and radioactivity in soil, air and water

For further information about opportunities to study abroad as part of our Environmental and Earth Science degrees, including shorter placements in Europe, please see our website: www.lancaster.ac.uk/enu-sci/study-abroad

Contact Hours

15 per week on average

Placement Opportunities

Future Careers

Environmental Engineer, Chemical Analyst, Air Quality Consultant, Meteorologist, Waste Water Engineer

Modules

Year 1
Core modules
Atmosphere, Weather and Climate
Biogeochemical Cycles
Environmental Processes and Systems
Geology
Global Environmental Challenges
Hydrology: Water in the Environment
Introduction to Environmental Chemistry
Natural Hazards
The Earth’s Interior

Optional skills modules
Biodiversity and Conservation
Geographical Skills in a Changing World
Global Change Biology
Introduction to Environmental Chemistry
Numerical Skills I
Numerical Skills II
— plus choice from across the University

Year 2
Core modules
Aquatic Biogeochemistry
Atmospheric Science
Catchment Hydrology
Environmental Data Visualisation and Analysis
Environmental Field Course
Experimental Design and Analysis

Optional modules
Energy, Economy and the Environment
Introduction to Eco-Innovation
Investigating Mediterranean Environments Field Course

Year 2 (Optional modules continued)
Principles of Biodiversity Conservation
Soil Science

Year 3
Dissertation Project OR Dissertation with External Partner

Optional modules
Climate and Society
Coastal Processes
Environmental Remote Sensing and Image Processing
Geological Hazards
Glacial Systems
Global Change and the Earth System
Global Change Biology: Challenges and Solutions
Hydrological Processes Field Course (Slapton)
Introduction to Geophysical Techniques
The Causes and Consequences of Environmental Radioactivity
The Dynamic Earth
Water Resources Management
Water, Society and the Istrian Landscape

Year 4 (MSci only)
Research Dissertation Project

Optional modules
Chemical Risk Assessment
Contaminated Land Remediation
Environmental Aspects of Renewable Energy
Environmental Toxicology
Flood Forecasting and Flood Risk Management
Groundwater Resources and Protection
Lake Ecology
Pollution Microbiology
— plus a range of Masters-level modules

Modules are subject to change and this list does not guarantee that a specific module will be available.
The Earth & Environmental Science degree focuses on Earth processes and emphasizes fieldwork and hands-on learning. It covers areas as diverse as geological mapping, atmospheric processes and tectonics and sedimentation. This degree draws on the considerable expertise of a number of our staff who specialize in Earth science and includes volcanologists, geophysicists and hydrogeologists. Many of the components of the Environmental Science degree will be open to you, but as you progress into your second and third years you will be able to study specialist Earth science modules. Those continuing on the MSci programme have the opportunity for further, in-depth study in the fourth year, involving a research dissertation project, physical volcanology module and a choice of Masters-level modules across a wide range of subjects.

As part of the Earth & Environmental Science programmes, we run a number of residential field modules. One popular overseas trip is the volcanic processes field module on Mount Etna in Sicily, studying volcanic processes and how the local population can manage the impacts of volcanic phenomena. We take full advantage of Lancaster’s location at the heart of the fells and dales of North West England and hold both day trips and residential field modules in the Lake District and Yorkshire Dales.

Our modules equip you with valuable transferable skills, such as scientific writing, IT and presentation skills. For the Earth sciences, you will also learn computer-based skills, which are central for understanding, predicting and testing geophysical and environmental systems. We run modules in computer-based programming and you can also use specialized modelling software. We also provide you with the skills required for data handling and processing, particularly relevant for the large quantities of digital data generated through satellite imagery for example.

### Modules

#### Year 1

**Core modules**
- Atmosphere, Weather and Climate
- Biogeochemical Cycles
- Environmental Processes and Systems
- Geology
- Global Environmental Challenges
- Hydrology: Water in the Environment
- Natural Hazards
- The Earth’s Interior

**Optional/skills modules**
- Biodiversity and Conservation
- Geographical Skills in a Changing World
- Global Change Biology
- Introduction to Environmental Chemistry
- Numerical Skills I
- Numerical Skills II

#### Year 2

**Core modules**
- Aquatic Biogeochemistry
- Atmospheric Science
- Catchment Hydrology
- Environmental Data Visualisation and Analysis
- Environmental Field Course
- Experimental Design and Analysis

**Optional modules**
- Atmospheric Science
- Catchment Hydrology
- Energy, Economy and the Environment
- Introduction to Eco-Innovation
- Investigating Mediterranean Environments Field Course

#### Year 3 (MSci only)

- Dissertation Project
- OR
- Dissertation with External Partner
- Introduction to Geophysical Techniques
- The Dynamic Earth

**Optional modules**
- Alpine Environmental Field Course
- Climate and Society
- Coastal Processes
- Coral Reef Ecology
- Environmental Remote Sensing and Image Processing
- Geological Hazards
- Global Change and the Earth System
- Global Change Biology: Challenges and Solutions
- Hydrological Processes Field Course (Glenlyon)
- The Causes and Consequences of Environmental Radioactivity
- Volcanic Processes Field Course
- Water Resources Management

#### Year 4 (MSci only)

- Physical Volcanology
- Research Dissertation Project

**Optional modules**
- Contaminated Land and Remediation
- Environmental Aspects of Renewable Energy
- Flood Forecasting and Flood Risk Management
- Groundwater Resources and Protection
- Sustainable Soil Management
- ... plus a range of Masters-level modules
Welcome from EnviroSoc

EnviroSoc aims to bring together anyone and everyone studying or interested in environmental issues, so it is a great place to meet not only others on your course but also new people from around the University.

We organise a diverse range of academic and non-academic activities throughout the year giving our members the chance to relax and enjoy themselves and also further develop your interest in environmental and Earth sciences.

One of the highlights of our social calendar is the end of year formal meal and ball, where we team up with the other societies in LEC (EcoSoc and Society of Lancaster University Geography Students) to host this memorable event for all students and staff in Lancaster Environment Centre.

Examples of previous activities we have held include guest lectures, documentary evenings, academic support and guidance sessions, Green Lancaster action day and trips to the nearby Lake District. We also have an active and varied social calendar, running events throughout the year which are a great way to take a break from your studies!

As a member of EnviroSoc, you will be free to attend as many social events as you wish, making new friends and creating lasting memories of Lancaster.

We look forward to meeting you all, and welcoming you to EnviroSoc.

What Do Our Graduates Think?

Kiri Huddleston
MiSci Hons Environmental Science, 2014

Kiri was initially attracted to Lancaster due to the fascinating content of our Environmental Science course. “I chose Lancaster because the course sounded the best,” she says. “Initially I was really interested in volcanoes and earthquakes but also wanted to learn more about how the world works in general, so the course fitted really well. As much as I enjoyed the learning, I really loved hanging out with friends,” she says. “I have so many funny memories of things we did like nights out, trips to Windermere, barbecues, trips to places nearby, Ashton Memorial, fireworks, the canal, playing in a band etc. There were many days of stressing over deadlines and exams, but these are the things I remember looking back. I really felt part of the Lancaster community.”

Nancy Baines
MiSci Hons Earth & Environmental Science, 2015

Since graduating in 2015, Nancy has decided to broaden her horizons and gain new experiences by travelling. “I am currently travelling South America and am writing this from the Galapagos Islands,” she says. “I needed a break after studying, and my degree has really made me appreciate the environments I’ve seen, it’s great to see a volcanic crater and understand why it’s there!” Nancy’s interest in travelling has been fuelled by the extensive fieldwork opportunities offered by LEC, as well as the fascinating content of her course. “I found the majority of the content really interesting, but my highlight was the field trips,” she says. “How could you not love being in beautiful places with your friends? Turning 21 on Mount Etna was something I won’t forget in a hurry... the course has helped me better understand the places I am travelling in. The lectures made me want to go and see all those exciting things we learnt about.”

Theo Platts-Dunn
MiSci Hons Earth & Environmental Science, 2015

“The best part of my degree was the variety of field trips and hands-on learning experiences,” he says. “Over the course of four years I’ve visited Spain, Italy, Mull, the Lake District and also took part in an optional overseas trip to Guangzhou in China.”

Andy Payne
MiSci Hons Environmental Science, 2016

Andy was initially attracted to Lancaster due to its outstanding reputation, and was impressed by the warm welcome that he received when visiting campus. “The first thing that drew me towards Lancaster was its reputation,” he says. “But it was when I first visited the city and campus that I fell in love with Lancaster and led to me choosing it as my firm choice.” Additionally, Andy greatly appreciated the varied and fascinating nature of his Environmental Science course, relishing the opportunity to pursue a number of his environmental interests. “My favourite part of studying Environmental Science at Lancaster was the flexibility that I was given to study a variety of different modules that I had an interest in,” he says. “Not only did this mean that I enjoyed my studies more, it also meant that I gained a vast array of transferable skills that were paramount in me obtaining a place on a graduate scheme in the business sector.”
Europe’s largest intervarsity sports contest. The University of York in the Roses competition, which is in regional and national competitions, but also annually against educational pursuits. Lancaster sports teams not only compete for sporting, leisure, political, outdoor, religious, cultural and 200 clubs and societies are affiliated to LUSU which cater The Sugarhouse, in the centre of the city. In addition, over more than 120 countries. All our activities are based on a single campus, just south of Lancaster city centre. You will find shops, banks, a health centre and a Post Office as well as restaurants, fast food outlets and bars. The campus has excellent sporting facilities which include an eight lane 25 metre indoor swimming pool, badminton, squash and tennis courts, a floodlit 3G AstroTurf pitch, weight training and fitness rooms.

The social life of the University revolves around eight undergraduate colleges, each with its own distinct identity. Every student belongs to a college, and each student is allocated a personal tutor. Each college has its own bar, common rooms and residences and are run by elected student committees who organise a programme of social events including Christmas balls, shopping trips, visits to the Lake District and various nearby cities, and post-exam themed parties known as ‘Extrav’. Inter-college rivalry is reflected through a series of annual sporting events throughout the year, and there are numerous other opportunities to be involved in competitive sport.

All students at Lancaster are automatically members of the Lancaster University Students’ Union (LUSU). The Union organises entertainment on campus and at its own nightclub, The Sugarhouse. Known to most students as ‘Sugar’ it has two large dancefloors, great drink offers, away, you’ll find many other students in the Students’ Union unique restaurants, cafés and takeaways and most even offer prices, but Lancaster plays host to a large number of other themed nights and events, and even has free buses back to campus all night. In addition, you can sip on a handcrafted cocktail in places such as Mint or The Apothecary or listen to your favourite dance tunes in the numerous other clubs around Lancaster, including Glow Rooms, Hustle and Bentleys.

Lancaster has a thriving cultural scene, catering for lovers of theatre and the arts. Performances are regularly staged at the Grand Theatre, Dukes Playhouse and Nuffield Theatre (on the University campus), whilst the Storey Institute hosts literary performances, art exhibitions and workshops throughout the year.

You can find out more about Lancaster and the local area at: www.lancaster.ac.uk/explore

Lancaster And The Local Area

By day...
Lancaster, ranked as one of the top ten most vibrant cities in the UK, has all the amenities of a large city without having lost its charm or character. In the city centre you will find many of the major high street retailers plus a number of independent specialist shops nestled alongside museums, a medieval castle, historic parks and monuments. The city centre can be reached in ten minutes by a regular bus service that runs from the University. Lancaster is lucky to be surrounded by some of the most scenic areas of the UK including the Forest of Bowland, Yorkshire Dales and the Lake District which provide outdoor enthusiasts with a range of sports locations for walking, climbing and water activities. Such areas also make excellent fieldwork sites for our environment-focused degrees. Coastal locations and seaside resorts are also just a short journey away, including Blackpool with its famous Tower, Water Park, Illuminations and Pleasure Beach. For those that enjoy the hustle and bustle of a large city, excellent transport links mean that Manchester and Liverpool can be reached within an hour.

By night...
Lancaster has a large and varied nightlife. For those looking for a cheap drink in a cheerful atmosphere, pubs such as the Crafty Scholar, Wetherspoons or Fibbers will be your first port of call. If you’d rather spend the evening in a pub with a unique character, real ale or craft beers and live music, Lancaster has an abundance of historic pubs waiting to be discovered. Not only do many of these offer great food at student-friendly prices, but Lancaster plays host to a large number of other unique restaurants, cafés and takeaways and most even offer a discount to students! For those who wish to dance the night away, you’ll find many other students in the Students’ Union owned nightclub, The Sugarhouse. Known to most students as simply ‘Sugar’ it has two large dancefloors, great drink offers, Lancaster University is diverse, varied, international, exciting and vibrant – you couldn’t ask for a better student experience. We have around 12,000 students and over 2,500 staff from more than 120 countries. All our activities are based on a single campus, just south of Lancaster city centre. You will find shops, banks, a health centre and a Post Office as well as restaurants, fast food outlets and bars. The campus has excellent sporting facilities which include an eight lane 25 metre indoor swimming pool, badminton, squash and tennis courts, a floodlit 3G AstroTurf pitch, weight training and fitness rooms.

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Admissions Information

Three Year Programmes
BSc Environmental Science (F750) and BSc Earth & Environmental Science (FF68)

- A Levels: ABB, candidates will normally be expected to have at least one science at A Level
- Scottish Highers: BBBB
- International Bac: 32 pts overall with 16 from best three HL courses
- BTEC: Overall grades of DDM with distinction in 3 modules
- HNC/HND: Pass

Study Abroad and Four Year Programmes
BSc Environmental Science (Study Abroad) (F754), BSc Earth & Environmental Science (Study Abroad) (FF6V) and MSci Environmental Science (F850), MSci Environmental Science (Study Abroad) (F851), MSci Earth & Environmental Science (4R71) and MSci Earth & Environmental Science (Study Abroad) (FF86)

- A Levels: AAB, candidates will normally be expected to have at least one science at A Level
- Scottish Highers: AB BBBB
- International Bac: 35 pts overall with 16 from best three HL courses
- BTEC: Overall grades of DDD/DDM with distinction in 9 modules
- HNC/HND: Pass

A Levels and Scottish Highers
We require students to have at least one A Level or Higher in a science subject, which could include:
- Biology
- Chemistry
- Environmental Science
- Geography
- Geology
- Maths
- Physics
- Psychology
- Statistics

This does not mean that other subjects are excluded, but we require applicants to have at least one science. Also, applicants must have GCSE (or equivalent) grade B (level 6) in Mathematics and grade C (level 4) in English.

For definitive details see: www.lancaster.ac.uk/env-sci/courses

Typical requirements for entry onto our Environmental and Earth Science degree programmes:

OpenPlus
If you do not meet these entry requirements you may be able to join the OpenPlus scheme we are running with the Open University (OU). The scheme involves part-time study with the OU followed by two years full-time study with us to complete years 2 and 3 of our degree programmes in BSc Environmental Science (F750) or BSc Earth & Environmental Science (FF68)

Applications to OpenPlus are not made through UCAS, but directly through Lancaster and the Open University. Visit: www.open.ac.uk/choose/openplus for more details regarding the OU components of these degrees and how to apply, or contact us at Lancaster.

Applications
Applications for all of our undergraduate degree programmes must be made through the Universities and Colleges Admissions Service (UCAS), using the online service via: www.ucas.com

Mature and Overseas Applicants
We welcome applications from mature or overseas students. Your application will be considered individually on its merits and in relation to the University’s guidance on equivalence to A Levels.

Other Qualifications
We welcome applications from students with non-standard qualifications. Mature students should contact us directly to discuss their circumstances. All types of previous training and experience will be taken into account, including Access to Science courses.
International students are normally required to have appropriate International Baccalaureate qualifications or equivalent. If in doubt about anything, please get in touch with us.

Bursaries & Scholarships
Our priority is to support every student to make the most of their life and education. We have a package of bursaries, based upon household income, and scholarships, based upon academic performance at A Level, to support students during their time at university.

For up to date details of tuition fees, financial support and further guidance please visit our website: www.lancaster.ac.uk/ugfunding

At the time of printing, 2019/20 bursaries, scholarships and access agreements remain to be confirmed and may be subject to change.
Visiting Us

Open Days and Campus Tours
Open Days take place from June to September for anyone thinking of applying to Lancaster. You will experience our vibrant campus and have the freedom to explore our academic departments, colleges and accommodation. You will also have the opportunity to visit Lancaster Environment Centre to see our facilities, experience hands-on demonstrations of our research and teaching and find out more about studying with us from our current students and staff.

In addition to Open Days, we also host regular Campus Tour Extra events (held on Wednesday afternoons throughout the year). These are a great opportunity to find out about studying at Lancaster, tour our 560-acre campus and visit Lancaster Environment Centre to find out more about Environmental and Earth Sciences.

You can book onto Open Days and Campus Tour Extra events at: www.lancaster.ac.uk/visitus

Applicant Visit Days
If you are offered a place on one of our degree schemes, you’ll be invited to visit us again in February or March. You’ll have the opportunity to tour our accommodation, take part in interactive activities and spend the day with Environmental and Earth Sciences staff and students. Applicant Visit Days are lively and informative events, designed to give you a taste of what it is like to be a student here. Parents are also welcome to attend these events too.

Visiting Us
Lancaster is very well served by road, rail and air networks and is nearby to major cities such as Manchester and Liverpool. More information about visiting the University can be found at: www.lancaster.ac.uk/contact-and-getting-here

Approximate Travel Times (By Train)

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<thead>
<tr>
<th>Route</th>
<th>Travel Time</th>
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<tr>
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<tr>
<td>Lancaster — Liverpool</td>
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<tr>
<td>Lancaster — Manchester</td>
<td>1 hour</td>
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Image credits
Many of the photographs in this prospectus were taken during fieldwork or on campus – thanks to our students and staff who took these photographs and appear in them. Additional photos appear courtesy of: Shutterstock

Disclaimer
The information provided in this brochure is correct at the time of publication (May 2018) but this may be subject to change as we constantly review and improve our degree programmes. This brochure does not form part of any contract between any person and Lancaster University.

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