University of Reading

GEOGRAPHY AND ENVIRONMENTAL SCIENCE

FOR ALL OUR TOMORROWS

“We are a dynamic department, ranked in the top 100 in the world for Environmental Sciences (QS World University Rankings by Subject 2023) with a long-established reputation for teaching across a wide range of topics in human and physical geography and environmental science.

The internationally recognised research standing of the University of Reading, ranked 3rd in UK for research power in Earth Systems and Environmental Sciences,* contributes directly to the development and content of the courses we offer.

With a range of flexible degree courses, expert staff and dedicated IT and laboratory facilities, combined with an exciting and evolving field class programme, this is a vibrant and energetic department in which to study. We hope you will join us and work together to tackle the world’s greatest challenges.”

Professor Nicholas Branch
Departmental Director for Recruitment and Admissions

reading.ac.uk/ges

*Times Higher Education Institutions Ranked by Subject, based on its analysis of the latest REF 2021

“Saving our planet, lifting people out of poverty, advancing economic growth … these are one and the same fight. Solutions to one problem must be solutions for all.”

Ban Ki-Moon
Secretary General of the United Nations, 2006–2016

A GROWING CONCERN

Climate strikes, ecological breakdown and species loss. Anger, environmental peril and social consequences. Daily, we are witnessing how climate change brings devastation and social disruption.

Students joining the University of Reading's Department of Geography and Environmental Science are galvanised; ready to make a difference and find solutions.

They study with leading researchers at the forefront of climate science, such as Professor Hilary Geoghegan, a cultural geographer whose research focuses on enthusiasm, emotion and expertise around issues such as climate change.

"My research informs the teaching I offer in human geography. I use it to highlight the relevance and value of geographical thinking to contemporary issues, such as tree health, biosecurity, climate change and challenging 'business as usual'.

"I have developed my research to enable students to build partnerships with my many contacts. These include the Science Museum in London, Forest Research and the Woodland Trust. Further fieldwork relates to combining human and physical geography research through interdisciplinary work on issues relating to trees, landscape and climate."

This creates the opportunity for students to be at the cutting-edge of climate study.

A significant opportunity for Reading's Geography students is the £1.3 million investment by the National Environment Research Council (NERC) for the 'Community for Engaging Environments' project. This project brings together experts from a range of disciplines to collaborate with diverse communities on environmental challenges. Hilary leads this national venture:

"Students are fully immersed in our professional research projects, like the 'NERC Community for Engaging Environments', from day one. This ensures a strong, compelling learning curve, not to mention the advanced expertise these students take out into the world – skills that are sought after and valued by any employer."

> "My research highlights the relevance and value of geographical thinking to contemporary issues, such as tree health, biosecurity, climate change and challenging 'business as usual'."

Professor Hilary Geoghegan

HERE COMES THE FLOOD

FORECASTING FLOODS

Flooding destroys lives. Every year it kills thousands of people around the world, and affects millions more – devastating homes, businesses and livelihoods.

Professor Hannah Cloke is interested in developing techniques to help us prepare better for flooding by improving forecasting. Her research saves lives through improved early warning systems in flood-prone parts of the world, and reduces the impact of flooding on businesses.

Hannah first started working on flood prevention after the 2002 European floods, when over a week of continuous heavy rains ravaged Europe, killing dozens, dispossessing thousands, and causing billions of Euros worth of damage.

This was part of the inspiration behind Hannah's work as a Research Associate at the European Commission Joint Research Centre in Ispra, Italy, developing an early warning system to prevent this scale of disaster happening again – you can't stop floods, but you can prepare for them. The work she did there has grown ever since.

Now Hannah advises the UK government on flood response and preparing for national and international flooding incidents. She developed techniques that were used in Uganda when the International Red Cross and Red Crescent Movement was able to deliver aid to 5,000 people before roads and other lines of communication were cut by floodwater.

Professor Hannah Cloke OBE

"I spent my early years admiring glacial features on holidays in the Lake District whilst at the same time considering the impacts of poverty, homelessness and divides in our society.

Geography is all about both perspectives – the physical and the social understanding of our planet and its people. You can't understand one without the other. This is why I apply the latest science to help people prepare for floods."

"This work has had a real impact in that we are now better prepared for floods, and as we take these techniques forward, we could reduce flood risk to people across the world."

Hannah's work feeds directly into her teaching, with modules covering current and recent floods in the UK, a flood forecasting exercise, a field course and the chance to focus on flooding in dissertations. Representatives from relevant external organisations such as the Environment Agency, Met Office, Scottish Flood Forecasting Service, the European Centre for Medium-Range Weather Forecasts and Red Cross Climate Centre join us on campus and talk with students directly – a brilliant networking opportunity.

Hannah's research has been crucial in developing a system that will help to forecast floods accurately, almost anywhere in the world. It has the potential to save thousands of lives. And you can be part of this.

ACCESS ALL AREAS

Growing up in Mexico City, Dr Sally Lloyd-Evans saw first-hand the effects of poverty and inequality on development. This sparked a lifelong interest in how communities grow and survive, and inspired her career in geography.

Sally is part of the Whitley Big Local initiative, funded by the National Lottery's £1 million grant to each of 150 disadvantaged communities in the UK. She worked with local residents to create a community research network training the residents in participatory research methods to empower them to conduct the research themselves and take ownership of the project.

The research led to a report on transport issues in the area and immediate change for the community. The group took the results to local transport authorities and worked with them to change the service provided to include bus routes through the Whitley area, allowing residents better access to local services such as schools, work and the hospital.

Each year the Whitley project advertises paid internships for students to get involved directly in the research. The internships allow students to shape real-world research, inform their understanding of the issues addressed by the project, and improve their career skills.

> "The whole project was really relevant to my degree and brought to life many of the issues and research methods we studied. I gained insight into working on a community development project and was able to apply the research methods I learned throughout my degree."

Beth Kingdom
BSc Human Geography graduate and former intern with the project

> "My work is about using participatory research to empower communities to act for social change ... I believe in helping people to undertake research that enables communities to tackle policy issues from the grassroots."

Dr Sally Lloyd-Evans

HUNTING RESILIENCE

“Initially the very idea of reconstructing vegetation history came from a second year undergraduate module that I took here at the University of Reading, when I was a student here myself… I was fascinated that you could look at pollen grains down a microscope and reconstruct the history of vegetation over thousands of years.”

Professor Frank Mayle

Amazonia is one of the most biodiverse locations on the planet, thought to be home to up to one half of all species, and around one third of all carbon on land. How will the rainforests respond to the impact of global warming, human land use, and deforestation? Will they be sensitive, or resilient?

Professor Frank Mayle works to reconstruct the history of Amazon rainforests, removing long cores of sediment from the earth for microscopic analysis of their contents to learn about the long-term dynamics of rainforest ecosystems. The long timeframe of the evidence collected means that we can predict the likely response of these ecosystems to natural drivers, such as climate change, as well as human interaction.

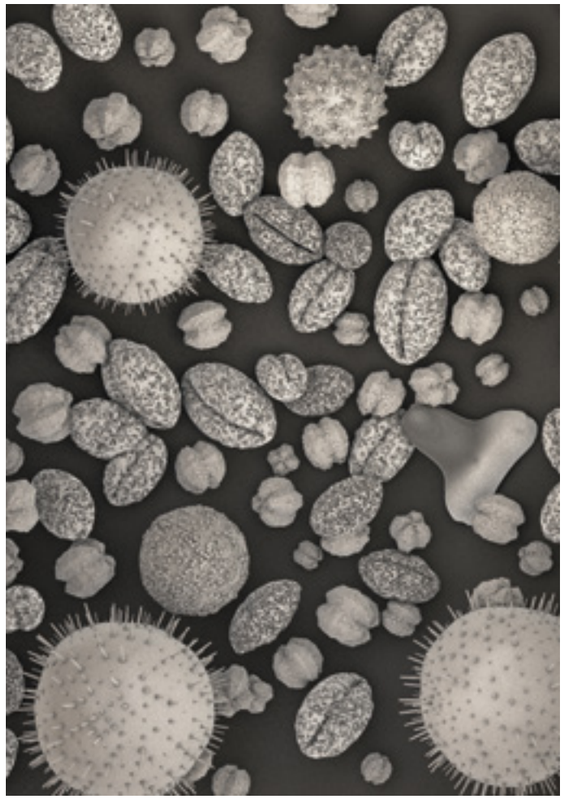
Frank draws on his extensive research in this unique location in his teaching. Case studies in his third year module Tropical Rainforests, Climate and Lost Civilisations are used to explore the interrelationships between climate change, human land use and tropical forest ecosystems.

The module facilitates discussion of the implications of this historical perspective for conservation policy and understanding the fate of tropical forests over the 21st century. Students use pollen slides from his coring work to learn practical microscopy techniques and reconstruct vegetation history, with several taking the opportunity to conduct their dissertations based on the cores and samples Frank has collected.

During one of Frank's recent research projects in the Amazon, hundreds of mysterious earthworks were uncovered as modern deforestation revealed sites concealed for centuries by trees. The earthworks have revolutionised our understanding of the ancient societies that built them and how they interacted with their environment.

There is increasing archaeological evidence that human populations in the area were much more complex societies than previously thought, and that they had a major impact on the landscape. Frank and his collaborators have found strong evidence that these indigenous peoples altered the biodiversity of the rainforests to suit their own needs; from deforestation in order to build monuments, to favouring the growth of palms over other plants, which were needed for a range of uses spanning medicines, food, dyes, and construction.

The discovery raises questions around land use, sustainability, and conservation efforts. Discouraging human interaction with an environment in order to preserve it is challenged if the very biodiversity we intend to protect has been altered or generated in some way by indigenous peoples over thousands of years – but how the land may be used, and to what extent, so as to be beneficial or harmful is still to be explored.



OUT IN THE FIELD

Develop your skills and experience new cultures with field classes.

Field classes are a critical part of your training, enabling you to develop skills in field techniques, observation, data analysis and presentation, and teamwork. We put field teaching, including UK and overseas field classes and shorter field projects around the Reading area, at the centre of your degree. This ranges from GIS mapping on the University campus to exploring the causes and consequences of flooding on local river catchments. Fieldwork helps you develop practical research skills, as well as apply what you learn in lectures and seminars in real-life contexts.

All of your compulsory field classes are subsidised by the Department, and the cost of the first-year trip is included in your tuition fees.

A range of field class destinations are offered throughout your course, giving you multiple options to choose from. Recent field class locations have included:

- A short field class in the first year in southern England.
- In the second year, a field class to Stirling, Scotland.
- In the final year, field classes are driven by student interest. Our most popular recent options are Iceland, Berlin, Nanjing and the UK.

To find out more, visit **reading.ac.uk/ges-field-classes**

“Fieldwork enables you to get hands-on experience with specialist equipment, employing techniques used in industry. By the end of the field class, I’d enhanced my understanding and gained so many skills that will broaden my employment prospects”

Joshua Gill (Stirling Field Class)
BSc Geography (Physical)

“I would definitely recommend attending a field trip during your course at University as it gave us the opportunity to apply some of the theories we learnt while meeting new people and visiting historic places! The balance between studies/fieldwork and leisure was spot on, everyone got along perfectly.”

Aristides Savva (Berlin Field Class)
BSc Geography and Economics

“The Iceland field trip has inspired me to look into furthering my education through doing my master’s there and considering a career that involves being outside as much as possible! The trip was a fantastic opportunity to see and experience a country and a landscape that had perhaps sparked our initial interest in real geography in the first place.”

Sarah Newman (Iceland Field Class)
BSc Human and Physical Geography

STUDY ABROAD

Stand out from the crowd and see the world.

In an increasingly international and mobile world, studying abroad can help boost your future employability. It provides an exciting opportunity to acquire numerous transferable and desirable skills, and study specialisms additional to what's offered at Reading. It's also a fantastic life experience.

You have the option to apply to take our Study Abroad module, subject to meeting the eligibility criteria*, which is available across all our courses. All courses offered by our partner universities are taught in English.

You also have the option of applying to spend a full year studying at one of our partner institutions on our four-year degrees.

For more information on our latest partner institutions, costs and how to apply visit: **reading.ac.uk/outgoing**

*Subject to availability, see inside back cover.

"It was an amazing and positive experience. I enjoyed meeting people from all over the world and immersing myself in Norwegian culture. Due to my experience, I am now contemplating studying a master's abroad."

Rihannon Lee
BSc Human Geography

PLACEMENTS AND EXPERIENCE

Take advantage of the wide range of opportunities available to enhance your professional skills, develop a network of contacts and strengthen your career prospects.

PROFESSIONAL PLACEMENTS AS PART OF YOUR DEGREE

Gain valuable work experience, explore your career options and strengthen your employability by taking a summer or year-long professional placement as part of your degree. Organisations with which students have recently worked include the Department for Education, Thames Water, Hydro-Logic, Dyer & Butler, the Game and Wildlife Conservation Trust, PwC, and Mott MacDonald. You could also take a placement beyond your subject field to gain direct experience in a potential career path and try out new skills.

RESEARCH EXPERIENCE

You may have the opportunity to work with partner organisations on research projects as part of your final year dissertation.

Working alongside employers, on a topic about which you are passionate, will enhance your professional skills and allow you to develop a network of contacts.

You can also apply to work on research projects, such as UROP (Undergraduate Research Opportunities Programme), taking place in the Department or wider University, allowing you to develop skills to use in your own project work.

“I’ve learnt so much about the industry and the company in a short space of time, developed lots of new skills and the people I work with on a day-to-day basis are lovely. There are also lots of opportunities to network and meet colleagues in our other offices around the UK as well as people from other companies.”

Meg Hopkins
BSc Environmental Science
Placement at SYSTRA Ltd

*Subject to availability, see inside back cover.

FAR-REACHING CAREER PROSPECTS

Prepare for success by making employment skills and opportunities a central part of your experience throughout your time at the University of Reading. You will have the opportunity to develop the practical and transferable skills that employers want to see, and our close relationships with leading companies and agencies give you the chance to make valuable contacts in your chosen industry.

You have the opportunity to gain direct contact with future employers through placements, our year in professional experience option, and your day-to-day studies in innovative modules.

MODULES THAT PREPARE YOU FOR THE WORKPLACE

Jonathan Cocks studied Human and Physical Geography and developed both his practical, applied and transferable skills throughout the course.

Jonathan chose the Preparing for Floods module which was developed with input from organisations that hold a real stake in the issues explored in the course, including staff from the Environment Agency, Met Office and Red Cross Climate Centre. Learning from professionals in the field allowed Jonathan to gain insight into a variety of potential sectors, organisations, and roles, helping prepare him to enter the job market with a clear direction.

ACHIEVE THE CAREER YOU WANT

Our graduates go on to work in a wide range of sectors, including education, commerce, environmental consultancies, government agencies, pollution monitoring and renewable and sustainable energy companies. Overall, 95% of graduates from Geography and Environmental Science at Reading are in work or further study within 15 months of graduation*.

Recent Geography graduates have gone on to work as transport analysts, planning officers, GIS specialists, environmental consultants, flood warning officers, and environmental engineers.

Our Environmental Science graduates have gone on to work for environmental consultancies, water companies, and waste disposal and pollution monitoring companies.

“Taking this module meant that I got to work directly with people who used the concepts I was learning about in their day-to-day roles, and really made it clear how relevant my course was to the issues I care about.”

Jonathan Cocks
BSc Human and Physical Geography

*Based on our analysis of HESA data © HESA 2022, Graduate Outcomes Survey 2019/20; includes first degree Geography and Environmental Science responders

COURSES

BSc GEOGRAPHY (HUMAN)

BSc GEOGRAPHY (PHYSICAL)

BSc GEOGRAPHY (HUMAN AND PHYSICAL)

BSc GEOGRAPHY AND ECONOMICS (REGIONAL SCIENCE)

BSc ENVIRONMENTAL SCIENCE

All our courses are also offered as four-year degrees with a year of professional experience and/or study abroad. You can apply directly to the majority of courses, or take the option to transfer at a later date.

BSc GEOGRAPHY (HUMAN)

Focus on cultural, political, social, developmental, economic and urban geographies. Human geography covers everything from climate change, globalisation and international labour markets to local and national issues of social deprivation and water pollution.

YEAR ONE

Topics include:

- Contemporary world cultures
- Geographical imaginaries
- Global challenges
- Landscapes and resources
- Skills in geography and environmental science
- Sustainability

YEAR TWO

Topics include:

- Analysing social data
- Encountering political geographies
- Energy resources
- Environment and development
- Geographical Information Systems (GIS)
- Past, present and future sustainability
- Skills training and project design
- Social and cultural geography

YEAR THREE

Topics include:

- Anthropology of heritage and cultural property
- Climate change and responsibility
- Consumption, politics and space
- Deathscapes and dark tourism
- Spaces of care and wellbeing
- Water resources

You will also have an opportunity to specialise in an area of your choice when completing a final year dissertation report.

You will have the opportunity to put your learning into practice and develop specialist skills during field classes. Locations subject to change.

Visit **reading.ac.uk/ges/undergraduate/field-classes** for more information.

BSc GEOGRAPHY (PHYSICAL)

Focus on our physical world and examine the complex relationships between humanity and the natural world.

Understand how our environment responds to and recovers from change, so we can address issues critical to our shared global future.

YEAR ONE

Topics include:

- Data environment
- Earth lab
- Global challenges
- Landscapes and resources
- Skills in geography and environmental science

YEAR TWO

Topics include:

- Climate and environmental change
- Earth processes and hazards
- Energy resources
- Environment and development
- Environmental diagnostics
- Geographical Information Systems (GIS)
- Monitoring the Earth from above
- Skills training and project design
- Water in the Earth system

YEAR THREE

Topics include:

- Air pollution
- Carbon and global change
- Climate change
- Coastal management
- Ecosystems modelling
- Preparing for floods
- Tropical rainforests
- Volcanic hazards
- Water resources

You will also have an opportunity to specialise in an area of your choice when completing a final year dissertation report.

You will have the opportunity to put your learning into practice and develop specialist skills during field classes. Locations subject to change.

Visit **reading.ac.uk/ges/undergraduate/field-classes** for more information.

BSc GEOGRAPHY (HUMAN AND PHYSICAL)

Study the relationships between people and physical processes, from the differences and dynamics of political systems and cultures, to the sustainable development of urban spaces, to the way the natural environment responds to and recovers from change.

YEAR ONE

Topics include:

- Contemporary world cultures
- Data environment
- Geographical imaginaries
- Global challenges
- Landscapes and resources
- Skills in geography and environmental science
- Sustainability

YEAR TWO

Topics include:

- Analysing social data
- Climate and environmental change
- Earth processes and hazards
- Energy resources
- Environment and development
- Geographical Information Systems (GIS)
- Monitoring the Earth from above
- Skills training and project design
- Water in the Earth system

YEAR THREE

Topics include:

- Air pollution
- Anthropology of heritage and cultural property
- Climate change and responsibility
- Consumption, politics and space
- Deathscapes and dark tourism
- Ecosystems modelling
- Environmental pollution
- Preparing for floods
- Soil ecology
- Spaces of care and wellbeing
- Tropical rainforests
- Water resources

You will also have an opportunity to specialise in an area of your choice when completing a final year dissertation report.

You will have the opportunity to put your learning into practice and develop specialist skills during field classes. Locations subject to change.

Visit **reading.ac.uk/ges/undergraduate/field-classes** for more information.

BSc GEOGRAPHY AND ECONOMICS (REGIONAL SCIENCE)

Examine the spatial implications of economic processes, and the economic impact of social processes. Learn from experts on issues including neighbourhood regeneration, UK housing reform, resilience and sustainability, and the gender wage gap.

YEAR ONE

Topics include:

- Geographical imaginaries
- Global challenges
- Principles of economics
- Quantitative methods and data analysis

YEAR TWO

Topics include:

- Analysing social data
- Business economics
- Economic history
- Economics of social policy
- Energy resources
- Environment and development
- Games and economic behaviour
- Geographical Information Systems (GIS)
- Intermediate microeconomics
- Intermediate macroeconomics
- Political geographies
- Skills training and project design
- Social and cultural geography

YEAR THREE

Topics include:

- Anthropology of heritage and cultural property
- Behavioural economics
- Climate change and responsibility
- Consumption, politics and space
- Deathscapes and tourism
- Development economics
- Environmental economics
- Financial economics
- Industrial organisation
- International economics
- Money and banking
- Public economics
- Spaces of care and wellbeing
- Water resources

You will also have an opportunity to specialise in an area of your choice when completing a final year dissertation report.

You will have the opportunity to put your learning into practice and develop specialist skills during field classes. Locations subject to change.

Visit **reading.ac.uk/ges/undergraduate/field-classes** for more information.

BSc ENVIRONMENTAL SCIENCE

Explore the chemical, physical and biological processes, structures and materials that underpin our understanding of the Earth. Understand issues of global importance such as climate change, flooding, soil formation, water resources, habitat management, and pollution.

YEAR ONE

Topics include:

- Data environment
- Earth lab
- Global challenges
- Landscapes and resources
- Skills in geography and environmental science
- Sustainability

YEAR TWO

Topics include:

- Climate and environmental change
- Earth processes and hazards
- Energy resources
- Environmental diagnostics
- Geographical Information Systems (GIS)
- Monitoring the Earth from above
- Skills training and project design
- Water in the Earth system

YEAR THREE

Topics include:

- Air pollution
- Carbon and global change
- Climate change
- Ecosystems modelling
- Environmental pollution
- Preparing for floods
- Soil ecology
- Tropical rainforests
- Water resources

You will also have an opportunity to specialise in an area of your choice when completing a final year dissertation report.

You will have the opportunity to put your learning into practice and develop specialist skills during field classes. Locations subject to change.

Visit **reading.ac.uk/ges/undergraduate/field-classes** for more information.

Important Information
This brochure was issued in 2023 and is aimed at prospective undergraduate students wishing to apply for a place at the University of Reading (the University) and start a course in autumn 2024. The University makes every effort to ensure that the information provided in the brochure is accurate and up-to-date at the time of going to press (May 2023). However, it may be necessary for the University to make some changes to the information presented in the brochure following publication – for example, where it is necessary to reflect changes in practice or theory in an academic subject as a result of emerging research; or if an accrediting body requires certain course content to be added or removed. To make an informed and up-to-date decision, we recommend that you check **reading.ac.uk/study**

The University undertakes to take all reasonable steps to provide the services (including the courses) described in this brochure. It does not, however, guarantee the provision of such services. Should industrial action or circumstances beyond the control of the University interfere with its ability to provide the services, the University undertakes to use all reasonable steps to minimise any disruption to the services.

Topics
Topics are provided as a taster of the areas of study that may be available on each course. Information is correct at the time of going to press (May 2023), for a list of compulsory (core) modules please check **reading.ac.uk** for the most up to date information. Teaching staff on specific courses mentioned in this brochure may be subject to change.

Joint courses
Our joint courses may have extra requirements, including English language requirements. Please check the individual course pages on our website for further details.

Year abroad and placement fees
Some courses include an optional or compulsory year abroad or placement year. During this year you will only pay a partial fee which is currently set at 15% of the normal tuition fee. Check the website for the latest information: **reading.ac.uk/fees-and-funding**

Placements
Programmes with a Professional Placement Year (also known as 'Year in Industry' or 'Placement Year') are fully dependent on students securing their own placement opportunity, normally through a competitive recruitment process. The University provides dedicated career and application support for placement year students. Students who do not secure a placement or who are unable to complete the placement year due to extenuating circumstances, have the option to transfer to a three year variant of their programme with agreement from their School/Department.

Study abroad
The partnerships listed are correct at the time of publication (May 2023). For up to date information on the University's partnerships contact **studyabroad@reading.ac.uk**

Where Study Abroad is not a compulsory part of the degree programme, the University of Reading cannot guarantee that every applicant who applies for the scheme will be successful. Whilst efforts are made to secure sufficient places at partner institutions, the number of places available and the University's partners can vary year-on-year. In all cases, the University cannot guarantee that it will be possible for applicants to choose to study abroad at a particular institution.

Further, certain courses and/or institutions may require you to satisfy specific eligibility criteria. It can be a competitive process. For further information on the University's Study Abroad Scheme please contact **studyabroad@reading.ac.uk**

University of Reading

Department of Geography and Environmental Science
reading.ac.uk/ges

Ask us a question
reading.ac.uk/question

Athena SWAN Silver Award
ECU Gender Charter
Stonewall Diversity Champion
The Queen's Anniversary Prizes for Higher and Further Education 2021

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