





UK Centre for Ecology & Hydrology

Graduate School for the Environment

Joined-up thinking for a better postgraduate experience

Masters' degrees and doctoral research 2025/26

Graduate School for the Environment

Our Graduate School for the Environment harnesses the power of three of the world's foremost research organisations to give you the ideal platform to build a productive career and make a positive difference.



in the Complete University Guide (2025)



Lancaster is in the **top 150** universities in the world in the QS World University Rankings (2025)



Sustainability is at the heart of Lancaster University. In the 2024 QS World University Rankings: Sustainability, we ranked **16th** in the UK and **44th** globally for sustainable impact

Pioneering World Leaders

Combining the expertise, resources and connections of Lancaster Environment Centre, Rothamsted Research and the UK Centre for Ecology & Hydrology, the Graduate School for the Environment is an exciting collaboration of three world leaders in environmental research. Solutions cannot be found by researchers, governments and businesses working in isolation. Instead, we advocate an international, interdisciplinary and inter-agency approach.

The Graduate School for the Environment is a world-leading academic centre with a truly global outlook and a similarly global network with global outlook and connections. It is a place where you will become part of a broad community of like-minded researchers, academics, scientists, agencies and businesses to develop the skills and expertise for a successful career.



World-class resources

The Graduate School for the Environment has unrivalled resources that accommodate an extraordinary wide range of environmental research topics.

We can call on a collective pool of hundreds of experts, provide you with access to cutting-edge facilities, and can curate data that fuels the most impactful research programmes.

Flexible and engaging degrees

Our programmes have been designed to make the most of our broad range of natural and social sciences expertise – with the opportunity for you to work in collaboration with staff across our sites.

On our taught programmes, you will have the opportunity to tailor your module choices to suit your particular interests. A particular highlight is the wide array of research opportunities for your dissertation project. Whether working with research-active academics, using state-of-theart facilities or conducting fieldwork, you will enjoy access to a network of global research institutes and business partnerships.

Interdisciplinary excellence

Environmental challenges can only be properly addressed when researchers, government agencies, and businesses come together to pool their ideas and devise practical solutions. So it's no coincidence that our community is comprised of researchers from across the natural and social sciences who are leading the international agenda in in key areas related to environmental sustainability in the 21st century. These same experts are the ones who will teach and supervise you.





Global outlook and impact

The Graduate School for the Environment has a strong international focus, which informs everything we do. This means you could find yourself engaged in research work in any corner of the globe.

Our outward-looking focus makes us better placed to tackle environmental issues at an international level. It also provides you with a world of opportunity, giving you the kind of global perspective that is valued by employers and a network of contacts in the UK and overseas.

Real-world focus

Everything we do at the Graduate School for the Environment is driven by the realities of the outside world.

We will encourage you to look outwards and engage with the global environmental community, staying connected to local issues and case studies. That might mean conducting a placement with one of our research partners or pursuing a company-based project in a particular industry.

Career gateway

When you leave the Graduate School for the Environment, you will take with you the key skills and practical experience, an extensive network of contacts and a qualification tailormade to secure the career you want.

We work with a wide range of organisations from research institutes to small and medium-sized enterprises – every one of which could prove to be a potential employer. What's more, our Enterprise and Business Partnership team at Lancaster aims to get you working with one of these during your studies.



Lancaster Environment Centre, Rothamsted Research and the UK Centre for Ecology & Hydrology all provide excellent facilities for research. Together, as the Graduate School for the Environment, we offer a wonderful range of opportunities via our flexible and engaging degrees.



State-of-the-art laboratories

We have a broad array of laboratories, specially equipped and staffed so that you can perform highly focused and effective experimental and analytical work.

Leading research facilities

From glasshouses to insectaries, biomolecular analysis to mass spectrometry, we offer a wide range of specialist facilities to our postgraduate students.

Widespread field sites

You will be able to conduct fieldwork of all types about the UK and overseas, and we can also offer a broad range of desk- and lab-based studies as an alternative to travel.

Cutting-edge technologies

Whether in the laboratory or the field, our researchers have access to specialist equipment that can transform the effectiveness and scope of their work.

Rich data resources

You can gain access to a truly unique set of large-scale long-maintained datasets and take advantage of our powerful analytical, modelling and statistical capabilities.

Equipped for *achievement*



6 My Master's has offered me a Ochance to broaden my academic skill set and provided me with a very strong foundation for my future career. A areat range of modules are available so you can tailor your studies towards your own interests and passions."

Caitlin Godfrey, **MSc Conservation and Biodiversity**

MSc Conservation and Biodiversity

Duration: Full-time 12 months **OR** Part-time 24 months

Our MSc Conservation and Biodiversity course is designed to provide you with the key skills that are valued by employers in the ecology, conservation and environmental sector. You will be joining a department that hosts world-leading experts in biodiversity, from the Amazon rainforest to coral reefs. Offering great flexibility, with a wide choice of study topics from across disciplines, enabling you to construct a programme that suits vour individual interests and career ambitions in this increasingly important field. You will gain a solid foundation in the key theoretical issues, such as wildlife population dynamics and conservation biology, and develop essential field skills on species identification, GIS, sampling and monitoring of populations, learning how to apply them to solve real-world problems, such as managing habitats or dealing with wildlife-human conflict. The program also provides you with more generic problem solving, report writing, data analysis and presentation skills.

You will complete six taught modules, interacting with a wide range of expert specialists, including conservation biologists, terrestrial, marine and lake ecologists, food security biologists and Earth observation geographers. Several of these modules include field excursions to the beautiful



landscapes around Lancaster, including the Lake District World Heritage Site, the Yorkshire Dales and several National Landscapes.

Additionally, you will undertake a dissertation project, which forms a substantial part of your degree. It will enhance your practical and analytical skills, giving you the opportunity to interact closely with our external partners in the conservation sector - both governmental and NGOs. Partner organisations include Natural England, the Environment Agency, RSPB, Butterfly Conservation, Wildlife Trusts and many others.

Graduates have gone on to successful careers as ecological consultants, conservation officers, land managers, researchers, as well as progressing to further study for a PhD.

Core modules:

- + Dissertation Project
- + Habitat Management
- + Planning Independent Research
- + Wildlife Monitoring Techniques

Optional modules:

- + Conservation Biology
- + Data Collection and Analysis
- + Environmental Governance and Management
- + Environmental Impact Assessment
- + Food Security, Agriculture and Climate Change + Geoinformatics
- + Lake Ecology
- + Numerical Skills
- + Soil Science

Further information can be found at: www.lancaster.ac.uk/gse/conservation-andbiodiversity

6 GThe environmental management Master's has allowed me broaden my skillset and studying modules which I believe have helped me sure a job in flood risk. The course has beed extremely flexible allowing me to tailor my degree and take the modules that I'm interested and passionate about."

Lauren Hart. MSc Environmental Management, Currently BGS Business Development Man

MSc Environmental Management

Duration: Full-time 12 months **OR** Part-time 24 months

The Earth's resources are under strain from a growing population. Now, more than ever, we need to monitor, manage and maintain our environment. This vocationally relevant degree provides you with an in-depth critical understanding of today's major environmental challenges. You can keep your learning broad or you can specialise in one of four areas: ecology, energy, food security, or pollution.

Several modules include field excursions to key field sites illustrating environmental management challenges - both on our doorstep in Cumbria and Morecambe Bay, and further afield. Additionally, you will undertake a dissertation project, which will enhance your practical and analytical skills and give you the chance to apply your learning to a real-world challenge. Our many research projects and partners across the globe provide exciting possibilities when you are choosing your dissertation topic. As an alternative to a traditional dissertation, you could instead choose to complete a research placement with a private sector company, government body or voluntary sector organisation.

This very popular course will equip you to pursue a broad range of careers including environmental monitoring, resource management and consultancy.



Core modules:

- + Dissertation Project
- + Environmental Governance and Management
- + Environmental Impact Assessment
- + Planning Independent Research

Optional modules:

- + Climate Change and Society
- + Conservation Biology
- + Data Analysis and Programming Skills
- + Data Collection and Analysis
- + Energy Conversion
- + Environmental Law
- + Geoinformatics
- + Geological Hazards
- + Global Change and the Earth System
- + Habitat Management
- + Numerical Skills
- + Perspectives on Environment and Development
- + Physical Volcanology
- + Research Methods in the Social Sciences
- + Wildlife Monitoring Techniques

Further information can be found at: www.lancaster.ac.uk/gse/environmentalmanagement



MSc Environment and Development

Duration: Full-time 12 months **OR** Part-time 24 months

The need for sustainable development is a global concern. This flexible degree prepares you to address the challenges faced in safeguarding the planet's ecosystems in a fast-developing world. It is ideal if you want to pursue a career in the fields of environment or development, in the private, public, or not-for-profit sectors.

This programme is suited to those with a Natural Sciences or Social Science background who wish to increase their breadth and depth of knowledge as applied to the environment, with an additional development component. You will complete six taught modules and a dissertation research project, with individual supervision from a research active expert. We offer great flexibility with modules spanning the natural and social sciences from sustainable soil management and conservation biology to environmental law and globalisation. This enables you to construct a degree that fits your interests and career ambitions and to apply your learning in a wider cultural context.

You will gain a solid foundation in the key theoretical issues around environment and development whilst gaining the problem solving , practical and field skills valued by employers.

Your dissertation project forms a substantial part of your degree; it will enhance your practical and analytical skills and give you the opportunity to apply your learning to a real-world challenge. Dissertation topics are available in both environment and development topics, with natural science and/or social science themes, and there are also opportunities for field work overseas.

Core modules:

- + Dissertation Project
- + Perspectives on Environment and Development
- + Planning Independent Research
- + Research Methods in the Social Sciences*

Optional modules:

- + Climate Change and Society
- + Contaminated Land and Remediation
- + Environmental Governance and Management
- + Food Security, Agriculture and Climate Change
- + Globalisation: Its Meanings, Causes and Consequences
- + Groundwater Resources and Protection
- + Major Approaches to the Study of International Relations
- + Renewable Energy
- + Soil Science
- + Theory and Concepts in Diplomacy and Foreign Policy

The above list gives examples of optional modules. The full list of optional modules (subject to change) can be found at:

www.lancaster.ac.uk/gse/environment-anddevelopment

*only required for those taking a social science rathet than natural science- based dissertation

🖌 🌈 I love how diverse, and yet highly

Interconnected, the content is within my course with a mixture of natural and social science, as well as having the opportunity to take Law and Maths modules. I think this provides the perfect background for going into a career facing global environmental issues."

Susannah Yielding, MSc Environment and Development,

Currently Senior Coordinator, Global Conservation Division at WWF



MSc Flood and Coastal Risk Management

Duration: Part-time 24 months

The UK is currently experiencing a greater number of rainstorms than previously. Society is recognising the importance of understanding and managing resultant flood risk in the face of this increased frequency of extreme weather and climate change.

In partnership with JBA Consulting, a leading flood risk management consultancy, we deliver accredited training for water and environmental practitioners focused on the application of technical skills and best practice techniques. The objective is to strengthen your knowledge and career development prospects in the flood and coastal risk management sector.

The course provides essential practical skills for practitioners within organisations including:

- Local Authorities with flood risk management responsibilities
- Infrastructure, network utilities and asset
 owners
- Environmental and engineering consultancies
- Catchment managers, Rivers Trusts and environmental NGOs
- National agencies such as SEPA, EA, NRW
 and Dfl Rivers

Your research dissertation is an important part of your training. You may undertake this research with your current employer or as part of our ongoing research work with our wide range of partners in the water sector. Throughout you will be supported by specialist supervision.

Core modules:

- + Catchment Hydrology
- + Coastal Erosion and Flood Risk Management
- + Dissertation Project
- + Forecasting and Extreme Event Response
- + Integrated Systems for Sustainable Surface Water Management
- + River Hydraulics: Processes, Structures and Modelling
- + Sustainable Floodplain Management and Restoration

Optional modules:

- + Groundwater Resources and Protection
- + Catchment Protection (field course)
- + Geoinformatics

Further information can be found at: www.lancaster.ac.uk/lec/floodrisk

CIWEM accredited course

The programme is fully accredited by the Chartered Institution of Water and Environmental Management (CIWEM).

This course is designed for part-time study and can be taken over a period of two to five years.

You may begin your studies with us at the Postgraduate Certificate or Postgraduate Diploma level and later transfer to the MSc programme (see page 17 for more information). You may start your chosen Flood and Coastal Risk Management programme at any point in the year.



MSc Sustainable Water Management

Duration: Full-time 12 months **OR** Part-time 24 months

With a strong emphasis on practical study, you will be taught by both Graduate School for the Environment staff and industry professionals, and will gain the key skills and professional training required for a rewarding career as a practitioner or researcher.

You will study six modules and complete a dissertation project. The core modules have been professionally accredited by the Chartered Institution of Water and Environmental Management (CIWEM) and will provide you with the key skills of a water professional by addressing the principles of catchment hydrology, sustainable surface water management, groundwater assessment, methods of catchment protection, principles of lake ecology, managing coastal flooding, flood forecasting, the design of river structures and the restoration of river channels.

Practical work is an important component of the programme, with modules including challenging fieldwork in Cumbrian and Lancashire catchments, and laboratory work involving the use of flumes, water quality analyses and computer models. We encourage you to undertake your dissertation project with an external partner in the water sector or as an integral part of our ongoing research activities in water resources, and you will be supervised by one of our active researchers with relevant expertise.

Core modules:

- + Catchment Hydrology and Assessment
- + Catchment Protection Field course
- + Coastal Erosion and Flood Risk Management
- + Dissertation Project
- + Forecasting and Extreme Event Response + Groundwater Resources and Protection
- + Integrated Systems for Sustainable Surface Water Management
- + Lake Ecology
- + Planning Independent Research

Optional modules

- + Behaviour of Pollutants in the Environment
- + Contaminated Land and Remediation
- + Data Assimilation and Integration
- + Environmental Governance and Management + Geoinformatics
- + International Environmental Law
- + Numerical Skills
- + Perspectives on Environment and Development
- Further information can be found at: www.lancaster.ac.uk/gse/sustainablewater-management

CIWEM accredited course

The programme is fully accredited by the Chartered Institution of Water and Environmental Management (CIWEM).



MSc Volcanology and the Environment

Duration: Full-time 12 months **OR** Part-time 24 months

Geological hazards, such as volcanic activity, threaten millions of people worldwide, and occur within the context of complex environmental challenges. Improved hazard mitigation is therefore a high priority. Our well-established course, the original and only taught Volcanology Master's degree in the UK, allows you to study alongside leading volcanologists in one of the UK's largest groups of environmental scientists.

You'll study six taught modules including the core module in physical volcanology, plus optional modules providing broader learning and practical skills highly relevant to aspiring volcanologists and environmental professionals. As well as gaining a strong theoretical grounding, you'll spend time in the laboratory and the field. We offer field excursions to study ancient volcanic rocks in the nearby Lake District and Mt Etna, the active Italian volcano.

You will join our Volcanology group and work with an internationally recognised researcher on your independent dissertation research project, taking advantage of our well-equipped experimental and geochemical laboratories that include rheology, thermal analysis, and analogue experimentation. The group provide additional opportunities to join seminars, workshops and discussions.

This course is excellent preparation for PhD research or careers in the geo/environmental sector, and suitable for students from diverse fields like Geography, Geology, Environmental Science, and Physics. Our alumni have a strong track record of career advancement in academia and industry.

Core modules:

- + Dissertation Project
- + Planning Independent Research
- + Physical Volcanology

Optional modules:

- + Climate Change and Society
- + Contaminated Land and Remediation
- + Data Assimilation and Integration
- + Environmental Governance and Management
- + Geoinformatics
- + Geological Hazards
- + Global Change and the Earth System
- + Groundwater Resources and Protection
- + Numerical Skills
- + Volcanic Process Field Course

Further information can be found at: www.lancaster.ac.uk/gse/volcanology

Photo: Steve Lane

MA Political Ecology

Duration: Full-time 12 months **OR** Part-time 24 months

The Earth is facing unprecedented environmental challenges. These challenges, ranging from biodiversity to climate change, demand both critical thought and action if we are to understand and live with a changing planet. Yet environmental issues are simultaneously political, technological and cultural, and produce profound inequalities in how wealth, power and justice are realised. The MA in Political Ecology offers the conceptual tools and practical skills to ask the difficult questions of human-environment relations, to critique the status quo uncritically, and to drive transformative action.

By taking the MA Political Ecology at Lancaster you will be working with and learning from one of the largest political ecology research groups in the country. Political Ecology is a field of many perspectives and disciplines. In this degree we embrace this plurality, working with students to analyse various approaches, spaces and practices from local to global scales. We focus on a range of themes including the politics of resource extraction, water, climate politics and the green economy.

To do this, we believe passionately that learning isn't just about lectures. We offer novel approaches to our teaching, engaging our students in creative classes that provide the necessary means to understand a complex planet and the challenges of living with it.

Core modules:

- + Approaches to Political Ecology
- + Dissertation Project
- + Encountering Political Ecology
- + Perspectives on Environment and Development
- + Planning Independent Research
- + Research Methods in the Social Sciences

Optional modules:

- + Building Ecological Civilisations
- + Climate Change and Society
- + Corporations and Sustainable Development
- + Environment and Culture
- + Globalisation: Its Meanings, Causes and Consequences
- + International Human Rights Law
- + The Rights of Peoples

Further information can be found at: www.lancaster.ac.uk/gse/political-ecology

Meet our Alumni

At the Graduate School for the Environment, our alumni stand as a testament to the power of education and innovation in addressing global environmental challenges. These passionate individuals have pursued careers that make a difference, leading initiatives in environmental protection, sustainability, and beyond. Their stories inspire the next generation of students to dream big and act boldly in their own careers.

Visit our Alumni page to explore the remarkable careers and journeys our graduates have undertaken.

Cara Roberts

Course taken: <u>MA Political</u> Ecology, BA Politics and Sociology

College: County and Graduate

Job title: NGDP Graduate Management Trainee in a local authority

During my Master's programme at Lancaster, I applied for and was accepted into the NGDP graduate scheme, where I will be for the next two years. This local government management programme places you within a council for four different placements. Alongside gaining experience in various council departments, the scheme prepares you for a Level 7 management qualification with the Chartered Management Institute.

My first placement is in the Public Health department, where I handle tasks such as public consultations, report writing, community engagement, and health needs assessments. I utilise the knowledge and skills I developed at Lancaster, particularly in critical thinking and analysis. The awareness my Master's provided about how social issues manifest at both national and local levels is crucial for local government work and the public sector overall. My academic assessments encouraged me to explore diverse writing styles and delve into topics that intrigued me.

I truly enjoyed my study experience at Lancaster, and the development of my transferable skills has been invaluable. I know my Master's helped me secure this opportunity, and I will continue to apply what I've learned in the future.

Master's by Research

A Master's by Research degree is for those who would prefer to carry out an in-depth research project without specific taught modular components.

Our Master's by Research programmes are postgraduate qualifications that provide excellent preparation for research careers in the public and private sectors or for PhD study. They will allow you to immerse yourself in a subject and benefit from the kind of specific skills training you need to be able to investigate it. You will be expected to conduct innovative, original research and then to write up an extended thesis with a view to submitting it for publication. If you are interested in pursuing this route, we will work with you to help design the most appropriate research project for you – making sure that you benefit from all the Graduate School for the Environment has to offer.

As a Master's by Research student, you may also be co-supervised by an external research, policy or business partner.

Further information can be found at: www.lancaster.ac.uk/lec/research-masters

PhD study

As part of our vibrant community of PhD students, you will make a direct contribution to the world-class research of the Graduate School for the Environment and develop the skills you need to enjoy a rewarding career in your chosen field.

Whatever your field of interest in relation to the environment – whether in the natural or social sciences – the size and scope of the Graduate School for the Environment means that you are guaranteed to find a suitably stimulating project to work on.

Support structure

You will immediately become a valued member of one of our research groups, each of which is led by one of our internationally respected academics and supported by an array of postdoctoral research associates and technicians.

You will make your personal contribution to the group and be taught the research skills you need – under the guidance of one or more supervisors specifically chosen to suit your area of interest. It is with the support of your supervisors and your research group colleagues that you will be able to extract full value from your time at the Graduate School for the Environment.

How to apply for a PhD?

You can apply for a funded PhD project, apply for a PhD from one of our Doctoral Training Centres, or develop your own self-funded project together with prospective supervisors.

Further information can be found at: www.lancaster.ac.uk/lec/graduate-school/phd

Our research community is made up of a series of groups set up to address specific areas of environmental research:

Earth Science
Ecology & Conservation
Environmental Sciences
Human Geography
Plant Biology

We offer the following PhD degrees:

We offer the following Master's by Research degrees:

Ecology by Research | Environmental Science by Research Plant Sciences by Research

Biological Science | Environmental Science | Geography

Doctoral training programmes

NorthWestBio

The NWB DTP is a new BBSRC-funded Doctoral Training Partnership (DTP) delivered between the universities of Glasgow, Lancaster, Queen's Belfast and Strathclyde. Each partner has proven expertise in research that addresses global challenges and provides access to outstanding research facilities and infrastructure. The programme is further enriched through our associated partners iBioIC, the Moredun Research Institute and the James Hutton Institute, expanding the collaborative options for joint PhD projects, industrial connectivity and entrepreneurship and placements.

North West Social Science Doctoral Training Partnership

The North West Social Science Doctoral Training Partnership (NWSSDTP) is a consortium of the universities of Central Lancashire, Keele, Lancaster, Liverpool, and Manchester. Funded by the Economic and Social Research Council (ESRC), it supports postgraduate studentships and training in the social sciences in the North West of England.

Envision

Led from Lancaster, but with university and business links across Britain, Envision is a government-funded £4.9 million initiative designed to create the next generation of environmental scientists. As a successful candidate, you will receive the doctoral training and real-world employment experience you need to launch you on a successful career in the environmental sector.

Further information can be found at: www.lancaster.ac.uk/gse/doctoraltraining-centres/

Professional training

Our professional training programmes are organised on a flexible module-by-module basis, which makes which makes it easier for you to fit your studies around your work.

Some are taught online, with additional face-to-face workshops. Others are taught in residential blocks of two-tothree days.

Each module is worth a certain number of credits, which can count towards a postgraduate qualification. You may wish to start by studying a Postgraduate Certificate level, which requires a total of 60 credits. You can then progress to a Postgraduate Diploma, which requires 120 credits, and if you complete an additional supervised research project you can be awarded a Master's degree. Alternatively, it may also be possible to take a single module for the purpose of continued professional development.

Further information can be found at: www.lancaster.ac.uk/lec/graduate-school/professional-training

Graduate School for the Environment

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You can also follow us on:

Facebook: @LancasterEnvironmentCentre Instagram: @lancaster_environmen X: #GradSchEnv

Further information about Rothamsted Research and the UK Centre for Ecology & Hydrologycan be found at:

www.rothamsted.ac.uk

www.ceh.ac.uk

Disclaimer

The information in this leaflet relates primarily to 2025/26 entry to the University and every effort has been taken to ensure the information is correct at the time of printing in September 2024. The University will use all reasonable effort to deliver the course as described but the University reserves the right to make changes after going to print. You are advised to consult our website at www.lancaster.ac.uk/study for up-to-date information before you submit your application.

Further legal information may be found at:

www.lancaster.ac.uk/compliance/legalnoticelmage 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

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